

US EPA ARCHIVE DOCUMENT

Clean Water Rule Comment Compendium
Topic 8: Tributaries

The Response to Comments Document, together with the preamble to the final Clean Water Rule, presents the responses of the Environmental Protection Agency (EPA) and the Department of the Army (collectively “the agencies”) to the more than one million public comments received on the proposed rule (79 FR 22188 (Apr. 21, 2014)). The agencies have addressed all significant issues raised in the public comments.

As a result of changes made to the preamble and final rule prior to signature, and due to the volume of comments received, some responses in the Response to Comments Document may not reflect the language in the preamble and final rule in every respect. Where the response is in conflict with the preamble or the final rule, the language in the final preamble and rule controls and should be used for purposes of understanding the scope, requirements, and basis of the final rule. In addition, due to the large number of comments that addressed similar issues, as well as the volume of the comments received, the Response to Comments Document does not always cross-reference each response to the commenter(s) who raised the particular issue involved. The responses presented in this document are intended to augment the responses to comments that appear in the preamble to the final rule or to address comments not discussed in that preamble. Although portions of the preamble to the final rule are paraphrased in this document where useful to add clarity to responses, the preamble itself remains the definitive statement of the rationale for the revisions adopted in the final rule. In many instances, particular responses presented in the Response to Comments Document include cross references to responses on related issues that are located either in the preamble to the Clean Water Rule, the Technical Support Document, or elsewhere in the Response to Comments Document. All issues on which the agencies are taking final action in the Clean Water Rule are addressed in the Clean Water Rule rulemaking record.

Accordingly, the Response to Comments Document, together with the preamble to the Clean Water Rule and the information contained in the Technical Support Document, the Science Report, and the rest of the administrative record should be considered collectively as the agencies’ response to all of the significant comments submitted on the proposed rule. The Response to Comments Document incorporates directly or by reference the significant public comments addressed in the preamble to the Clean Water Rule as well as other significant public comments that were submitted on the proposed rule.

This compendium, as part of the Response to Comments Document, provides a compendium of the technical comments about tributaries submitted by commenters. Comments have been copied into this document “as is” with no editing or summarizing. Footnotes in regular font are taken directly from the comments.

TOPIC 8. TRIBUTARIES.....	19
8.1. DEFINITION	19
AGENCY SUMMARY RESPONSE	19
SPECIFIC COMMENTS	21
National Association of State Foresters (Doc. #14636).....	21
Tennessee Valley Association (Doc. #17470)	23
Bullhead City, Arizona (Doc. #4185)	25
Pennsylvania Fish and Boat Commission (Doc. #4826)	25
Quapaw Tribe of Oklahoma (the O-Gah-Pah) (Doc. #7980)	26
Pennsylvania Department of Environmental Protection, Office of Water Management (Doc. #7985)	27
Barona Band of Mission Indians (Doc. #10966)	27
Department of Justice, State of Montana (Doc. #13625).....	30
Illinois Farm Bureau (Doc. #14070).....	30
North Carolina Department of Agriculture and Consumer Services (Doc. #14747)	31
San Carlos Apache Tribe (Doc. #15067).....	31
Florida Department of Environmental Protection (Doc. #15080)	32
Tennessee Department of Environment and Conservation (Doc. #15135)	32
Wisconsin Department of Natural Resource (Doc. #15141)	33
California State Water Resources Control Board (Doc. #15213).....	34
Sealaska Corporation (Doc. #15356).....	36
North Dakota Office of the Governor et al. (Doc. #15365).....	39
Ohio Department of Natural Resources et al. (Doc. #15421).....	40
Wyoming Department of Environmental Quality (Doc. #16393)	40
Indiana Department of Environmental Management (Doc. #16440)	41
Office of the Governor, State of Utah (Doc. #16534)	41
State of South Dakota (Doc. #16925).....	42
Allen Boone Humphries Robinson LLP (Doc. #19614).....	43
Franconia Township, Pennsylvania (Doc. #8661).....	43
City of Escondido (Doc. #11116)	44
Clark County Regional Flood Control District, Nevada (Doc. #11726)	44
Uintah County, Utah (Doc. #12720).....	45
National Association of Flood & Stormwater Management Agencies (Doc. #13613)	45
Board of County Commissioners, Otero County, New Mexico (Doc. #14321)...	45
Board of County Commissioners, Delta County, Colorado (Doc. #14405)	46
Board of Supervisors, Cochise County, Arizona (Doc. #14541).....	47
Waters of the United States Coalition (Doc. #14589)	47
Board of Supervisors, San Joaquin County, California (Doc. #15017.1).....	48
Flood Control and Water Conservation District, Alameda County, California (Doc. #15074)	48
National Association of Counties (Doc. #15081)	48
Painesville Township, Ohio (Doc. #15183).....	49
Department of Public Works, County of San Diego, California (Doc. #17920) ..	49
Butte County Administration, County of Butte, California (Doc. #19593).....	50

Board of Supervisors, Sutter County, California (Doc. #19657).....	51
North Dakota Water Resource Districts Association (Doc. #5596)	52
Utah Association of Counties (Doc. #14756)	52
Washington State Water Resources Association (Doc. #16543).....	52
League of Oregon Cities (Doc. #16546).....	54
Michigan Association of Conservation Districts (Doc. #16583).....	54
Wyoming Water Development Commission (Doc. #17059).....	54
Indiana Cast Metals Association (Doc. #14895.1)	55
Golf Course Superintendents Association of America et al. (Doc. #14902)	55
Institute of Scrap Recycling Industries, Inc. (Doc. #15041).....	55
National Association of Manufacturers (Doc. #15410).....	56
Texas Chemical Council (Doc. #15433).....	57
GBMC & Associates (Doc. #15770)	57
Federal Water Quality Coalition (Doc. #15822.1).....	58
Water Advocacy Coalition (Doc. #17921.1)	60
American Society of Civil Engineers (Doc. #19572)	65
Minnkota Power Cooperative, Inc. (Doc. #19607).....	65
Kerr Environmental Services Corps. (Doc. #7937.1)	66
Kansas Independent Oil & Gas Association (Doc. #12249).....	66
Pennsylvania Coal Alliance (Doc. #13074).....	67
O'Neil LLP (Doc. #14651).....	67
West Valley Planned Communities (Doc. #18906).....	68
CEMEX (Doc. #19470)	68
National Association of Home Builders (Doc. #19540).....	69
Home Builders Association of Tennessee (Doc. #19581).....	71
Freeport-McMoRan Inc. (Doc. #14135, #14135.1, and #14135.2)	73
National Stone, Sand and Gravel Association (Doc. #14412).....	78
Wyoming Mining Association (Doc. #14460).....	79
The Mosaic Company (Doc. #14640).....	80
Continental Resources, Inc. (Doc. #14655)	81
Sinclair Oil Corporation (Doc. #15142)	82
Halliburton Energy Services, Inc. (Doc. #15509).....	83
Illinois Coal Association (Doc. #15517)	84
Dominion Resources Services, Inc. (Doc. #16338).....	85
Montana Wool Growers Association (Doc. #5843.1)	86
Alameda County Cattlemen (Doc. #8674).....	86
National Sorghum Producers (Doc. #10847).....	87
Nebraska Cattlemen (Doc. #13018).....	87
Missouri Agribusiness Association (Doc. #13025)	88
North American Meat Association and American Meat Institute (Doc. #13071)	88
Illinois Corn Growers Association (Doc. #13996)	89
Indiana Farm Bureau, Inc. (Doc. #14124)	89
Irvine Ranch Water District (Doc. #14774).....	90
Iowa Farmers Union (Doc. #15007)	91
J.R. Simplot Company (Doc. #15062).....	91
Klamath Water Users Association (Doc. #15063).....	92

Colorado Cattlemen's Association (Doc. #15068).....	93
American Forest Foundation (Doc. #15093)	94
El Dorado Irrigation District, Placerville, California (Doc. #15231)	94
Union County Cattlemen (Doc. #15261)	96
Weyerhaeuser Company (Doc. #15392).....	96
Minnesota Soybean Growers Association (Doc. #15542).....	96
Alabama Farmers Federation (Doc. #16539).....	97
Missouri Corn Growers Association (Doc. #16569)	98
Agribusiness Association of Kentucky et al. (Doc. #18005).....	98
New Mexico Cattle Growers Association et al. (Doc. #19595)	100
Georgia Department of Transportation (Doc. #14282.1).....	100
Lake Charles Harbor and Terminal District, Louisiana (Doc. #14448)	100
Airports Council International - North America (Doc. #16370)	101
Mohave Electric Cooperative, Inc. (Doc. #10953).....	101
Duke Energy (Doc. #13029).....	102
Peabody Energy (Doc. #13560).....	102
Florida Power and Light Company (Doc. #13615)	103
Arizona Public Service Company (Doc. #15162).....	104
Louisville and Jefferson County Metropolitan Sewer District (Doc. #15413)...	104
Orange County Sanitation District, California (Doc. #16335.1)	104
West Bay Sanitary District, Novato Sanitary District, West County Wastewater District, Union Sanitary District and West Valley Sanitation District, California (Doc. #16610)	105
Metropolitan Water District of Southern California (Doc. #14637).....	106
Arizona's Generation & Transmission Cooperatives (Doc. #14901)	106
Utility Water Act Group (Doc. #15016)	107
NiSource Inc. (Doc. #15112).....	109
Northern Colorado Water Conservancy District, Berthoud, Colorado (Doc. #15114)	109
Nebraska Public Power District (Doc. #15126).....	111
Lower Colorado River Authority (Doc. #16332)	111
Tri-State Generation and Transmission Association, Inc. (Doc. #16392).....	112
Texas Water Development Board (Doc. #16563).....	112
Northern California Association (Doc. #17444).....	113
Cloud Peak Energy (Doc. #18010)	114
Tucson Electric Power Company, UNS Energy Corporation (Doc. #19561)	114
Chesapeake Bay Foundation (Doc. #14620)	115
National Wildlife Federation (Doc. #15020)	116
Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233).....	118
American Rivers (Doc. #15372)	122
Center for Science in Public Participation (Doc. #15426).....	122
Natural Resources Defense Council et al. (Doc. #15437)	124
Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394) ..	126
Waterkeeper Alliance et al. (Doc. #16413)	127
Association of State Floodplain Managers, Inc. (Doc. #19452).....	128

American Association of Port Authorities (Doc. #13559).....	129
The Association of State Wetland Managers (Doc. #14131)	130
Earthjustice (Doc. #14564)	130
Center for Rural Affairs (Doc. #15029).....	131
National Parks Conservation Association (Doc. #15130)	131
Endangered Habitats League (Doc. #3384)	133
George Washington University Regulatory Studies Center (Doc. #13563)	133
Citizens Campaign for the Environment (Doc. #14967)	133
Neuse Riverkeeper Foundation (Doc. #15095)	134
Competitive Enterprise Institute et al. (Doc. #15127)	134
The River Alliance of Wisconsin (Doc. #16344)	135
Wyoming Outdoor Council (Doc. #16528)	136
Tennessee Clean Water Network et al. (Doc. #16537).....	136
Kentucky Waterways Alliance (Doc. #16581)	137
Lemon Bay Conservancy, Inc. (Doc. #18908.1)	139
Water Environment Federation (Doc. #16584)	140
Congress of the United States, Senate Committee on Environment and Public Works et al. (Doc. #16564).....	141
8.1.1. <i>Relevance of Flow Regime</i>	141
AGENCY SUMMARY RESPONSE	141
Issue: Jurisdiction over Intermittent and Ephemeral Waters	141
Issue: Legality of Asserting Jurisdiction over Ephemeral Waters	145
Issue: Requirement of “Contribute Flow”	146
Issue: Regulation of Man-Altered Streams.....	147
Issue: Definitions and Clarity	148
SPECIFIC COMMENTS:	148
Tennessee Valley Association (Doc. #17470)	148
Pueblo of Sandia (Doc. #2729)	149
Rebekah Warren, Michigan State Senator, 18 th District (Doc. #4769).....	150
Pennsylvania Fish and Boat Commission (Doc. #4826)	150
New York State Attorney General Office et al. (Doc. #6020.1).....	150
Quapaw Tribe of Oklahoma (the O-Gah-Pah) (Doc. #7980)	151
Navajo Nation Environmental Protection Agency (Doc. #10117)	151
Washington State Senate (Doc. #10871)	151
District Department of the Environment, Government of the District of Columbia (Doc. #12716.1)	152
Virginia Department of Transportation (Doc. #12756)	153
Texas Department of Transportation (Doc. #12757).....	154
New Mexico Department of Agriculture (Doc. #13024).....	154
State of Wyoming (Doc. #14584).....	155
North Carolina Department of Agriculture and Consumer Services (Doc. #14747)	157
Office of the Governor, State of Kansas (Doc. #14794).....	157
San Carlos Apache Tribe (Doc. #15067).....	158
Georgia Environmental Protection Division (Doc. #16348)	158
Attorney General, State of Michigan (Doc. #16469).....	159

Tennessee Department of Transportation (Doc. #16470).....	159
Department of Health and Environmental Control, State of South Carolina (Doc. #16491)	160
New Mexico Environment Department (Doc. #16552).....	161
Nebraska Department of Roads (Doc. #16896).....	162
State of Alaska (Doc. #19465).....	162
Allen Boone Humphries Robinson LLP (Doc. #19614).....	163
Lincoln County Conservation District, Washington (Doc. #4236)	163
North Cass Water Resource District (Doc. #5491).....	165
Alameda Corridor East Construction Authority et al. (Doc. #8534.1)	166
Pasco County, Florida (Doc. #9697).....	166
Pikes Peak Area Council of Governments (Doc. #9732)	167
Clark County Regional Flood Control District (Doc. #11726).....	167
Brown County, Kansas (Doc. #13603).....	167
North Dakota Association of Soil Conservation Districts (Doc. #15168).....	168
Los Angeles Department of Water and Power (Doc. #15238)	168
Washington County Commission, Utah (Doc. #15448)	169
Colorado Springs Utilities (Doc. #16351.1)	170
South Kansas Groundwater Management District No. 3, Garden City, Kansas (Doc. #16465)	170
Snowmass Water and Sanitation District, Snowmass Village, Colorado (Doc. #16529)	171
Water Managers, Kaweah and Tule Watersheds, San Joaquin Valley, California (Doc. #16544)	172
County Commissioners, Hot Springs County, Wyoming (Doc. #16676)	173
City of St. Petersburg, Florida (Doc. #18897)	175
Massachusetts Department of Environmental Protection (Doc. #19133).....	175
Mississippi Valley Flood Control Association (Doc. #19488).....	176
California State Association of Counties (Doc. # 9692).....	177
National Association of Conservation Districts (Doc. #12349)	177
Colorado Stormwater Council (Doc. #12981)	178
California Building Industry Association et al. (Doc. #14523)	178
North Carolina Soil and Water Conservation Commission (Doc. #14790).....	179
Western Urban Water Coalition (Doc. #15178.1)	179
John Deere & Company (Doc. #14136.1)	184
Corporate Environmental Enforcement Council, Inc. (Doc. #14608)	185
Arizona Chamber of Commerce and Industry (Doc. #14639).....	186
Greater Houston Partnership (Doc. #14726)	186
Indiana Cast Metals Association (Doc. #14895.1)	187
Landmark Legal Foundation (Doc. #15364)	187
Idaho Association of Commerce & Industry (Doc. #15461).....	188
American Council of Engineering Companies (Doc. #15534).....	188
GBMC & Associates (Doc. #15770)	189
Federal Water Quality Coalition (Doc. #15822.1).....	191
Action United et al. (Doc. #18859).....	195
Southern Nevada Home Builders Association (Doc. #3251)	195

The Elm Group, Inc. (Doc. #9688)	196
National Ready Mixed Concrete Association (Doc. #13956)	197
Building Industry Association of Greater Louisville (Doc. #16449)	198
National Association of Home Builders (Doc. #19540)	198
New Mexico Mining Association (Doc. #8644)	211
Reclamation and Abandoned Mine Lands Divisions, Public Service Commission, North Dakota (Doc. #12857)	212
Enefit American Oil (Doc. #13438)	212
Arizona Mining Association (Doc. #13951)	213
Nevada Mining Association (Doc. #14930)	214
Barrick Gold of North America (Doc. #16914)	215
Virginia Coal and Energy Alliance and Virginia Mining Issues Group (Doc. #18016)	216
Montana Wool Growers Association (Doc. #5843.1)	217
Alameda County Cattlewomen (Doc. #8674)	218
Maryland Farm Bureau (Doc. #10755)	219
Hancock County, Indiana (Doc. #11980)	220
Montana Farm Bureau Federation (Doc. #12715)	220
Louisiana Cotton and Grain Association (Doc. #12752)	221
Nebraska Cattlemen (Doc. #13018)	222
Missouri Agribusiness Association (Doc. #13025)	222
Iowa Corn Growers Association (Doc. #13269)	223
Western Growers Association (Doc. #14130)	223
Sugar Cane Growers Cooperative of Florida (Doc. #14283)	224
Wyoming Farm Bureau Federation (Doc. #14406)	225
Kansas Farm Bureau (Doc. #14408)	226
Kansas Agriculture Alliance (Doc. #14424)	227
Oklahoma Pork Council (Doc. #14911)	228
Indiana Corn Growers Association (Doc. #14933)	229
National Corn Growers Association (Doc. #14968)	229
Colorado Cattlemen’s Association (Doc. #15068)	235
North Carolina Farm Bureau Federation (Doc. #15078)	235
Weyerhaeuser Company (Doc. #15392)	236
Jensen Livestock and Land LLC (Doc. #15540)	236
Dairy Cares (Doc. #16471)	237
Agribusiness Association of Kentucky et al. (Doc. #18005)	238
Frasier Farms (Doc. #18660)	239
Ohio Pork Council (Doc. #19554)	240
Georgia Department of Transportation (Doc. #14282.1)	240
Charlotte-Mecklenburg Storm Water Services (Doc. #3431)	242
Red River Joint Water Resource District (Doc. #4227)	242
Florida Federation of Garden Clubs (Doc. #5725)	243
Beaufort County Stormwater Utility, South Carolina (Doc. #7326.1)	243
Black Hills Corporation (Doc. #6248)	245
Northwest Colorado Council of Governments Water Quality/Quantity Committee (Doc. #10187)	245

Mohave Electric Cooperative, Inc. (Doc. #10953)	246
Duke Energy (Doc. #13029)	247
Murray Energy Corporation (Doc. #13954)	249
County of San Diego, California (Doc. #14782)	249
Southeast Metro Stormwater Authority (Doc. #14935).....	250
Arizona Public Service Company (Doc. #15162).....	251
Albuquerque Metropolitan Arroyo Flood Control Authority (Doc. #15221).....	251
Southern Company (Doc. #14134)	253
CPS Energy (Doc. #14566).....	257
Colorado Water Congress Federal Affairs Committee (Doc. #14569).....	257
Southern Nevada Water Authority (Doc. #14580)	258
Santa Clara Valley Water District, California (Doc. #14776)	259
ERO Resources Corporation (Doc. #14914)	259
Utility Water Act Group (Doc. #15016)	260
Colorado River Water Conservation District, Colorado (Doc. #15070)	262
Illinois Fertilizer & Chemical Association (Doc. #15129)	263
Idaho Power Company (Doc. #15501)	263
Lower Colorado River Authority (Doc. #16332)	263
Basin Electronic Power Cooperative (Doc. #16447).....	265
Cloud Peak Energy (Doc. #18010)	265
Xcel Energy (Doc. #18023)	266
Ducks Unlimited (Doc. #11014).....	267
Choose Clean Water Coalition et al. (Doc. #11773.1)	267
Southern Environmental Law Center et al. (Doc. #13610)	269
National Wildlife Federation (Doc. #15020)	271
American Rivers (Doc. #15372)	275
Western Resource Advocates (Doc. #16460)	276
National Waterways Conference, Inc. (Doc. #12979).....	280
Trout Unlimited (Doc. #18015)	281
Environment Council of Rhode Island (Doc. #3532)	281
Clean Water Action et al. (Doc. #13997)	282
Kansas Natural Resource Council (Doc. #14599)	282
Mystic River Watershed Association (Doc. #14633)	283
Citizens Committee to Complete the Refuge (Doc. #14738.1)	283
Montana Audubon (Doc. #14755)	283
Clean Water Action et al. (Doc. #14884)	284
Amigos Bravos (Doc. #14974)	285
Clean Water Action Maryland et al. (Doc. #15072).....	287
Environmental Justice Coalition for Water (Doc. #15105)	288
Friends of the Cacapon River (Doc. #15121)	289
Tulane Environmental Law Clinic et al (Doc. #15123).....	289
Audubon California et al. (Doc. #15200)	296
Western Pennsylvania Conservancy (Doc. #15202).....	297
Center for Water Advocacy et al. (Doc. #15225)	297
Hackensack Riverkeeper, Hudson Riverkeeper, Milwaukee Riverkeeper, New York/New Jersey Baykeeper and Raritan Riverkeeper (Doc. #15360)	298

Sierra Club, Cumberland Chapter (Doc. #15466)	298
Wisconsin Wetlands Association (Doc. #15629)	299
Friends of the Rappahannock (Doc. #15864)	300
Regulatory Environmental Group for Missouri (Doc. #16337.1).....	300
Charles River Conservancy et al. (Doc. #16453)	301
Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394) ..	301
Michigan United Conservation Clubs (Doc. #16395)	305
Waterkeeper Alliance et al. (Doc. #16413)	305
Wyoming Outdoor Council (Doc. #16528)	307
Tennessee Clean Water Network et al. (Doc. #16537).....	308
Audubon Society of Greater Denver (Doc. #16934)	308
Warm Springs Watershed Association (Doc. #18019).....	309
Upper Mississippi, Illinois, & Missouri Rivers Association (Doc. #19563)	309
Society for Freshwater Science (Doc. #11783)	310
Consortium of Aquatic Scientific Societies (Doc. #14802).....	310
United States Senate (Doc. #19655)	311
United States House of Representatives (Doc. #17458).....	311
8.1.2. <i>Ordinary High Water Mark (OHWM)</i>	312
AGENCY SUMMARY RESPONSE	312
Issue: Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features	312
Issue: Need more guidance on determining OHWM and definitions of bed and banks and OHWM	316
SPECIFIC COMMENTS	318
Washington State Department of Ecology et al. (Doc. #13957).....	318
Alabama Department of Transportation (Doc. #14116)	319
Commonwealth Pennsylvania Department of Agriculture (Doc. #14465).....	319
Alameda Corridor East Construction Authority et al. (Doc. #8534.1)	319
Kendall County Board, Illinois (Doc. #10965).....	320
Board of County Commissioners, Churchill County, Nevada (Doc. #12260) ...	320
Weld County, Colorado (Doc. #12343).....	321
Brown County, Kansas (Doc. #13603).....	322
Board of Supervisors, San Joaquin County, California (Doc. #15017.1).....	322
Painesville Township, Ohio (Doc. #15183).....	323
Brady Township Supervisors, Clearfield County, Pennsylvania (Doc. #16480)	323
Sienna Plantation Levee Improvement District, Sugar Land, Texas (Doc. #17455)	324
Butte County, California (Doc. #19593).....	325
Association of California Water Agencies (Doc. #12978)	325
Colorado Stormwater Council (Doc. #12981)	327
Flood Control and Water Conservation District, Riverside County, California (Doc. #14581)	327
Western Urban Water Coalition (Doc. #15178.1)	328
State of Nevada Department of Conservation et al. (Doc. #16932)	330
Montana Association of Conservation Districts (Doc. #18628).....	330
Water Advocacy Coalition (Doc. #7981)	331

John Deere & Company (Doc. #14136.1)	332
Arizona Chamber of Commerce and Industry (Doc. #14639).....	333
Steel Manufacturers Association and Specialty Steel Industry of North America (Doc. #15416)	333
GBMC & Associates (Doc. #15770)	333
Water Advocacy Coalition (Doc. #17921.1)	334
National Association of Home Builders (Doc. #19540).....	336
Minnkota Power Cooperative, Inc. (Doc. #19607).....	338
American Society of Civil Engineers (Doc. #19572)	339
Southpace Properties, Inc. (Doc. #6989)	339
Kerr Environmental Services Corp. (Doc. #7937.1).....	339
Portland Cement Association (Doc. #13271)	340
El Dorado Holdings, Inc. (Doc. #14285).....	341
NAIOP Commercial Real Estate Development Association (Doc. #14621).....	342
South Carolina Forest Association (Doc. #6855)	343
Kansas Independent Oil & Gas Association (Doc. #12249).....	343
Pennsylvania Coal Alliance (Doc. #13074).....	344
Enefit American Oil (Doc. #13438).....	344
Arizona Mining Association (Doc. #13951).....	345
Freeport-McMoRan Inc. (Doc. #14135, #14135.1 and #14135.2)	349
Wyoming Mining Association (Doc. #14460).....	353
Devon Energy Corporation (Doc. #14916).....	354
National Mining Association (Doc. #15059).....	354
National Sustainable Agriculture Coalition (Doc. #15403).....	355
Halliburton Energy Services, Inc. (Doc. #15509).....	355
Pennsylvania Grade Crude Oil Coalition (Doc. #15773)	356
Dominion Resources Services, Inc. (Doc. #16338).....	356
Washington Cattlemen’s Association (Doc. #3723).....	357
Oregon Cattlemen’s Association (Doc. #5273.1)	357
National Farmers Union (Doc. #6249)	357
Alameda County Cattlewomen (Doc. #8674).....	358
Glenn County Rangeland Association (Doc. #12724).....	360
Colorado Farm Bureau (Doc. #12829)	360
Bayless and Berkalew Co. (Doc. #12967)	360
North American Meat Association and American Meat Institute (Doc. #13071)	361
National Chicken Council, National Turkey Federation, and U.S. Poultry & Egg Association (Doc. #14469)	361
Minnesota Farm Bureau (Doc. #14653)	362
Irvine Ranch Water District (Doc. #14774).....	362
California Association of Winegrape Growers (Doc. #14593)	363
Monarch-Chesterfield Levee District, St. Louis, Missouri (Doc. #14904)	364
North Carolina Farm Bureau Federation (Doc. #15078)	365
Snell & Wilmer L.L.P. (Doc. #15206).....	366
Missouri Farm Bureau Federation (Doc. #15224).....	367
Weyerhaeuser Company (Doc. #15392).....	367

Utah Farm Bureau Federation (Doc. #16542.1)	369
Iowa Farm Bureau Federation (Doc. #15633.1)	369
Riverport Levee District (Doc. #15655)	370
Greene County Farm Bureau (Doc. #17007)	371
Agribusiness Association of Kentucky et al. (Doc. #18005)	371
Wilkin County Farm Bureau (Doc. #19489)	372
American Water Company (Doc. #6935.1)	373
Northwest Colorado Council of Governments Water Quality/Quantity Committee (Doc. #10187)	373
Duke Energy (Doc. #13029)	374
Murray Energy Corporation (Doc. #13954)	375
Department of Public Works, City of Northglenn, Colorado (Doc. #14990)	375
Arizona Public Service Company (Doc. #15162)	376
Louisville and Jefferson County Metropolitan Sewer District (Doc. #15413)	376
West Bay Sanitary District, Novato Sanitary District, West County Wastewater District, Union Sanitary District and West Valley Sanitation District, California (Doc. #16610)	377
Southern Company (Doc. #14134)	377
Metropolitan Water District of Southern California (Doc. #14637)	378
Nucor Corp. (Doc. #14963)	380
Pennsylvania Independent Oil and Gas Association (Doc. #15167)	381
Lower Colorado River Authority (Doc. #16332)	381
Tri-State Generation and Transmission Association, Inc. (Doc. #16392)	381
Northern California Association (Doc. #17444)	382
Ducks Unlimited (Doc. #11014)	382
Southern Environmental Law Center et al. (Doc. #13610)	383
The Wildlife Society (Doc. #14899)	384
Potomac Riverkeeper, Inc. (Doc. #15013)	385
National Wildlife Federation (Doc. #15020)	385
American Rivers (Doc. #15372)	387
Western Resource Advocates (Doc. #16460)	389
National Waterways Conference, Inc. (Doc. #12979)	389
Earthjustice (Doc. #14564)	390
Center for Rural Affairs (Doc. #15029)	391
Texas Wildlife Association (Doc. #12251)	391
Protect Americans Now (Doc. #12726)	391
Citizens Committee to Complete the Refuge (Doc. #14738.1)	392
Los Angeles Waterkeepers (Doc. #15060)	392
Delaware Riverkeeper Network (Doc. #15383)	393
Missouri and Associated Rivers Coalition (Doc. #15528)	394
Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394) ..	394
Waterkeeper Alliance et al. (Doc. #16413)	395
Congress of the United States, Senate Committee on Environment and Public Works et al. (Doc. #16564)	397
O'Neil LLP (Doc. #16559)	398

8.2. INCLUSION OF WETLANDS, LAKES, DITCHES AS TRIBUTARIES 398

AGENCY SUMMARY RESPONSE	398
Issue: Wetlands, Lakes, and Ponds	399
Issue: Ditches as Tributary	400
SPECIFIC COMMENTS	401
Region 10 Tribal Caucus (Doc. #14927)	401
Pueblo of Sandia (Doc. #2729)	401
Missouri Department of Transportation (Doc. #3313)	402
Virginia Department of Transportation (Doc. #12756)	402
North Carolina Forest Service, North Carolina Department of Agriculture (Doc. #14122)	403
Texas Commission on Environmental Quality (Doc. #14279)	404
North Dakota Office of the Governor et al. (Doc. #15365)	404
Ohio Department of Natural Resources et al. (Doc. #15421)	405
Attorney General, State of Michigan (Doc. #16469)	407
Tennessee Department of Transportation (Doc. #16470)	408
State of South Dakota (Doc. #16925)	408
State of Alaska (Doc. #19465)	409
Skamania County Board of Commissioners, Washington (Doc. #2469.1)	410
Franconia Township, Pennsylvania (Doc. #8661)	410
Murray County Board of Commissioners (Doc. #7528)	410
City of Chesapeake, Virginia (Doc. #9615)	412
County of Henry, Virginia (Doc. #10949)	413
Board of County Commissioners, Otero County, New Mexico (Doc. #14321)	413
New Mexico Environment Department (Doc. #16552)	413
Bureau of Environmental Services, City of Portland, Oregon (Doc. #16662) ...	414
Dolores Water Conservancy District and Southwestern Water Conservation District, Colorado (Doc. #19461)	414
North Dakota Water Resource Districts Association (Doc. #5596)	416
Nebraska Association of Resources Districts (Doc. #11855)	416
California Association of Sanitation Agencies (Doc. #12832)	417
Association of California Water Agencies (Doc. #12978)	418
Western Coalition of Arid States (Doc. #14407)	418
Rhode Island Rivers Council (Doc. #16367)	420
Washington State Water Resources Association (Doc. #16543)	420
Michigan Association of Conservation Districts (Doc. #16583)	421
Federal Water Quality Coalition (Doc. #15822.1)	422
Water Advocacy Coalition (Doc. #17921.1)	422
Virginia Manufacturers Association (Doc. #18821)	423
Action United et al. (Doc. #18859)	424
Minnkota Power Cooperative, Inc. (Doc. #19607)	424
Kerr Environmental Services Corp. (Doc. #7937.1)	424
Portland Cement Association (Doc. #13271)	426
Associated General Contractors of America (Doc. #14602)	429
Vulcan Materials Company (Doc. #14642)	430
National Association of Home Builders (Doc. #19540)	431
New Mexico Mining Association (Doc. #8644)	434

Kansas Independent Oil & Gas Association (Doc. #12249).....	435
Alliance Coal, LLC (Doc. #14577).....	436
Devon Energy Corporation (Doc. #14916).....	437
Sinclair Oil Corporation (Doc. #15142)	437
Ohio Coal Association (Doc. #15163).....	438
National Sustainable Agriculture Coalition (Doc. #15403).....	438
Pennsylvania Aggregates and Concrete Association (Doc. #16353).....	439
National Farmers Union (Doc. #6249)	440
Alameda County Cattlewomen (Doc. #8674).....	441
Michigan Farm Bureau (Doc. #10196).....	443
North American Meat Association and American Meat Institute (Doc. #13071)	
.....	443
Kennewick Irrigation District, Kennewick, Washington (Doc. #13571)	444
American Exploration & Mining Association (Doc. #13616).....	444
Western Growers Association (Doc. #14130)	445
National Corn Growers Association (Doc. #14968).....	445
Klamath Water Users Association (Doc. #15063).....	446
Union County Cattlemen (Doc. #15261)	446
Beet Sugar Development Foundation (Doc. #15368).....	447
Jensen Livestock and Land LLC (Doc. #15540)	448
Florida Crystals Corporation (Doc. #16652)	449
North Dakota Farmers Union (Doc. #16930.1)	450
Agribusiness Association of Kentucky et al. (Doc. #18005).....	450
Hampton Roads Planning District Commission, Chesapeake, Virginia (Doc. #9612)	451
Georgia Department of Transportation (Doc. #14282.1).....	451
Department of Public Works, City of Chesapeake, Virginia (Doc. #5612.1)	452
Black Hills Corporation (Doc. #6248).....	453
Clearwater Watershed District et al. (Doc. #9560.1).....	453
Central Massachusetts Regional Stormwater Coalition (Doc. #15443.1)	454
Duke Energy (Doc. #13029)	454
Murray Energy Corporation (Doc. #13954)	455
Southern Company (Doc. #14134)	456
Santa Clara Valley Water District, California (Doc. #14776)	457
Nucor Corp. (Doc. #14963)	457
Colorado River Water Conservation District, Colorado (Doc. #15070)	458
Illinois Fertilizer & Chemical Association (Doc. #15129).....	458
Tri-State Generation and Transmission Association, Inc. (Doc. #16392).....	459
Texas Water Development Board (Doc. #16563).....	459
Ducks Unlimited (Doc. #11014).....	459
Southern Environmental Law Center et al. (Doc. #13610)	460
Chesapeake Bay Foundation (Doc. #14620)	461
National Wildlife Federation (Doc. #15020)	462
American Rivers (Doc. #15372)	465
Natural Resources Defense Council et al. (Doc. #15437)	465
National Federation of Independent Business (Doc. #8319).....	467

Earthjustice (Doc. #14564)	467
Center for Rural Affairs (Doc. #15029).....	468
Alabama Rivers Alliance (Doc. #14280).....	468
Atlanta Audubon Society (Doc. #14281).....	469
Clean Water Action et al. (Doc. #14884)	470
Conservancy of Southwest Florida (Doc. #14980).....	470
Clean Water Action Maryland et al. (Doc. #15072).....	471
Tulane Environmental Law Clinic et al (Doc. #15123).....	471
Stormwater Management Commission, Lake County, Illinois (Doc. #15381) ..	471
Wisconsin Wetlands Association (Doc. #15629)	472
The River Alliance of Wisconsin (Doc. #16344)	472
Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394) ..	473
Michigan United Conservation Clubs (Doc. #16395)	473
Waterkeeper Alliance et al. (Doc. #16413)	474
Red River Valley Association (Doc. #16432)	475
Ruby Valley Conservation District, Montana (Doc. #16477)	476
Society for Freshwater Science (Doc. #11783)	476
Florida Stormwater Association (Doc. #14613)	477
Robert J. Pierce, PhD, Wetland Science Applications, Inc. (Doc. #4958)	477
O'Neil LLP (Doc. #16559).....	478
8.3. RELEVANCE OF BREAKS IN OHWM.....	478
AGENCY SUMMARY RESPONSE	478
Issue: General Comments Opposing and Supporting Approach to Break in OHWM	478
Issue: Difficulties in determining OHWM, length of break, and contribution of flow	479
Issue: Break in OHWM should sever jurisdiction	481
SPECIFIC COMMENTS	483
U.S. House of Representatives Committee on Space, Science and Technology (Doc. #16386)	483
North Carolina Department of Environment and Natural Resources (Doc. #14984)	483
San Carlos Apache Tribe (Doc. #15067).....	484
Ohio Department of Natural Resources et al. (Doc. #15421).....	484
California Department of Transportation, Division of Environmental Analysis (Doc. #19538)	485
Western Coalition of Arid States (Doc. #14407).....	486
Flood Control and Water Conservation District, Riverside County, California (Doc. #14581)	486
City of Buckeye, Arizona (Doc. #14591)	486
American Foundry Society (Doc. #15148).....	486
Federal StormWater Association (Doc. #15161).....	487
Water Advocacy Coalition (Doc. #17921.1)	488
Kerr Environmental Services Corp. (Doc. #7937.1).....	488
El Dorado Holdings, Inc. (Doc. #14285).....	489
National Association of Home Builders (Doc. #19540).....	491

Pennsylvania Coal Alliance (Doc. #13074).....	492
National Stone, Sand and Gravel Association (Doc. #14412).....	492
Halliburton Energy Services, Inc. (Doc. #15509).....	493
Alpha Natural Resources, Inc. (Doc. #15624).....	493
Pennsylvania Grade Crude Oil Coalition (Doc. #15773)	496
Dominion Resources Services, Inc. (Doc. #16338).....	496
Pennsylvania Aggregates and Concrete Association (Doc. #16353).....	496
Montana Farm Bureau Federation (Doc. #12715).....	497
National Chicken Council, National Turkey Federation, and U.S. Poultry & Egg Association (Doc. #14469)	497
Charlotte-Mecklenburg Storm Water Services (Doc. #3431).....	498
Duke Energy (Doc. #13029).....	498
EcoSynthesis Scientific & Regulatory Services (Doc. #14586).....	499
Metropolitan Water District of Southern California (Doc. #14637).....	499
ERO Resources Corporation (Doc. #14914)	499
Pennsylvania Independent Oil and Gas Association (Doc. #15167)	500
Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394) ..	500
Western Resource Advocates (Doc. #16460)	501
Missouri Coalition for the Environment (Doc. #16372).....	502
O'Neil LLP (Doc. #16559).....	503

8.4. TRIBUTARIES DISTINGUISHED FROM NON-JURISDICTIONAL GULLIES, RILLS, NON-WETLAND SWALES..... 503

AGENCY SUMMARY RESPONSE.....	503
Issue: Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale	503
Issue: Need for additional factors and specific guidance and methodology on determining bed and banks and OHWM, especially in the arid West.	506
Issue: Lack of clarity problematic for certain sectors including farming, ranching, and mining.	508
SPECIFIC COMMENTS	510
U.S. House of Representatives Committee on Space, Science and Technology (Doc. #16386)	510
North Carolina Department of Agriculture and Consumer Services (Doc. #14747)	510
State of Oregon (Doc. #15218).....	511
Ohio Department of Natural Resources et al. (Doc. #15421).....	511
City of Chesapeake, Virginia (Doc. #9615).....	512
County of Henry, Virginia (Doc. #10949).....	513
Board of Supervisors, Maricopa County, Arizona (Doc. #14132.1)	513
Washington County Commission, Utah (Doc. #14991)	514
South Big Horn County Conservation District, Wyoming (Doc. #17264).....	514
Virginia Department of Transportation (Doc. #12756)	514
Association of Clean Water Administrators (Doc. #13069).....	515
Western Coalition of Arid States (Doc. #14407).....	515
Western Urban Water Coalition (Doc. #15178.1)	515

California Department of Transportation, Division of Environmental Analysis (Doc. #19538)	518
Arizona Chamber of Commerce and Industry (Doc. #14639).....	518
Aluminum Association (Doc. #15388)	519
National Association of Manufacturers (Doc. #15410).....	520
American Council of Engineering Companies (Doc. #15534).....	521
Business Council of Alabama (Doc. #15538).....	521
GBMC & Associates (Doc. #15770)	522
Federal Water Quality Coalition (Doc. #15822.1).....	522
Water Advocacy Coalition (Doc. #17921.1)	524
National Association of Home Builders (Doc. #19540).....	526
Pennsylvania Coal Alliance (Doc. #13074).....	527
Newmont Mining Corporation (Doc. #13596)	527
Arizona Mining Association (Doc. #13951).....	528
Freeport-McMoRan Inc. (Doc. #14135 and Doc. #14135.1)	529
The Mosaic Company (Doc. #14640).....	533
National Mining Association (Doc. #15059).....	534
Halliburton Energy Services, Inc. (Doc. #15509).....	539
Alpha Natural Resources, Inc. (Doc. #15624).....	540
Dominion Resources Services, Inc. (Doc. #16338).....	541
Alameda County Cattlewomen (Doc. #8674).....	542
Montana Farm Bureau Federation (Doc. #12715).....	542
North American Meat Association and American Meat Institute (Doc. #13071)	543
Kennewick Irrigation District, Kennewick, Washington (Doc. #13571)	544
Kansas Agriculture Alliance (Doc. #14424).....	544
Georgia Paper & Forest Products Association (Doc. #14924)	545
North Carolina Farm Bureau Federation (Doc. #15078).....	545
Missouri Farm Bureau Federation (Doc. #15224).....	546
National Alliance of Forest Owners (Doc. #15247)	547
American Forest & Paper Association (Doc. #15420)	548
Jensen Livestock and Land LLC (Doc. #15440)	549
Iowa Farm Bureau Federation (Doc. #15633.1)	549
Montana Stockgrowers Association (Doc. #16937)	550
Greene County Farm Bureau (Doc. #17007).....	551
Agribusiness Association of Kentucky et al. (Doc. #18005).....	551
Department of Public Works, City of Chesapeake, Virginia (Doc. #5612.1)	552
Duke Energy (Doc. #13029).....	552
Southern Company (Doc. #14134)	553
EcoSynthesis Scientific & Regulatory Services (Doc. #14586).....	554
ERO Resources Corporation (Doc. #14914)	557
American Public Power Association (Doc. #15008).....	558
Colorado River Water Conservation District, Colorado (Doc. #15070)	558
Association of Metropolitan Water Agencies et al. (Doc. #15157).....	559
Pennsylvania Independent Oil and Gas Association (Doc. #15167)	559
Wisconsin Electric Power Company and Wisconsin Gas LLC (Doc. #15407)..	560

Southern Environmental Law Center et al. (Doc. #13610)	560
Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233).....	561
Natural Resources Defense Council et al. (Doc. #15437)	561
Association of State Floodplain Managers, Inc. (Doc. #19452).....	562
The Association of State Wetland Managers (Doc. #14131)	563
Texas Wildlife Association (Doc. #12251)	563
Wyoming Outdoor Council (Doc. #16528)	564
Office of the Governor, State of Utah (Doc. #16534)	566
U.S. Senators Jeff Flake and John McCain (Doc. #1377)	566
Environmental Technology Consultants (Doc. #2597)	567
Whitman, Requardt & Associates, LLP (Doc. #1330)	567
8.5. SUPPLEMENTAL COMMENTS ON TRIBUTARIES	568
SPECIFIC COMMENTS	568
Anonymous (Doc. #3300.1).....	568
L. Banks (Doc. #5554.2).....	569
Anonymous (Doc. #7447).....	569
Office of the Administrator, Science Advisory Board, U.S. Environmental Protection Agency (Doc. #7531)	569
Board of Douglas County Commissioners, Castle Rock, CO (Doc. #8145)	570
Terry E. Branstad, Governor, State of Iowa et al. (Doc. #8377)	571
Southern California Association of Governments (Doc. #8534.1).....	571
B. Forman (Doc. #9065)	571
Michael Richard (Doc. #9291)	571
RiverStone Group, Inc. (Doc. #10742).....	572
County of Henry, Collinsville, Virginia (Doc. #10949)	573
Anonymous (Doc. #11304).....	573
Anonymous (Doc. #11350).....	573
T. Walsh (Doc. #11437).....	574
Anonymous (Doc. #11481).....	574
Norton County Road & Bridge (Doc. #11746).....	575
Anonymous (Doc. #11761).....	576
Jack Kearns (Doc. #11860).....	577
Vicki Watson (Doc. #12081)	577
Office of the Board Attorney, Board of Supervisors Jackson County, Mississippi (Doc. #12262)	577
Mesa County, Colorado Board of County Commissioners (Doc. #12713)	578
Milan Township Board of Trustees (Doc. #13044)	578
Jason Reott (Doc. #13199).....	579
NRG Energy, Inc. (Doc. #13995)	580
Todd Wilkinson (Doc. #13443)	580
Newmont Mining Corporation (Doc. #13596)	581
Southern Environmental Law Center et al. (Doc. #13610)	582
D. Fleming (Doc. #13654).....	582
Tamara Choat (Doc. #13701)	583
Big Horn County State of Wyoming (Doc. #14571)	584

Waters of the United States Coalition (Doc. #14589)	585
The Clean Energy Group Waters Initiative (Doc. #14616)	585
State of Oklahoma (Doc. #14773)	586
Patti Buck (Doc. #14825)	587
Clean Water Action (Doc. #15015)	587
The Heritage Foundation (Doc. #15055)	589
Lea Soil and Conservation District Board of Supervisors (Doc. #15144.1)	590
Arizona Department of Transportation (Doc. #15215)	591
Southern Ute Indian Tribe Growth Fund (Doc. #15386)	592
Wyoming County Commissioners Association (Doc. #15434)	592
Pennsylvania Farm Bureau (Doc. #15508)	593
Countrymark Cooperative Holding Corporation, LLC; Countrymark Refining and Logistics, LLC (Doc. #15656)	594
K. Ransford (Doc. #15675)	597
Anonymous (Doc. #16234)	597
North Dakota Farmers Union (Doc. #16390)	597
Virginia Poultry Federation (Doc. #16604)	598
D. Gillham (Doc. #16906)	599
Shasta County Farm Bureau (Doc. #16924)	599
Arizona Rock Products Association (Doc. #17055)	599
Atlantic Legal Foundation (Doc. #17361)	601
D. Furtado (Doc. #17659)	602
A. Cilimburg (Doc. #17667)	602
D. Parsons (Doc. #17789)	602
J. Holder (Doc. #17999)	602
R. McKinnon (Doc. #18845)	603
Donald Shawcroft (Doc. #18569)	603
Anonymous (Doc. #18801)	604
City of Olathe Kansas (Doc. #18982)	604
Jon Klingel (Doc. #19166)	604
J. R. Dorney (Doc. #19235)	607
Halliburton Energy Services, Inc. (Doc. #19458)	608
REFERENCES	609
SUPPLEMENTAL REFERENCES	631

Topic 8. TRIBUTARIES

8.1. DEFINITION

Agency Summary Response

The agencies received many comments in response to the proposed definition of “tributary” in the proposed rule. The proposed rule defined “tributary” as:

“a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (1)(i) through (iv) of this definition. In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (1)(i) through (iii) of this definition. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural break (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (2)(iii) or (iv) of this definition.”

Many commenters indicated that the proposed definition of “tributary” was ambiguous and would result in jurisdiction asserted over many waters that have not previously been considered jurisdictional. Commenters expressed particular concerns with intermittent and ephemeral waters and artificial or man-made waters, such as canals and ditches. A number of commenters questioned the agencies’ legal ability to assert jurisdiction over such waters, especially ephemeral waters and man-made waters. Other commenters supported the proposed inclusion of intermittent, ephemeral and man-made waters as tributaries, when those waters functioned as tributaries. Many commenters expressed concern that the proposed definition would consider ditches, especially stormwater conveyances, as waters of the United States even where such features were already regulated as point sources under the National Pollutant Discharge Elimination System (NPDES).

Many commenters raised concerns with the proposed definition’s characterization of “contributes flow,” and suggested that this could subject nearly any water located anywhere on the landscape to jurisdiction as a tributary. Many commenters did not agree that waters such as wetlands, lakes, ponds and impoundments should be considered tributaries. These commenters believed that including such waters as tributaries rendered the definition confusing, illogical and

contrary to the public’s common understanding of the term “tributary” as a channel or stream characterized by flowing water.

Many commenters were uncomfortable with the use of ordinary high water mark (OHWM) in the definition of tributary due to inconsistent identification of OHWM indicators regionally and among the agencies’ field staff. Other commenters supported the use of OHWM and bed and banks as physical indicators of tributaries. Numerous commenters were concerned that the jurisdictional status of a tributary would be extended upstream of a natural or man-made break in the OHWM and/or presence of bed and bank if such features existed upstream of a break.

The final rule is similar to the proposal, but important revisions and clarifications have been made in response to public comments. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an OHWM. The rule includes ephemeral streams that meet the definition of tributary as waters of the United States, because the agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. If a water lacks sufficient flow to create the physical characteristics of bed and banks and an OHWM, it is not considered “tributary” under the rule. To further emphasize this point, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not waters of the United States.

CWA jurisdiction has historically been asserted over intermittent and ephemeral waters. The longstanding regulatory definition of “waters of the United States” included “tributaries” without any limitations regarding volume or duration of flow. The December 2008 Guidance on post-*Rapanos* implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water, and that intermittent or seasonal streams were jurisdictional without the need for a case-specific showing of significant nexus. Federal court decisions, some of which are decades old, have supported assertions that intermittent and ephemeral waters are jurisdictional.

The final rule does not distinguish among natural, modified, and constructed features in the definition of “tributary.” The preamble to the final rule, as well as Section VII of the Technical Support Document, describe that the scientific literature supports a conclusion that waters meeting the definition of “tributary,” either individually or in combination have a significant nexus. The final rule therefore indicates that waters that meet the definition of “tributary” and are not excluded under paragraph (b), are considered jurisdictional. The rationale for this approach is based on the fact that modified and constructed tributaries perform many of the same functions as natural tributaries, especially the conveyance of water that carries nutrients, pollutants, and other constituents, both good and bad, to traditional navigable waters, interstate waters, and the territorial seas.

Section I of the Technical Support Document, discusses the historic scope of the existing regulatory definition of “waters of the United States,” and also describes the consistency of the final rule with both the statute and judicial decisions, including those of the U.S. Supreme Court.

While paragraph (b) of the final rule provides for the exclusion of many features from consideration as waters of the United States, including stormwater control features created in dry land and many ditches regardless of use, Section I of the Technical Support Document also provides the legal framework under which a ditch could be considered both a point source and a water of the United States.

The definition of “tributary” in the final rule no longer includes wetlands, lakes, ponds and impoundments as tributaries. However, the definition retains the phrase “contributes flow, either directly or through another water.” This reflects scientific literature about the connectivity among waters. The final rule’s definition makes clear that a water is considered tributary only if (1) it contributes flow, either directly or through another water, to a traditional navigable water, interstate water, or the territorial seas, and (2) it has the physical indicators of a bed and banks and an OHWM. The term “ordinary high water mark” has been defined in the regulations of the U.S. Army Corps of Engineers (Corps) since 1986. It has been used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. The final rule does not change the definition of OHWM, but simply incorporates it into EPA’s regulations for consistency and clarity.

Streams with a break in OHWM can be water of the United States under current practice, which dictates that a natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). The agencies’ position is supported by science, and the U.S. Environmental Protection Agency Office of Research and Development report, “Connectivity of Streams and Wetlands to Downstream Waters,” which discusses how breaks in stream channel characteristics change the nature of the connection to downstream waters, but do not remove it.

Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

Specific Comments

National Association of State Foresters (Doc. #14636)

- 8.1 ...[T]he proposed rule’s attempt at categorically defining “all tributaries” as WOTUS including man-made ditches, and certain lands adjacent to tributaries such as riparian areas and floodplains, would seem to result in a much broader reach of federal jurisdiction, regardless of whether or not the tributary has a significant nexus to, or relative permanence of, water. We propose that if a new definition of the term tributary is necessary, then that new definition needs to be more precise than what is currently proposed as “all tributaries.” (p. 2)

Agency Response: See summary essay 8.1 above for response. With respect to commenter’s assertion that the proposed definition is an expansion of jurisdiction -- The agencies disagree with the assertion the definition of tributary would expand

US EPA ARCHIVE DOCUMENT

jurisdiction. CWA jurisdiction historically has been asserted over intermittent and ephemeral waters. As discussed at greater detail in the summary essay for Section 8.1.1 below, the longstanding regulatory definition of “waters of the United States” included “tributaries” without any limitations regarding volume or duration of flow. The December 2008 Guidance on post-*Rapanos* implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water, and that intermittent or seasonal streams were jurisdictional without the need for a case-specific showing of significant nexus. Regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow but may not declare an ephemeral stream non-jurisdictional altogether. Federal court decisions, some of which are decades old, have supported assertions that intermittent and ephemeral waters are jurisdictional. Practice after *Rapanos* has considered ephemeral waters as jurisdictional under the CWA where they have a significant nexus to a traditional navigable water. Similarly, longstanding agency practice has asserted jurisdiction over certain ditches, and thus agencies do not view the final rule’s approach to ditches as an expansion. For more discussion, see Compendium #6 “Ditches.” With respect to commenter’s assertion that the definition is not sufficiently precise -- The final rule definition provides greater clarity than under previous definitions of waters of the United States by providing, for the first time, a definition of “tributary.” Previous definitions of waters of the United States regulated all tributary streams without qualification because the regulations did not define tributary. The final rule defines “tributary” by requiring a bed and banks and an OHWM (physical characteristics created by sufficient volume, frequency, and duration of flow), and requiring that the water contributes flow, either directly or through another water, to a traditional navigable water, interstate water, or the territorial seas. The definition clarifies that natural or man-made breaks in bed and banks or OHWM do not result in a water losing its tributary status, and that a tributary can be natural, man-altered, or man-made. The definition is based on the best available science, intent of the CWA, and caselaw, and is consistent with current practice. To ensure clarity on issues that public comments and the agencies’ implementation experience indicates would be helpful, the final rule definition continues to explain the relevance of breaks in OHWMs and man-made and man-altered streams.

In response to public comments and to further increase clarity, the final rule preamble defines perennial, intermittent, and ephemera flows. In addition, the preamble includes a definition of bed and banks adapted largely from longstanding agencies’ practice as well as public comments. The agencies have added the Corps’ existing regulatory definition of “ordinary high water mark” to EPA’s regulations, and Corps technical manuals are available to help ensure consistency with how field staff identify presence of an OHWM. For more discussion of definitions and their impact on overall final rule clarity, see Compendium #14. The final rule also provides that wetlands, lakes, and ponds that lack bed, banks, and an ordinary high water mark should be evaluated as adjacent waters and not as tributaries. The final rule does not provide quantitative measures for tributary, because peer-reviewed

science establishes no flow threshold below which a tributary would not have an important effect on the integrity of downstream traditional navigable waters, interstate waters, or the territorial seas either alone or in combination with similarly situated waters (See Compendium #9, Scientific Evidence Supporting Rule).

Tennessee Valley Association (Doc. #17470)

- 8.2 ...With the proposed "tributary" definition, the Agencies have expanded the scope of features that are currently regulated as tributaries, extending jurisdiction to features like ephemeral drainages and wet-weather conveyances that have not previously been categorically jurisdictional.³)

Agency Response: The agencies disagree with the assertion that intermittent and ephemeral waters have not been jurisdictional previously. CWA jurisdiction historically has been asserted over intermittent and ephemeral waters. The longstanding regulatory definition of “waters of the United States” included “tributaries” without any limitations regarding volume or duration of flow. The December 2008 Guidance on post-Rapanos implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water, and that intermittent or seasonal streams were jurisdictional without the need for a case-specific showing of significant nexus. Regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow but may not declare an ephemeral stream non-jurisdictional altogether. See, e.g., 40 CFR § 131.10(g)(2). Several states and tribes expressly cover intermittent and ephemeral waters in their water quality standards submitted to EPA for review under the CWA, including Arizona, Delaware, New Mexico, South Carolina, and the Ute Mountain Ute Tribe, among others. Federal court decisions, some of which are decades old, have supported assertions that intermittent and ephemeral waters are jurisdictional. For example, the U.S. District court in Arizona held in 1975 that the definition of waters of the United States includes any waterway: “ ... a legal definition of ‘navigable waters’ or ‘waters of the United States’ within the scope of the Act includes any waterway within the United States also including normally dry arroyos through which water may flow, whether such water will ultimately end up in public waters such as a river or stream, tributary to a river or stream, lake, reservoir, bay, gulf, sea or ocean either within or adjacent to the United States.” *United States v. Phelps Dodge Corp*, 391 F.Supp 1181, 1187 (1975). Practice after Rapanos has considered ephemeral waters as jurisdictional under the CWA where they have a significant nexus to a traditional navigable water. For example, EPA and the Army Corps of Engineers issued a joint memorandum in 2007 asserting jurisdiction over a first-order ephemeral stream in Riverside County, California, based on its significant nexus to a traditional navigable water. “Assertion of Jurisdiction for Jurisdictional Determination SPL-2007-261-FBV” (Dec. 6, 2007), available at: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/RelatedResources/CWAGuidance.aspx>.

- 8.3 ... the newly proposed definition of tributaries includes waters and features well beyond those that have been deemed jurisdictional based on current practice under existing guidance from the Agencies. The proposed rule defines "tributary" as "a water physically characterized by the presence of a bed and banks and ordinary high water mark ... which contributes flow, either directly or through another water" to a TNW, interstate water, territorial sea, or impoundment. 79 Fed. Reg. 22,263. In addition, wetlands, lakes, and ponds can be treated as tributaries if they contribute flow to a TNW, interstate water, or territorial sea, even if they lack a bed, banks, and ordinary high water mark (OHWM). In our experience, this represents a major expansion over recent determinations of jurisdiction. Also, the Proposal specifically includes "ditches" in the definition of tributary, meaning that ditches with a bed, bank, and OHWM that contribute flow will be considered jurisdictional unless they meet one of the narrow exclusions. This change conflicts with the 2008 Rapanos Guidance which provided that ditches "are generally not waters of the United States...". We believe that, in spite of the Agencies' stated position, the breadth of this definition for tributaries leaves room for regulating a considerable number of water features not previously considered to be "waters of the United States," including ephemeral drainages, wet weather conveyances, ditches, and streams carrying minimal water volumes and which are remote from any navigable-in-fact water. (p. 5)

Agency Response: As discussed in the summary essay above, the agencies do not view the proposed or final rule as an expansion. CWA programs have since its enactment in 1972 protected the quality within all waters of the United States, and not just the downstream navigable waters. As discussed in the preamble, the U.S. Supreme Court is in agreement that the term "waters of the United States" encompasses waters that are not navigable in the traditional sense. See Technical Support Document for more discussion. As discussed in the response immediately above, ephemeral and intermittent streams have been considered "waters of the US" under longstanding practice. Similarly, longstanding agency practice has asserted jurisdiction over certain ditches, and thus do not view the final rule's approach to ditches as an expansion. For example, under previous regulations, the agencies' longstanding practice has been to consider ditches to be tributaries and thus a water of the United States where they contributed flow to the tributary system, particularly where a ditch had been excavated in a natural stream or relocated a natural stream. When the 2008 interagency *Rapanos* Guidance discussed ditches that were not jurisdictional, the guidance identified non-jurisdictional ditches as those ditches (including roadside ditches) excavated wholly in and draining only uplands and that did not carry a relatively permanent flow of water. The final rule has expanded this exclusion for ditches encompass ephemeral ditches that are not a relocated tributary or excavated in a tributary, intermittent ditches that are not a relocated tributary, excavated in a tributary, or drain wetlands, and ditches that do not flow, either directly or through another water, into a traditional navigable water, interstate water, or territorial sea. As a result, not only is the final rule not an expansion because it regulates certain ditches, it regulates fewer ditches than under current practice. For more discussion, see Compendium #6 "Ditches." With respect to regulation of ditches and wet weather conveyances, it is not the intent of the agencies to regulate new types of waters that were not historically regulated. As a result, the final rule includes an explicit exclusion from the definition of water of

the United States for stormwater control features constructed to convey, treat, or store stormwater that are created in dry land ((b)(6)). This exclusion is discussed further in Compendium #7, “Features and Waters Not Jurisdictional.” The CWA does not regulate lands as “waters of the United States.” The proposal’s reference to riparian areas and floodplains in the definition of “neighboring” adjacent waters was to waters in the riparian area or floodplain, and did not seek to regulate lands in those areas. The definition of “neighboring” has been revised in response to comments received to clarify this and related points. For more information, see Compendium #3, “Adjacent Waters,” particularly subsection 3.2 on the definition of neighboring. For more discussion on OHWM, see the summary essays and individual responses below in this compendium.

Bullhead City, Arizona (Doc. #4185)

- 8.4 ...EPA also proposes to include "natural, man-altered, or man-made" in the new definition of tributary, appearing that the EPA is basing its categorical classification of tributaries as "waters of the U.S.", regardless of their size, amount of flow and distance from a traditional navigable water, on the significant nexus test articulated by Justice Kennedy in his concurring opinion in *Rapanos v. United States*, 547 U.S. 715 (2006), which was meant to be applied in a site-specific analysis; ... (p. 1)

Agency Response: See summary response for section 8.1. Section III of the preamble to the final rule and section II of the Technical Support Document describes the agencies’ significant nexus analysis.

Pennsylvania Fish and Boat Commission (Doc. #4826)

- 8.5 From a state resource agency's perspective, the PFBC interprets most of the proposed rule as straight forward, however the "tributaries" and "other waters" components of the rule appear to be the most challenging to achieve consistency on a nationwide basis. The PFBC firmly lauds the facts from scientific peer reviewed literature that reveal the importance of tributaries and the ecological importance of maintaining the biological, physical, and chemical integrity to the downstream watershed. The PFBC has in fact, recognized the value of tributaries and has included in agency policy the following provision regarding tributaries within Pennsylvania Code Title 58 Recreation§ 57.11 Statements of Policy, Listing of wild trout streams. (4) *Tributary linkages. Tributaries of wild trout streams are classified as wild trout stream for their function as habitat for segments of wild trout populations, including nurseries and refuges, and in sustaining water quality necessary for wild trout.* This language provides protection for a specific fish community based on maintenance of the physical, and chemical quality of tributaries in a watershed that supports a cold water fish community. The PFBC suggests this policy language is analogous in intent and in support of language defining tributaries and their functions in the proposed "waters of the United States" definition. (p. 2)

Agency Response: The agencies agree with the commenter that peer-reviewed scientific literature, including that discussing aquatic biota such as fish, support the approach in the proposed and final rules.

Quapaw Tribe of Oklahoma (the O-Gah-Pah) (Doc. #7980)

- 8.6 2. Definition of Tributary. Existing regulations do not define this term. In practice, the term is usually restricted to active channels with ordinary high water marks that connect (either directly or through downstream channels) to a traditional navigable water. Under the proposed rule, a tributary would be defined to include natural and manmade water bodies with ordinary high water marks (regardless of flow regime), in addition to wetlands and other waters that do not have ordinary high water marks, provided that the water feature contributes flow (directly or indirectly) to a traditional navigable water. Features that would otherwise meet the definition of tributary do not lose that status if, for any length, there are natural or manmade breaks, provided that there is an ordinary high water mark upstream of the break. **The proposed rule's definition of tributaries would add a large number of previously unregulated features to those considered tributaries to traditional navigable waters, and thus by rule, are Waters of the U.S.** (p. 2)

Agency Response: See the section on OHWM below in this compendium for discussion and responses to comments on OHWM. With respect to waters being newly regulated, the agencies disagree with the assertion that many types of previously unregulated waters would be jurisdictional as tributaries. Longstanding agency practice has asserted jurisdiction over certain ditches, and thus do not view the final rule's approach to ditches as an expansion. For example, under previous regulations, the agencies' longstanding practice has been to consider ditches to be tributaries and thus a water of the United States where they contributed flow to the tributary system, particularly where a ditch had been excavated in a natural stream or relocated a natural stream. When the 2008 interagency *Rapanos* Guidance discussed ditches that were not jurisdictional, the guidance identified non-jurisdictional ditches as those ditches (including roadside ditches) excavated wholly in and draining only uplands and that did not carry a relatively permanent flow of water. The final rule has expanded this exclusion for ditches encompass ephemeral ditches that are not a relocated tributary or excavated in a tributary, intermittent ditches that are not a relocated tributary, excavated in a tributary, or drain wetlands, and ditches that do not flow, either directly or through another water, into a traditional navigable water, interstate water, or territorial sea. As a result, not only is the final rule not an expansion because it regulates certain ditches, it regulates fewer ditches than under current practice. For more discussion, see Compendium #6 "Ditches." Similarly, CWA jurisdiction historically has been asserted over intermittent and ephemeral waters. The longstanding regulatory definition of "waters of the United States" included "tributaries" without any limitations regarding volume or duration of flow. The December 2008 Guidance on post-Rapanos implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water, and that intermittent or seasonal streams were jurisdictional without the need for a case-specific showing of significant nexus. Regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow but may not declare an ephemeral stream non-jurisdictional altogether. See, e.g., 40 CFR § 131.10(g)(2). Several states and tribes expressly cover intermittent and

ephemeral waters in their water quality standards submitted to EPA for review under the CWA, including Arizona, Delaware, New Mexico, South Carolina, and the Ute Mountain Ute Tribe, among others. Federal court decisions, some of which are decades old, have supported assertions that intermittent and ephemeral waters are jurisdictional. For example, the U.S. District court in Arizona held in 1975 that the definition of waters of the United States includes any waterway: “... a legal definition of ‘navigable waters’ or ‘waters of the United States’ within the scope of the Act includes any waterway within the United States also including normally dry arroyos through which water may flow, whether such water will ultimately end up in public waters such as a river or stream, tributary to a river or stream, lake, reservoir, bay, gulf, sea or ocean either within or adjacent to the United States.” United States v. Phelps Dodge Corp, 391 F.Supp 1181, 1187 (1975). Practice after Rapanos has considered ephemeral waters as jurisdictional under the CWA where they have a significant nexus to a traditional navigable water. For example, EPA and the Army Corps of Engineers issued a joint memorandum in 2007 asserting jurisdiction over a first-order ephemeral stream in Riverside County, California, based on its significant nexus to a traditional navigable water. “Assertion of Jurisdiction for Jurisdictional Determination SPL-2007-261-FBV” (Dec. 6, 2007), available at: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/RelatedResources/CWAGuidance.aspxType here>

Pennsylvania Department of Environmental Protection, Office of Water Management (Doc. #7985)

- 8.7 Tributary - Define to mean a channel or conveyance of surface water having both defined bed and banks, whether natural or artificial, with perennial or intermittent flow that flows to a larger stream or other body of water; the "bed" being the bottom/substrate area/base of the channel or conveyance; and "banks" being the break in slope between the edge of the bed of the channel and the surrounding terrain and generally parallel to the channel or conveyance. (p. 6-7)

Agency Response: See summary response for section 8.1. The preamble to the final rule indicates “for purposes of the rule, ‘bed and banks’ means the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual.”

Barona Band of Mission Indians (Doc. #10966)

- 8.8 -The final rule Section 328(c)(5) defines "tributary" expansively...

Taken literally, this standard would define most of the land area of the United States as "waters of the United States." Much rain that falls is not immediately absorbed into the ground, and, instead, runs off and is collected through ever-increasing courses, from trickles, to runnels, to rivulets, to gullies, to rills, to brooklets, to streamlets, to brooks, to creeks, to streams, and to rivers that empty into the ocean. During and after rains, such flows, even if only occasional, all drain into the ocean and other indisputably jurisdictional waters, from the smallest drainage feature to the largest, through a network

of can include tributaries of tributaries of tributaries, etc. Each of these drainage features, from the smallest to the largest, from the most occasional and with ephemeral to the most massive and continuous, contributes to the flow of water into some navigable water or ocean. Presumably, a drop of rain falling on the west edge of the continental divide in Colorado that is not absorbed or diverted will eventually find its way into the Colorado River and thence into the Pacific Ocean. Presumably, that drop could also carry a molecule of a pollutant, a grain of sediment, etc. from the continental divide into the Pacific Ocean. While the effect of that single drop on interstate commerce may be *de minimis*, the Tribe will assume that the cumulative effects of many such drops may be aggregated to produce a significant effect.

That single drop of water, along with others like it, will have a cumulative significant effect on the physical, biological, and chemical integrity of the indisputably jurisdictional waters into which they eventually flow. The EPA is correct in this conclusion. See 79 F.R. at p. 22206. But the mere fact that such a cumulative effect may exist does not, in itself, justify the regulation of that drop of water from the very first point, near the continental divide, where it first enters the most evanescent, ephemeral, and tiny drainage with a bed, banks, and OHWM, especially if that confluence of characteristics immediately ceases and does not reappear for many miles. If this conclusion did follow, then virtually the entire land mass of the United States would become "waters of the United States". At some point, virtually every drop of rain that is not absorbed or diverted will enter something that qualifies as a "tributary". From that point onward, even if there is a no further confluence of bed, banks, and OHWM for any indefinite distance, the land over which that drop passes on its way to the sea will be "waters of the United States", thereby expanding the jurisdiction of the EPA and ACE under the Clean Water Act from not just "waters of the United States" to "lands of the United States". (p. 2-3)

Agency Response: See summary responses for sections 8.1 and 8.4. Section I of the Technical Support Document describes the legal basis of the final rule and also provides a review of the historic scope of the regulatory definition of “waters of the United States.”

8.9 C. The Tribe suggests a paradigm for a more practical definition of "tributary".

Another major provision of the CWA deals with regulation of pollutants from "point sources." All sources of such pollutants must be either point sources or non-point sources, but only "point source" is defined. A "point source" is

any discernable, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged. [33 U.S.C. §1362(14)]

There is no definition for non-point source, largely because, by its nature, it is so diffuse as to defy useful definition:

Stormwater that is not collected or channeled and then discharged, but rather runs off and dissipates in a natural and unimpeded manner, is not a discharge from a point source as defined by §502(14). As we wrote in *League of Wilderness*

Defenders/Blue Mountains Biodiversity Project v. Forsgren, 309 F.3d 1881, 1884 (9th Cir., 2002):

Although nonpoint source pollution is not statutorily defined, it is widely understood to be the type of pollution that arises from many dispersed activities over large areas, and is not traceable to any single discrete source. Because it arises in such a diffuse way, it is very difficult to regulate through individual permits.

Northwest Environmental Defense Center v. Brown, 640 F.3d 1063, 1070 (9th Cir., 2011)

Point sources and non-point sources are thus the two ends of a spectrum of discharges that, at some intermediate point, switches from one to the other. In this way, they are similar to the water spectrum of trickle, rivulet, fill, gully, brooklet, streamlet, brook, creek, stream, river, and ocean. As the Ninth Circuit has recently noted in this regard,

However, when stormwater runoff is collected in a system of ditches, culverts, and channels and then is discharged into a stream or river, there is a "discernable, confined and concrete conveyance" of pollutants, and there is therefore a discharge from a point source. In other words, runoff is not inherently a nonpoint or point source of pollution. Rather, it is a nonpoint or point source under §502(14) depending on whether it is allowed to run off naturally (and is thus a nonpoint) or is collected, channeled, and discharged through a system of ditches, channels, culverts, and similar conveyances (and is thus a point source discharge).

Id

The point of inflexion of the pollutant source spectrum is the point at which runoff becomes confined into a ditch, channel, culvert, or similar structure and is thus segregated from natural free-ranging flow. The proposed rule sets this point of inflexion for water courses at the point where a rill or gully first acquires an OHWM and either a bed or a bank. The impracticality of and Constitutional problems with this definition are noted above. Instead, The Tribe suggests that the EPA replace this proposed point of inflexion for the water course spectrum to be a point that can be identified by objective and measurable factors (e.g., volume of flow, duration of flow, time of year of flow, likelihood of and capacity for carrying a significant quantity of pollutants, actual quantity and of pollutants and/or sediment, seasonality, distance to a navigable water, etc.). A point of inflexion with objective criteria is (1) far easier to administer, (2) much less likely to generate legal challenges, (3) predictable for the benefit of the regulated public, and (4) not presenting the kinds of constitutional issues that the current proposal raises. The Tribe will leave it to the EPA to consider this suggestion, in the hope that the above advantages will induce it to abandon a definition of "tributary" that needlessly causes the problems noted above, in favor of one that equally serves the purposes of the CWA without endlessly prolonging the conflicts engendered by *Rapanos*. (p. 8-9)

Agency Response: See summary response for section 8.1. Section I of the Technical Support Document provides the legal framework under which a ditch could be considered both a point source and a water of the United States. Paragraph (b) of the final rule excludes many features, including most ditches that

are not relocated tributaries or excavated in tributaries. See section IV(I) of the preamble to the final rule and summary responses in Compendium #7 “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions.

Department of Justice, State of Montana (Doc. #13625)

- 8.10 While this discussion was about tributaries and adjacent wetlands, it indicates a regulation must contain specific criteria that allow objective identification of jurisdictional waters. But in your agencies' proposal, the definitions of "neighboring," "riparian area," "floodplain," and "significant nexus," lack any such specific limiting or defining criteria as to volume off low, proximity to navigable waters, or any other parameter. The only definition containing such criteria is the definition of "tributary," in its reference to bed, banks and ordinary high water mark, but after naming those, the definition quickly departs from any objectively identifiable criteria when it says: "In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (a)(1) through (3) of this definition." (p. 3)

Agency Response: See summary response for section 8.1.

Illinois Farm Bureau (Doc. #14070)

- 8.11 In their WOTUS proposal, EPA and the Corps have defined for the first time what they consider to be a “tributary.” Making all ephemeral and intermittent tributaries jurisdictional is simply extraordinary. In practice, relying on the plain English meanings of the proposed rule, literally millions of drainage features in every part of every farming region of the country will have characteristics – a bed, bank and ordinary high water mark – that would make them tributaries. This will expand the jurisdiction of EPA and the Corps in an unprecedented manner that conflicts with both the clear direction and intent of the Supreme Court’s prior numerous decisions that sought to limit the federal jurisdiction over private lands.

One of EPA’s and the Corps’ expressly stated goals for the proposed rule was to create certainty for the regulated community. In fact and in practice, for farmers, the exact opposite will occur. As proposed, the drainage features that exist in farm fields in nearly every farming region in the country, many with visible channels, beds, banks and high water marks, all appear to be WOTUS. Whether they are or are not WOTUS will depend on the outcome of a formal determination, a process and status that will be a source of unprecedented uncertainty for farmers. Not only is there uncertainty created by the definition of tributary as it might be interpreted in the field, every farmer knows that field judgments will have their own uncertain outcome, depending on the subjective and different judgment calls made by different agency personnel. (p. 2)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features of concern to the agriculture community. Such exclusions include prior converted cropland, most ditches that are not relocated tributaries or excavated in tributaries, artificially irrigated areas that would revert to dry land should application of water to that area cease, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering or irrigation, and erosional features that do not meet the definition of “tributary” in the final rule.

Paragraph (b) also makes it clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, any feature excluded under paragraph (b) may not be considered waters of the United States under any other provision of the rule. Additionally, all statutory exemptions, including those exempting normal farming, silviculture and ranching activities from CWA section 404 permitting, remain in effect and unchanged by the final rule.

North Carolina Department of Agriculture and Consumer Services (Doc. #14747)

- 8.12 As currently drafted, the proposed rule raises legitimate concerns about the regulation of on farm ephemeral streams, ditches, ponds, and isolated wetlands. NCDA&CS opposes the new definition of tributaries as it encompasses far more waters than intended under the CWA and Supreme Court decisions, including ditches and ephemeral streams. If a definition of tributary is included in the final rule, this definition should be revised to include fewer waters. (p. 2)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features of concern to the agriculture community. Such exclusions include prior converted cropland, most ditches that are not relocated tributaries or excavated in tributaries, artificially irrigated areas that would revert to dry land should application of water to that area cease, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering or irrigation, and erosional features that do not meet the definition of “tributary” in the final rule. Paragraph (b) also makes it clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, any feature excluded under paragraph (b) may not be considered waters of the United States under any other provision of the rule. Additionally, all statutory exemptions, including those exempting normal farming, silviculture and ranching activities from CWA section 404 permitting, remain in effect and unchanged by the final rule.

San Carlos Apache Tribe (Doc. #15067)

- 8.13 Existing regulations do not define tributary. In practice, the term is usually restricted to active channels with ordinary high water marks that connect (either directly or through downstream channels) to traditional navigable waters. Under the proposed rule, a tributary would be defined to include natural and manmade water bodies with banks and beds and high water marks (regardless of flow regime), in addition to wetlands and other waters that do not have ordinary high water marks (“OHWM”), provided that the water feature contributes flow (directly or indirectly) to a traditional navigable water.

Presumably, a drop of rain falling on the west edge of the continental divide that is not absorbed or diverted will eventually find its way into the Pacific Ocean. Presumably, that drop could also carry a molecule of a pollutant from the continental divide into the Pacific Ocean. Thus, any single drop of water may have a cumulative effect on the physical, biological, and chemical integrity of jurisdictional waters into which they eventually flow. The EPA is correct in this conclusion. See 79 F.R. at p. 22206. The mere fact that such a cumulative effect may exist does not, in itself, justify the regulation of

every drop of water that may ultimately flow into a jurisdictional water. At some point, virtually every drop of rain that is not absorbed or diverted will enter something that qualifies as a “tributary” under the proposed rule. (p. 4)

Agency Response: See summary response for section 8.1. Section I of the Technical Support Document describes the legal basis of the final rule and also provides a review of the historic scope of the regulatory definition of “waters of the United States.”

Florida Department of Environmental Protection (Doc. #15080)

8.14 ...Size, flow frequency, flow rate, and distance from the nearest core federal water do not appear to be relevant inquiries when determining the jurisdictional status of tributaries. 79 Fed. Reg. at 22,206.

- The Department asks that the federal agencies clarify whether size, flow frequency, flow rate, and distance are relevant factors when assessing the degree of connectivity between individual water bodies. If so, is there opportunity to refine the jurisdictional category to account for variability in these factors? (p. 4)

Agency Response: Section III of the preamble to the final rule and section II of the Technical Support Document describes the agencies’ significant nexus analysis.

Tennessee Department of Environment and Conservation (Doc. #15135)

8.15 The SAB review of the proposed rule includes:

Tributaries, as a group, exert strong influence on the physical, chemical, biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of physical, chemical and biological processes. SAB advises EPA to reconsider the definition of tributaries because not all tributaries have ordinary high water marks- they may be absent in ephemeral streams within arid and semi-arid environments or low gradient landscapes where the flow of waters is unlikely to cause an ordinary high water mark. SAB advises EPA to consider changing the wording to "bed, bank and other evidence of flow."

Comment: The state agencies have concerns regarding EPA's broad tributary definition, specifically in the ephemeral context that will be discussed in detail below. Our experience is that there is already inconsistent distinction between erosional features or wet weather conveyances and actual streams in the field. Removing the requirement for an ordinary high water mark, when such a mark may be one of the driving characteristics that could demonstrate connectivity (and the effects that may follow) is not insubstantial or speculative would clearly call into question whether the legal test for jurisdiction would be satisfied. Whether the use of aggregated connectivity to demonstrate the required legal nexus is appropriate is also unclear. In science, any flow and any connection may be enough for connection, influence and impact, but that is not the end of the inquiry for federal jurisdiction. The law requires the nexus to be significant. (p. 12)

Agency Response: See summary response for section 8.1., 8.1.1 and 8.1.2. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

- 8.16 With regard to the definition of tributary, and within the context described above whereby at least one Corps district is asserting federal jurisdiction over erosional features and/or wet weather conveyances, we are skeptical that all features with any evidence a federal agency deems adequate of a bed, bank and ordinary high water mark that contributes flow in any manner to any down gradient water that eventually reaches a traditionally jurisdictional water are appropriately jurisdictional under the CWA within the confines the law places on that jurisdiction. Again, the state agencies do not debate the federal jurisdiction with regard to the vast majority of the tributary network to traditionally navigable water bodies. However, we are concerned with the assertion of federal jurisdiction over waters and features that have not historically been federal waters in Tennessee and should not become such due to this federal rule proposal. These waters and features are either significantly remote in geographic distance from traditionally navigable waters and/or erosional in nature and should not get absorbed in the reach of federal jurisdiction through the broad definition of tributary and its categorical application. ***The state agencies recommend EPA and the Corps revise the definition of tributary to include qualifying language making it clear that erosional features should not be considered tributaries and provide some minimum threshold for the amount of flow that must be present and/or the amount of time water must be present with in the water body.*** (p. 21)

Agency Response: See summary response for section 8.1. Section I of the Technical Support Document describes the legal basis of the final rule. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule excludes many features, including non-wetland swales and most ditches that are not relocated tributaries or excavated in tributaries. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 "Features and Waters Not Jurisdictional," for a broad discussion of the final rule's exclusions. See summary responses for section 6.0, "Ditches," and 6.2, "Excluded Ditches," in this RTC for a focused description of how the exclusions for ditches were revised and clarified for the final rule.

Wisconsin Department of Natural Resource (Doc. #15141)

- 8.17 The definition of tributary includes waters that have a defined bed and banks and an ordinary high water mark and contributes flow directly or through another water to a traditional WOTUS. The definition goes on to say that wetlands, lakes and ponds do not need to have a bed, banks or OHWM to fall within the definition of tributary as long as it contributes flow directly or through another water to a traditional WOTUS. The rule is unclear and it should be clarified whether a tributary that contributes flow through another water must also have a bed and bank and OHWM.

Although the proposed definition includes waters, such as wetlands, lakes and ponds that do not have a bed and banks or an ordinary high water mark but contribute flow to traditional waters, the definition would not include tributaries, such as head water streams, that may not exhibit a bed and banks or ordinary high water mark. Although these waters may be

regulated as "adjacent waters" it seems counterintuitive to regulate some waters, which do not exhibit a bed and banks and OHWM, but not others. The WI DNR suggests the agencies make a determination on the proposed regulatory construct, so that comments that are provided can be responsive to the proposal. Additionally, we would recommend the proposed regulations not result in any increase of jurisdiction over current federal guidance. (p. 2)

Agency Response: See summary response for section 8.1.

California State Water Resources Control Board (Doc. #15213)

- 8.18 We also strongly support the Agencies' science -based approach to the rulemaking, particularly with respect to further defining the types of water bodies that are considered to be "waters of the United States" because they significantly affect the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, or the territorial seas.

For example, the inclusion of all tributaries (including headwaters, ephemeral and intermittent streams, and tributary wetlands and ponds) as jurisdictional waters is an important step in protecting water quality in California. Both the Agencies' peer- reviewed scientific report and the Science Advisory Board's October 17, 2014 review of the Agencies' report correctly recognize the importance of all tributaries in maintaining the biological, physical, and chemical integrity of downstream waters. As shown in Attachment A of this letter, intermittent and ephemeral streams cover a significant portion of California's surface area. As recommended by the Science Advisory Board in its September 30, 2014 letter to the Agencies, however, the Agencies should consider whether the proposed definition of "tributary" actually includes all ephemeral streams as intended, but also clearly distinguishes such tributaries from excluded non -tributary ditches. In addition, natural discontinuous channels in dry land stream systems should also be considered to be tributaries, even when there are one or more natural breaks in the channel. (p. 1-2)

Agency Response: See summary response for section 8.1.

- 8.19 The following specific comments are provided by the California State Water Resources Control Board and the nine California regional water quality control boards (collectively, the "Water Boards ") staff regarding the proposed "Definition of 'Waters of the United States' Under the Clean Water Act" (Proposed Rule) for 40 CFR 230.3. Specific recommended changes to the proposed regulations are shown in strikeout/underline format. Additional comments are presented as endnotes.

...

(5) *Tributary*. The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4) of this section. In addition, wetlands,[9] lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (s)(1) through (3) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man -made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, natural

discontinuous channels in dryland stream systems,^[10] debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A tributary, including wetlands, can be a natural, man -altered, or man -made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (t)(3) or (4) of this section. (6) Wetlands. The term wetlands means those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

...

[Endnotes]

[9] We support the proposed language including wetlands as tributary. However, the Agencies should consider whether interconnecting non -wetland swales that provide critical hydrologic connectivity to wetland complexes should be excluded. In California, this is commonly found in vernal pool complexes. Although vernal pools may be considered jurisdictional, swales that provide chemical, physical, and biological connectivity would be excluded. For clarity, we suggest that the Agencies consider whether to add "interconnecting swales" to clarify that interconnecting swales in wetland complexes should be considered jurisdictional because they directly contribute flows and function as part of the tributary system to waters of the United States.

We agree that gullies and rills, and non -wetland swales in upland areas that are purely erosional features and do not contribute flow, either directly or through another water, to waters of the United States correctly should not be considered jurisdictional by rule. However, as suggested by the Scientific Advisory Board, the Agencies should consider whether non -wetland swales in arid and semi -arid environments and low gradient landscapes should be included as tributaries if they contribute flow to waters of the United States (particularly headwaters in zero order basins), regardless of the presence of an ordinary high water mark. There are many ephemeral and intermittent tributaries in the arid West, such as those ephemeral channels that are tributary to the Mojave River and Amargosa River in California. As shown on the National Hydrography Dataset (NHD) high resolution map (Attachment A), the majority of streams in California (79 percent) are intermittent or ephemeral (INDUS Corporation, 2013).

Headwaters undergo geomorphic processes, such as erosion and incision, which may take the initial form of non -wetland swales. Therefore, these headwater features can significantly affect the chemical, physical, and biological integrity of waters of the United States. The importance of headwater stream systems is noted throughout the preamble to the Proposed Rule on page 22201: "The great majority of tributaries are headwater streams, and whether they are perennial, intermittent, or ephemeral, they play an important role in the transport of water, sediments, organic matter, nutrients, and organisms to downstream environments. Tributaries serve to store water, thereby reducing flooding, provide biogeochemical functions that help maintain water quality, trap and transport sediments, transport, store and modify pollutants, provide habitat for plants and animals, and sustain the biological productivity of downstream rivers, lakes

and estuaries." Additionally, the preamble to the Proposed Rule clearly recognizes on page 22206 the benefits of headwater and ephemeral streams: "[t]ributaries that are small, flow infrequently, or are a substantial distance from the nearest (a)(1) through (a)(3) water (e.g., headwater perennial, intermittent, and ephemeral tributaries) are essential components of the tributary network and have important effects on the chemical, physical, and biological integrity of (a)(1) through (a)(3) waters, contributing many of the same functions downstream as larger streams. When their functional contributions to the chemical, physical, and biological conditions of downstream waters are considered at a watershed scale, the scientific evidence supports a legal determination that they meet the "significant nexus" standard articulated by Justice Kennedy in *Rapanos*."

[10] We note that there are ephemeral and intermittent streams in arid and semi-arid regions that are commonly referred to as "drylands" (Levick et al., 2008; CDFG, 2010). Natural discontinuous channels in dryland stream ephemeral channels are characterized by alternating erosional and depositional reaches that may vary in length (USACE, 2008). These channels are constantly in flux and are characterized by temporal and spatial changes in channel morphology for any given location. These systems are subject to prolonged wet and dry cycles and typically have many years of discontinuous flows. Since jurisdiction should be based on physical structure rather than the vagaries of climate, these features when contributing flow either directly or through another water to a water of the United States, should be considered jurisdictional. (p. 5, 6-7, 8-9)

Agency Response: See summary responses for sections 8.1, 8.1.1 and 8.4. Section IV(H) of the preamble to the final rule and section IX of the Technical Support Document address "Case-Specific Waters of the United States," including western vernal pools in California.

Sealaska Corporation (Doc. #15356)

8.20 ...the Agencies' proposal to categorically regulate all "tributaries" would extend to intermittent and ephemeral streams, and most ditches. Such an expansive and unilateral claim of jurisdiction over tributaries is inconsistent with the plain language of the CWA, the Supreme Court's interpretations of the Act, and the evidence in the administrative record. Further as stated above the Connectivity report does not explain how waters, in this case tributaries, and wetland systems that may be hydrologically connected demonstrate significant nexus. In the coastal temperate rainforest snowmelt and rainfall create temporary overland flows, shallow perched areas that create isolated pockets of standing water until they evaporate or drain.

Rather than automatically regulating most or all water bodies with a bed and a bank, the Agencies should adopt the approach described in Justice Scalia's plurality opinion in *Rapanos*.

Regardless of whether or not the plurality opinion represents the holding of *Rapanos*, that opinion is most consistent with the Supreme Court's historic treatment of non-wetland areas such as streams. As noted above, *Rapanos* and *Riverside Bayview* concerned the unique question of whether wetlands, which are "inseparably bound up" with adjacent water bodies, are jurisdictional. Their holdings did not address non-wetland water bodies such as ponds, natural streams and manmade ditches. *SWANCC*, by contrast, addressed

the question of whether an isolated pond was jurisdictional. The Court’s clear answer was that such ponds were not jurisdictional because the CWA was not intended to regulate “nonnavigable, isolated, intrastate waters.”

Consistent with SWANCC’s limited view of CWA jurisdiction over non-wetland water bodies, the plurality opinion in *Rapanos* limited jurisdiction to “those relatively permanent, standing or continuously flowing bodies of water ‘forming geographic features’ that are described in ordinary parlance as ‘streams,’ ‘oceans, rivers, [and] lakes.’” The *Rapanos* plurality further held that CWA jurisdiction does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall. The plurality opinion also indicated that the Agencies’ attempt to regulate manmade water bodies as tributaries is not supported by the CWA:

In applying the definition to “ephemeral streams,” “wet meadows,” storm sewers and culverts, “directional sheet flow during storm events,” drain tiles, man-made drainage ditches, and dry arroyos in the middle of the desert, the Corps has stretched the term “waters of the United States” beyond parody. The plain language of the statute simply does not authorize this “Land Is Waters” approach to federal jurisdiction.¹

The Agencies should revise the proposed rule to define jurisdiction over tributaries consistent with the *Rapanos* plurality. Under the plurality’s approach, the Agencies would define a tributary as a water that contributes direct flow to a traditional navigable water via a continuous surface connection. The plurality’s approach is consistent with the plain language of the CWA and its policy to preserve States’ authority over land and water use. It is also consistent with SWANCC. The plurality opinion provides a clear, defensible basis for the Agencies to draw bright lines including certain types of water bodies within CWA jurisdiction and excluding other types of water bodies. (p. 12-13)

Agency Response: See summary response for section 8.1. Section I of the Technical Support Document describes the legal basis of the final rule. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. See summary responses for section 6.0, “Ditches,” and 6.2, “Excluded Ditches,” in this RTC for a focused description of how the exclusions for ditches were revised and clarified for the final rule.

- 8.21 The Agencies’ proposed definition for “tributary” is overly broad and lacks sufficient clarity. As noted above, the Agencies’ definition fails to give adequate consideration to

¹ 79 Fed. Reg. at 22,201.

the plurality opinion in *Rapanos* and the holding in *SWANCC*, and it relies almost exclusively on legally irrelevant portions of Justice Kennedy’s concurring opinion in *Rapanos* or an incorrect interpretation of ‘significant nexus’ to mean any hydrologic connection. Moreover, even if the Agencies’ definition for “tributary” were consistent with the law, it is ambiguous, leaving the regulated public to guess as to which water bodies the Agencies intend to regulate. The Agencies propose to identify a “tributary” based on the presence of a bed, bank, OHWM, and any minimal amount of flow that eventually reaches navigable waters. As Justice Kennedy stated in his *Rapanos* opinion, however, these terms are not sufficiently detailed to provide appropriate limits on the Agencies’ exercise of jurisdiction.²

The terms used by the Agencies to define “tributaries” should be clarified. The terms “bed” and “bank” can include any land at lower elevation that lies between lands at higher elevation. All but the flattest terrain will feature some natural areas of lower elevations that water will follow. The term “OHWM” is similarly broad, and can encompass any physical sign of water flow, such as changes in the soil, vegetation or debris. The Agencies themselves have admitted that their definition of OHWM is vague, ambiguous, and inconsistently applied.³ The Agencies should revise the rule to clarify how field staff will determine the presence of a bed, bank, and OHWM.

In determining whether a water body is a jurisdictional tributary, the Agencies should consider not only the presence of these features but also factors such as the frequency, duration, volume of flow and significance to receiving waters. As discussed above, the Agencies must consider such factors to maintain consistency with Justice Kennedy’s concurring opinion in *Rapanos* and to give meaning to the word “navigable” in the CWA.

The jurisdictional status of Southeast Alaska water bodies will be particularly difficult to determine for streams that contribute no direct flow to navigable waters, but may contribute flow “indirectly,” through other waters, especially in short seasonal high water events in a region that gets 100 to 200 inches of precipitation annually. The Agencies fail to clarify how such an indirect contribution may be identified, and fail to specify whether such a contribution must be made via a surface water connection or rather, in the Agencies’ view, may be made via groundwater. To the extent that the Agencies intend to establish indirect connections via groundwater, Sealaska objects to such an interpretation, which is unsupported by the CWA or any of the Supreme Court’s decisions. (p. 13-14)

Agency Response: Section I of the Technical Support Document describes the legal basis of the final rule and Section VII describes the rationale and support for the tributaries definition. The term “ordinary high water mark” has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. As described in the preamble, for purposes of the

² *Rapanos*, 547 U.S. at 734.

³ GAO Report “Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction, Feb. 2004, available at _____. See also Farm Bureau Testimony (“the Corps’ Philadelphia District has observed that, due to inconsistent interpretations of the OHWM concept, as well as inconsistent field indicators and delineation practices, identifying precisely where the OHWM ends is nothing more than a judgment call.”).

rule, “bed and banks” means the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual. See also summary response 8.3.

North Dakota Office of the Governor et al. (Doc. #15365)

8.22 2. The definition of tributary in the proposed rule is expansive and unacceptable to the State of North Dakota.

The proposed rule attempts to establish a chain of nexus extending up endless orders of streams into ephemeral flows in washes, drains, and ditches feeding the higher order navigable streams. This federal jurisdictional claim violates the intent of the court outlined in *Rapanos*. Instead of regulating the water quality effects of distant tributaries on the navigable streams, EPA proposes regulating water quality within tributaries themselves.

Take, for example, if federal water quality standards specify that a certain nutrient may not exceed a specific amount in a navigable stream. The proposed rule would subject influent tributaries to that same standard, rather than regulating the tributary’s contribution to the standard in the navigable stream. Next, the lower order tributary influent to the first tributary is regulated not by the effect on the navigable water, or even the first tributary, but is subjected to the same standard as the navigable water. This overreaching jurisdiction is applied up into washes, ditches, and drains, which are themselves subjected to the standard applied to the navigable waterbody itself.

The cumulative effect of the above outlined water bodies on receiving navigable water bodies is moderated by timing, freshwater influx from stream beds and seeps, and other minimally affected tributaries. These factors make it so any given individual tributary or drain may have little final impact on the major receiving waterbody. To claim authority and apply the same standard within a flowing agricultural or municipal drain as is applied to an interstate water--without reference to intervening moderating effects--allows federal micromanagement and interference with virtually all human enterprises and a blank check to apply standards in any manner it chooses. EPA and cooperating federal agencies are appropriating for themselves the authority to become the arbiter of all economic enterprises and the power to impede or vet them at will.

EPA must limit its federal jurisdictional claims to a nexus that is defined by proximity, not remote connectivity. (p. 3-4)

Agency Response: See summary response for section 8.1 and 8.1.1. Section I of the Technical Support Document describes the legal basis of the final rule. Existing regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow but may not declare an ephemeral stream non-jurisdictional altogether. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Ohio Department of Natural Resources et al. (Doc. #15421)

- 8.23 Under the agencies' proposed rule, when a tributary flows through a wetland into another tributary (e.g., a run-of-stream wetland), losing its OHWM through the wetland, It remains a tributary, and the wetland itself is considered a tributary. Logically, one would assume that as a tributary (such as a stream) entered a wetland and completely lost Its defined bed, bank, and OHWM, it would no longer be considered a stream type "tributary", but rather a wetland type "tributary." However, the rule is unclear. From the perspective of a regulator or an applicant, would the "tributary" be considered wetland, stream, or both as it passes through the wetland? What about a run-of-stream Impoundment? How would you calculate a stream length for a tributary that had lost its OHWM while passing through a wetland or Impoundment? This will have important implications for waterway permit thresholds based on acreage and/or linear footage of resources. It would also have implications on mitigation requirements. This is another example where defining the specific types of "tributary" (streams, ditches, ponds, lakes, etc ...) would be critical for practical implementation of the proposed rule change. Failure to do so would result in continued regulatory inconsistencies across the nation. (p. 9)

Agency Response: See summary response for section 8.1.

- 8.24 Ohio EPA Comments:

The definition as proposed is lengthy and difficult to understand, especially for the landowner and general public. Ohio EPA would recommend the alternative approach suggested in the preamble text. (p. 24)

Agency Response: See summary response for section 8.1.

Wyoming Department of Environmental Quality (Doc. #16393)

- 8.25 The proposed rule assumes jurisdiction over multiple categories of waters. The most troubling parts - and there are many - involve determinations for "tributaries" and "other waters." Tributaries are defined in the proposed rule as waters that have a bed, bank and high water mark and contribute some flow to a navigable water. But the inclusion of a "flow" condition in this definition is meaningless given the rule's formulation of the jurisdictional test. All tributaries under the proposed rule would be considered jurisdictional because in the aggregate they are considered to have a significant effect on downstream waters. The amount or frequency of flow from any particular tributary will not be considered because flow is presumed to occur at some point in time, even when it is rare. Therefore, in reality, any channel with a bed, bank and high watermark would become jurisdictional under this rule regardless of the amount of flow.

In arid states like Wyoming and much of the Western United States, a considerable percentage of the mapped ephemeral stream miles are actually grassy swales or erosional gullies. These may or may not meet the tributary criteria in the proposed rule (bed, bank and high water mark) and likely will require a case-by-case evaluation, undermining the regulatory certainty espoused by EPA and the Corps. In addition, there are many more miles of unmapped drainages and channels, all of which are subject to water quality standards and discharge permitting requirements in Wyoming under existing state law. All would likely be considered "other waters" under the proposed rule, and may or may not be jurisdictional depending upon a case-specific determination. How those

determinations will be made is not clear under the proposal, but the process seems to rely on a very poorly developed concept of evaluating similarly situated drainages in the area. In contrast, the plurality opinion in *Rapanos*, which has been ignored by the federal agencies, described a much clearer concept by requiring the presence of a relatively permanent flow and a hydrologic surface connection to another water of the United States in order to establish jurisdiction.

These uncertainties will have very real impacts in Wyoming. Based on the 1:24,000 scale National Hydrographic Dataset (NHD), approximately 80% of Wyoming's stream miles are intermittent or ephemeral. While the portion that is ephemeral cannot be precisely estimated with available data, it is widely known that ephemeral channels comprise a large fraction of stream miles in arid and semi-arid regions. (p. 4)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including non-wetland swales, grassed waterways, and erosional features like gullies and rills that do not meet the definition of tributary. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule.

Indiana Department of Environmental Management (Doc. #16440)

8.26 **d. The final rule must clarify that connecting waters will themselves not be considered jurisdictional.**

The proposed definition of "tributary" includes water that goes underground and the proposed definition of "neighboring" includes water that has a connection to navigable water only through shallow groundwater or through a "confined surface hydrologic connection." We question the inclusion of groundwater as connecting water. Regardless of how connections are defined, the final rule must clarify that it is not the Agencies' intent to claim jurisdiction over the connecting features themselves. (p. 5)

Agency Response: Section VIII of the Technical Support Document addresses “adjacent waters,” including the revised and clarified definition of “neighboring.” Groundwater is explicitly excluded under paragraph (b) of the final rule.

Office of the Governor, State of Utah (Doc. #16534)

8.27 The Proposed Rule declares that all "tributaries" of both core waters and impoundments of core waters (dams or reservoirs) are always covered by the CWA.⁴ The Proposed definition of "tributaries" is extremely broad, and includes "ponds, impoundments,

⁴ See 79 Fed. Reg. 22263 (proposed April 21, 2014) (to potentially be codified at 40 C.F.R. § 230.3(s)(5)).

canals, and ditches" not otherwise excluded in the proposed rule.⁵ Waters are even deemed tributaries under the proposed rule "if they contribute flow, either directly or through another water" to a jurisdictional water, and tributaries are still deemed as such even if the water passes man-made breaks such as "culverts, pipes, or dams."⁶ The EPA and Army explain that this definition is correct because the tributaries "significantly" affect chemical, physical and biological integrity of traditional navigable waters, interstate waters, and/or territorial seas. Specifically, the term "significant" is used to justify the expansion to the proposed rules tributary definition. However, "significance" has not been clearly defined with quantitative measures of the chemical, biological, or physical effects of a tributary on downstream waters. The absence of quantitative measures makes it extremely difficult to determine which waters qualify as a tributary. (p. 8-9)

Agency Response: See summary response for section 8.1. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

State of South Dakota (Doc. #16925)

- 8.28 Tributaries Determined Jurisdictional-by-Rule - SDDOT recommends modifying the proposed rule to ensure that tributaries are evaluated under the same criteria used in the 2008 Guidance. Tributaries should be deemed jurisdictional by rule only if they have perennial flow, that is typically flow year-round or have continuous flow seasonally. Such tributaries must include the presence of bed and banks with ordinary high water marks. Without this requirement, the universe of tributaries deemed jurisdictional is unreasonably broadened. The final rule should clarify that exclusions take precedence over the jurisdictional-by-rule provisions and, therefore, if a ditch is excluded by paragraphs (b)(3) or (b)(4), the ditch would be non-jurisdictional. (p. 5)

Agency Response: See summary response for section 8.1. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule excludes most ditches that are not relocated tributaries or excavated in tributaries and makes it clear that all of the features excluded in paragraph (b) "are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)" of the rule. Thus, any feature excluded under paragraph (b) may not be considered waters of the United States under any other provision of the rule.

⁵ See 79 Fed. Reg. 22263 (proposed April 21, 2014) (to potentially be codified at 40 C.F.R. § 230.3(u)(5)).

⁶ *Id.*

Allen Boone Humphries Robinson LLP (Doc. #19614)

- 8.29 "Tributary" is defined in the Proposed Rule as "a water physically characterized by the presence of a bed and banks and ordinary high water mark [OHWM] . . . which contributes flow, either directly or through another [jurisdictional water]," and, additionally, "wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow."⁷ This proposed definition of "tributary" is vague and overbroad. In many locations a bed, banks and OHWM cannot be easily identified. The definition is silent as to volume or frequency of flow. And "tributary" could be interpreted to include man-made waters with artificial features, such as drainage ditches or artificial ponds. This ambiguity will require extensive examination of miles of upstream tributary features, and create uncertainty and the potential for jurisdictional over-reaching. (p. 7)

Agency Response: See summary responses for sections 8.1, 8.1.2 and 8.4.

Franconia Township, Pennsylvania (Doc. #8661)

- 8.30 This definition, if adopted, would significantly increase the jurisdictional reach of the CWA. This definition will bring into play countless streams, creeks, rivulets, washes, and other features where water does, will or could run to (eventually) navigable waters. We believe there needs to be a limit, a "bright line" set by the rule as to just how far the CWA manifests its dominion over local, regional and state waters. The agencies continue to say the proposed rule will not expand this jurisdiction, but we believe otherwise. (p. 2)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 "Features and Waters Not Jurisdictional," for a broad discussion of the final rule's exclusions.

- 8.31 The agencies should provide assurances in a final rule that the definition of "tributary" will be limited to those with "bed and banks with an ordinary high water mark" that have formed over several years, and that would not include temporary accumulations of sediment or hydraulic activity resulting from specific isolated precipitation or runoff events. Definitions must be fleshed out for the terms "ordinary high water mark", "bed and banks", and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule. Jurisdictional tributaries should meet a new "bright line" test related to size of bed and banks, amount of flow, distance from the jurisdictional navigable water in order to be considered a "water of the U.S.", or establishing a limit on just how small or how far upstream the CWA would apply from the jurisdictional navigable water. (p. 2-3)

Agency Response: See summary response for section 8.1. The term "ordinary high water mark" has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. As described in the preamble, for purposes of the rule, "bed and banks" means the substrate and

⁷ 79 Fed. Reg. at 22,263.

sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual.

City of Escondido (Doc. #11116)

8.32 Expansion of the Definition of Waters of the U.S. The expansion of the definition of Waters of the U.S. is seen in the last three bullets of the definition (page 22913) relating to:

- *All tributaries of a traditional navigable water, instate water, the territorial seas or impoundment;*
- *All waters, including wetlands, adjacent to a traditional navigable water, interstate water, the territorial seas, impoundment or tributary; and*
- *On a case-specific basis other waters, including wetlands, provided that those waters alone, or in combination with other similarly situated waters, including wetlands, located in the same region, have a significant nexus to a traditional navigable water, interstate water or the territorial seas.*

How would we define a tributary? Could this be a storm drain that has persistent dry weather flows? This could mean that we could not maintain our storm drain system without obtaining a permit. **We recommend that the first bullet be revised to specifically limit the tributary to downstream of a stormdrain or channel outlet to a stream. If not, storm drain systems should be specifically excluded from the definition.** (p. 1-2)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries and erosional features that do not meet the definition of tributary and stormwater control features created in dry land. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. See summary responses for section 6.0, “Ditches,” and 6.2, “Excluded Ditches,” in this RTC for a focused description of how the exclusions for ditches were revised and clarified for the final rule.

Clark County Regional Flood Control District, Nevada (Doc. #11726)

8.33 While it is true that some ephemeral streams are headwaters for the nation's major rivers, not all ephemeral streams are headwaters. Many ephemeral washes in the desert southwest may not convey any actual water to downstream "waters" for years on end. In these washes, the presence of an ordinary high water mark indicates only that water has flowed through the area at some time in the past, NOT that it ordinarily flows through there. (p. 2)

Agency Response: See summary responses for sections 8.1 and 8.4.

Uintah County, Utah (Doc. #12720)

- 8.34 Because the definition proposed for tributary is so broad, the Agencies could insert themselves into local building and zoning processes. In a rural setting like the majority of the western United States, individual homes could be subject to EPA or COE approval for any aspect of design and construction where natural run-off would not be captured by a waste water system. Purely from the standpoint of the affect of gravity upon water, the case makes itself that water flows downhill. The notion that any flow in any physical feature, dry or wet, qualifies it as a water of the US is nonsense. (p. 4)

Agency Response: The agencies have no desire to be involved with local building or zoning processes. See summary response for section 8.1.

National Association of Flood & Stormwater Management Agencies (Doc. #13613)

- 8.35 NAFSMA appreciates the agencies' efforts to provide new definitions in the proposed rule but we are concerned that the definitions are not clear and in aggregate, are excessively expansive. As an example, per (a)(5), all tributaries would be WOTUS; then (a)(6) establishes area adjacent to Tributaries as WOTUS; then, (c)(1) Adjacent includes Neighboring, which is subsequently defined to include (c)(3) Riparian Area and (c)(4) Floodplain. By multiple convoluted definitions, a tributary has become categorically vast. Consequently, WOTUS encompasses noncontiguous areas in the floodplain and riparian areas neighboring a tributary, which could be (but may not have to be) a bed and bank with an Ordinary High Water Mark, but does not have to be flowing. Under these definitions, the entire watershed could be categorically determined to be WOTUS which is inconsistent with EPA's stated intent. Furthermore, since definition (c)(2) Tributary specifies that shallow subsurface hydrologic connections can be jurisdictional nexus, WOTUS could extend beyond the surface water watershed boundaries. (p. 3)

Agency Response: See summary response for section 8.1. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," for a broad discussion of the final rule's exclusions. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section VIII of the Technical Support Document addresses "adjacent waters," including the revised and clarified definition of "neighboring."

Board of County Commissioners, Otero County, New Mexico (Doc. #14321)

- 8.36 The definition of "tributary": For legal and scientific clarity, the agencies should withdraw the Proposed Rule and replace it with a rule that defines tributaries as only those waters that maintain a permanent, surface water connection to an (a)(1) or (a)(3) water. (p. 14)

Agency Response: See summary response for section 8.1.

Board of County Commissioners, Delta County, Colorado (Doc. #14405)

- 8.37 The proposed rule presumes that all ephemeral and includes intermittent drainages that have the presence of a bed and banks and an Ordinary High Water Mark (OHWM) and that contribute flow, either directly or through water, to a WUS are jurisdictional. The proposed rule does not recognize that there are differences among not only types of drainages, but individual drainages and their potential for affecting the chemical, physical, or biological integrity of a Waters of the United States (WUS). The proposed presumption of jurisdiction by rule for ephemeral and intermittent drainages runs counter to the guidance and process established by the *SWANCC* and *Rapanos* opinions.

The broad definition of tributaries encompasses ponds, ditches and other features that are beyond the agencies' authority. The plain language of the definition of tributary encompasses numerous isolated and, in many cases, dry features that are far beyond the agencies' authority under the CWA. It would encompass isolated ponds not otherwise excluded that somehow be connected through a surface connection, groundwater, or any other connection to a nearby (a)(1) through (4) water. It encompasses isolated wetlands in pastures that may be connected to a nearby creek through ground water or ditches. It encompasses virtually all artificial stock ponds west of the Mississippi River, of which, virtually all will have been built on a drainage (and ephemeral streams) in order to fill with water. It is clear that the plain language of the definition makes the category almost limitless.

Delta County BoCC assert that the agencies' definition of "tributary" is a limitless category that has the potential to wrap every natural pond, isolated wetland, or ditch into the federal regulatory scheme, which violates the language and spirit of the Supreme Court's decisions in *SWANCC* and *Rapanos*.⁸ It is clear that the phrase "waters of the U.S." is not limitless, yet that is exactly what the agencies have proposed through their broad and ill-defined term "tributary." Key phrases have been left undefined. The definition for "through another water," a key phrase in the definition, was simply left out by the agencies. Not only does this foster confusion instead of clarity in the regulated community, it could be stretched by regulators or litigants now or in the future. If the agencies' intent was not to create such a broad definition, than they should have put such intent in the regulation.

The agencies cannot categorically make anything with a bed, bank and OHWM that takes water somewhere downstream jurisdictional. The proposed rule is clear that the definition of 'tributary' does in fact include all ephemeral, intermittent and perennial features and that rate of flow (or any flow) is simply not a factor. (Proposed Rule at 22206; "...the agencies conclude that tributaries, including headwaters, intermittent, ; intermittent and ephemeral streams, and especially when all tributaries in a watershed are considered in combination, have a significant nexus to traditional navigable waters, interstate waters, or

⁸ *Rapanos v. United States*, 547 U.S. 715 (2006); (J. Scalia, Indicating "navigable" invokes a limit on the CWA jurisdiction the plurality stated "...that the qualifier "navigable" is not devoid of significance ... the waters of the United States in 1362(7) cannot bear the expansive meaning that the Corps would give it"); *SWANCC v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001); (In striking down the agencies' Migratory Bird Rule the court stated, "we find nothing approaching a clear statement from Congress that it intended 404(a) to reach an abandoned sand and gravel pit such as we have here").

territorial seas...")). Delta BoCC believes that the definition of tributary is overly broad because the agencies cannot make all tributaries per se jurisdictional without satisfying the significant nexus analysis. (p. 3-4)

Agency Response: See summary response for section 8.1. Section I of the Technical Support Document describes the legal basis of the final rule. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries and erosional features that do not meet the definition of tributary. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions.

Board of Supervisors, Cochise County, Arizona (Doc. #14541)

- 8.38 As noted in the proposed rule on page 22192, a "four-Justice plurality in *Rapanos* interpreted the term "waters of the United States" as covering "relatively permanent, standing or continuously flowing bodies of water ... that are connected to traditional navigable waters ... ," Many of the tributaries and other waters that the agencies are trying to include as jurisdictional fail to meet this requirement. The definition of a tributary must be rewritten to include the four-Justice requirements in *Rapanos*. The proposed rule ignores this requirement and must be rewritten to address this requirement in addition to the significant nexus requirement on which it is currently based.

Also as noted in the proposed rule on page 22213, "Justice Kennedy was clear that waters with a significant nexus must significantly affect the chemical, physical, or biological integrity of a downstream navigable water and that the requisite nexus must be more than "speculative or insubstantial," ... " While some tributaries may have connectivity with the jurisdictional a(1) to a(3) waters of the US, their contribution to the downstream navigable water is extremely minor when compared with other tributaries in the total sum of contributions. As a result, the nexus for that tributary with the jurisdictional water becomes insubstantial and thus insignificant, and that tributary does not have a significant nexus. As a result of this rationale, the definition for tributary should be revised to include the requirement that the tributary provides a significant contribution to the navigable water. This same rationale applies to "other waters" as described in the proposed rule.

Further, the agencies have drawn the conclusion that "While Justice Kennedy focused on adjacent wetlands in light of the facts of the cases before him, it is reasonable to utilize the same standard for tributaries." However, the agencies fail to include the requirements of the four-Justice plurality of "relatively permanent, standing or continuously flowing bodies of water" to that conclusion. This conclusion must be revised in light of that requirement. (p. 1-2)

Agency Response: Section I of the Technical Support Document describes the legal basis of the final rule.

Waters of the United States Coalition (Doc. #14589)

- 8.39 Definition of “Tributary” – The Proposed Rule will reclassify manmade channels that discharge to traditional navigable waters as “waters of the United States.” This change

will capture aqueducts, storm drain systems, and other manmade channels. Under the Clean Water Act, these conveyances are point sources that discharge into waters of the United States rather than waters of the United States themselves. Designation as waters of the United States will interfere with or prevent manmade channels from being used to convey water whether it is in a water supply, flood control, or waste treatment capacity. (p. 4)

Agency Response: See summary response for section 8.1, 8.1.1 and 8.1.2.

Paragraph (b) of the final rule excludes many features, including waste treatment systems designed to meet the requirements of the CWA, stormwater control features created in dry land and most ditches that are not relocated tributaries or excavated in tributaries. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions.

Board of Supervisors, San Joaquin County, California (Doc. #15017.1)

- 8.40 Jurisdictional tributaries should meet a new "bright line" test related to size of bed and banks, amount, duration and frequency of flow, or distance from the jurisdictional navigable water in order to be considered a "water of the U.S.", establishing limits based on size, flow volume and frequency, and/or distance from the jurisdictional navigable water where the CWA would apply. Finally, wetlands should not be considered "tributaries" in the final rule, as they should have to meet "adjacency" or "significant nexus" tests associated with "adjacent" or "other waters" to be considered "waters of the U.S." (p. 4)

Agency Response: See summary response for section 8.1, 8.1.1 and 8.1.2.

Flood Control and Water Conservation District, Alameda County, California (Doc. #15074)

- 8.41 4. The proposed rule defines tributary as “water physically characterized by the presence of bed and banks and ordinary high water mark (OHWM) (33CFR 328.3(e) and contributes flows as describe in paragraph (a) (1) through (4). However, it is not clear what flow discharge basis (i.e.; 2-year or 10 year) should be used in to delineating the lateral extent of Waters and other waters. The proposed use of Lichvar methodology (based on geomorphology) overestimates the lateral extent of the OHWM. The characteristic soil, vegetation and or descendible hydrology required to confer jurisdiction are often discounted or ignored. This results in excessively large jurisdictional areas and corresponding high mitigation demands. The rulemaking process should consider a method that is science based, equitable and truly results in meeting the intent of the Clean Water Act. (p. 2)

Agency Response: See summary responses for sections 8.1, 8.1.1 and 8.1.2.

National Association of Counties (Doc. #15081)

- 8.42 Recommendations

...

- Create a national map that clearly shows which waters and their tributaries are considered jurisdictional

... (p. 11)

Agency Response: Determining the jurisdictional status of a water feature often requires site specific knowledge. Although the final rule provides increased clarity and “bright line” distinctions to help differentiate waters of the United States from non-jurisdictional features, it will not eliminate the need for consideration of site specific knowledge. The agencies generally only conduct jurisdictional determinations at the request of individual landowners, thus we do not have maps depicting the geographic scope of the CWA. Such maps do not exist and the costs associated with a national effort to develop them are cost prohibitive and would require access to private property across the country. The U.S. Geological Survey and the U.S. Fish and Wildlife Service collect information on the extent and location of water resources across the country and use this information for many non-regulatory purposes, including characterizing the national status and trends of wetlands losses. This data is publicly available and the agencies have relied on USGS and USFWS information to characterize qualitatively the location and types of national water resources. This information is depicted on maps but not for purposes of quantifying the extent of waters covered under CWA regulatory programs.

Painesville Township, Ohio (Doc. #15183)

- 8.43 This definition, if adopted, would significantly increase the jurisdictional reach of the CWA. This definition will bring into play countless streams, creeks, rivulets, washes, and other features where water does, will or could run to (eventually) navigable waters. We believe there needs to be a "bright line" set by the rule as to just how far the CWA manifests its dominion over local, regional and state waters. (p. 1-2)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions.

Department of Public Works, County of San Diego, California (Doc. #17920)

- 8.44 Simplify the definition for tributaries

The definition for tributaries should be revised to contain less subjective terms, include appropriate exemptions, and be simply defined so as to minimize broad interpretation. Tributaries have never before been defined in the regulations for Waters of the U.S. In the proposed rule, the definition for tributaries is vaguely defined, lacking necessary exemptions, and containing many subjective terms. Furthermore, this definition of tributary could be interpreted to include stormwater conveyance or treatment facilities that previously were not defined as a tributary. By broadening the definition, clean-up activities in stormwater conveyance channels could trigger the need for additional permits and lengthy certification processes. Because man-made features could be considered tributaries under the proposed definition, it should be revised to include

appropriate exemptions for features that require County maintenance and oversight. Features such as BMPs, roadside ditches, and water conveyances should be exempt. Additionally, the definition states that the flow in the tributary may be *ephemeral*, *intermittent* or *perennial*. These terms are not further defined in the new rule, and can have varying definitions. To avoid broad and subjective interpretation, the terms *ephemeral* and *intermittent* should be removed, as these terms could be applied to any area that is wet and carries water during a single rain event. The term *perennial* is more appropriate for the definition of tributaries and in-line with the existing regulatory language, which defines a tributary as being relatively permanent.

EXAMPLE: The County maintains and monitors waterways including roadside ditches, flood control channels, and drainage conveyances, which are used to safely guide water away from homes, businesses, properties and roads. Man-made features such as ditches and canals can be considered tributaries under the proposed definition. Therefore, the definition needs to be revised to contain appropriate exemptions in order to appropriately monitor and maintain these features. In addition, a ditch that carries water once a year and ultimately connects to a Traditionally Navigable Water can be considered ephemeral and, therefore, would be a tributary based on the new definition. The word *ephemeral* should be eliminated from the definition because it can be too broadly and subjectively applied. (p. 7)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including waste treatment systems designed to meet the requirements of the CWA, stormwater control features created in dry land and most ditches that are not relocated tributaries or excavated in tributaries. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. All existing statutory exemptions, including those exempting maintenance of existing irrigation and drainage ditches from CWA section 404 permitting, remain in effect and unchanged by the final rule. Section IV(F) of the preamble to the final rule describes flow regimes, as they are related to tributaries and ditches. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section VIII of the Technical Support Document addresses “adjacent waters.”

Butte County Administration, County of Butte, California (Doc. #19593)

- 8.45 The agencies should provide assurances in a final rule that the definition of “tributary” will be limited to those with “bed and banks with an ordinary high water mark” that have formed over several years, and that would not include temporary accumulations of sediment or hydraulic activity resulting from specific isolated precipitation or runoff events. Definitions must be fleshed out for the terms “ordinary high water mark”, “bed and banks”, and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule.

Also, the SAB recently advised the EPA to reconsider the definition of tributaries in the proposed rule because the SAB maintains that not all tributaries may have ordinary high water marks. The SAB stated that “an ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark.”⁹ The SAB advised the agency to “consider changing the wording in the definition to ‘bed, bank, and other evidence of flow’.”¹⁰ We believe this would further broaden the jurisdiction of the CWA beyond what Congress intended, as any indication of surface water runoff from an isolated rain event in a field, dirt road or parking lot could meet this new expanded definition, becoming a “water of the U.S.” subject to CWA regulation. (p. 5)

Agency Response: See summary response for section 8.1 and 8.1.2. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments. The term “ordinary high water mark” has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. As described in the preamble, for purposes of the rule, “bed and banks” means the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual.

Board of Supervisors, Sutter County, California (Doc. #19657)

8.46 ... Jurisdictional tributaries should meet a new "bright line" test related to size of bed and banks, amount of flow, distance from the jurisdictional navigable water in order to be considered a "water of the U.S.", or establishing a limit on just how small or how far upstream the CWA would apply from the jurisdictional navigable water. Wetlands should also not be considered "tributaries" in the final rule, as they should have to meet "adjacency" or "significant nexus" tests associated with "adjacent" or "other waters" to be considered "waters of the U.S."

...

To address these issues, we request that the agencies make the following changes to the Proposed Rule:

- Revise the proposed definition of "tributary" in 33 CF.R § 328.3(c)(S) to exclude: "any water that contributes flows to waters of the United States, if at all, exclusively as a result of mechanical pumping."

...(p. 7, 8)

Agency Response: See summary response for section 8.1, 8.1.1 and 8.1.2.

⁹ [EPA-SAB-14-007] Science Advisory Board letter to EPA Administrator Gina McCarthy dated September 30, 2014 re: Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA’s Proposed Rule titled “Definition of Waters of the United States under the Clean Water Act”

¹⁰ Id.

North Dakota Water Resource Districts Association (Doc. #5596)

- 8.47 A concern with the jurisdictional by-rule approach to tributaries is that it leaves behind Justice Kennedy's narrow "significant nexus" test from *Rapanos* and adopts merely a "nexus" test, regardless of volume of flow, proximity to navigable waters or other relevant factors to the significance of a tributary to a Water. (p. 1)

Agency Response: Section III of the preamble to the final rule and section II of the Technical Support Document describes the agencies' significant nexus analysis. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Utah Association of Counties (Doc. #14756)

- 8.48 33 CFR 328.3 Current Rule: (5) Tributaries of waters identified in paragraphs (a)(1) through (4) of this section;

Proposed Change to 33 CFR 328.3: (5) **All** tributaries of waters (**other than waters that are themselves wetlands**) identified in paragraphs (a)(1) through (4) of this section, **provided the tributaries have a significant nexus to such waters;** (p. 9-10)

Agency Response: See summary response for section 8.1.

- 8.49 Proposed Change to 33 CFR 328.3: **(5) (4)** Tributary. The term *tributary* means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section. ~~In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (a)(1) through (3) of this section. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (b)(3) or (4) of this section.~~ (p. 17-18)

Agency Response: See summary response for section 8.1.

Washington State Water Resources Association (Doc. #16543)

- 8.50 The proposal would, for the first time, categorize all "tributaries" as jurisdictional by rule, negating any opportunity to scientifically rebut the case for jurisdiction based on such factors as the size of the tributary, the temporal nature of its flow, whether the so-called waterbody is ephemeral or intermittent in nature, the distance to a traditional navigable

water (TNW), the nature of any breaks in the bed, bank and ordinary high water mark (OHWM), whether the waterbody is natural or man-made, and the nature, if any, of affects from the tributary on downstream water quality.

...Clarify that jurisdictional “tributaries” are limited to waters that contribute direct flow to a traditional navigable water via a continuous surface connection;... (p. 3-4, 15)

Agency Response: See summary response for section 8.1.

- 8.51 Despite the proposals stated objective to add clarity to the regulatory process, the proposal in fact creates great confusion and uncertainty. Some of the unanswered questions have been alluded to above, e.g., what will be the effect of the proposal on the construction and operation of stormwater control facilities, or the repair and replacement of ditches. Other issues that must be addressed, through clarification and in the context of an ongoing dialogue amongst stakeholders, include:

- ...
 - Are isolated waters without any direct surface or shallow subsurface connection to TNWs, but which periodically capture sheet flows containing pollutants, jurisdictional;
 - ...
 - Is it accurate to state that “all” ephemeral or intermittent streams will now be considered jurisdictional;
 - Is it accurate to state that waters adjacent to tributaries, including non-navigable tributaries, regardless of how remote or insubstantial the connection, are now jurisdictional;
 - ...
 - If a pipeline is constructed across a normally dry wash or dry arroyo, and the construction activity occurs only when water is not flowing, will the project nevertheless need a section 404 permit (if the answer is “yes” or “maybe,” are there any limits on the amount or frequency of flow that must pass through the wash or arroyo);
- ... (p. 17, 18)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including stormwater control features created in dry land and most ditches that are not relocated tributaries or excavated in tributaries. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. All existing statutory exemptions, including those exempting maintenance of existing irrigation and drainage ditches from CWA section 404 permitting, remain in effect and unchanged by the final rule. Section II of the Technical Support Document describes the agencies’ significant nexus analysis. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section VIII of the Technical Support Document addresses “adjacent waters.”

League of Oregon Cities (Doc. #16546)

- 8.52 The EPA "Facts about the Waters of the U.S. Proposal" document indicates that the proposed rule "does NOT include any waters that have not have historically been covered under the Clean Water Act." ... Furthermore, the definition of "tributaries", which includes certain ephemeral streams, and inclusion of neighboring waters will create a broadened scope under which the agencies will have enhanced jurisdictional authority. (p. 1)

Agency Response: See summary response for section 8.1. Section I of the Technical Support Document describes the legal basis of the final rule, and also includes a summary of the historic scope of the existing regulatory definition of "waters of the United States."

Michigan Association of Conservation Districts (Doc. #16583)

- 8.53 Additional Concerns with the Proposed Rule:

- Tributary Definition. The difference between streams and ditches under the definition of tributary is very important to agriculture in Michigan and the proposed rule needs to clarify the definition and when, where and how there might be a significant nexus between remote drainage features or isolated waters and downstream navigable waters. As currently drafted, the proposal raises legitimate concerns about the potential regulation of on-farm ditches, ponds, and isolated wetlands that are located in a natural stream or have a hydrologic connection to a downstream jurisdictional water body. This creates the very real potential for the regulation of on-farm water features, regardless of intended use. Because of the great diversity in natural features across the United States, MACO strongly encourages the use of local input to ascertain and develop local parameters, criteria and defined standards regarding the relevance of tributaries to traditional navigable WOTUS. (p. 2-3)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including prior converted cropland, most ditches that are not relocated tributaries or excavated in tributaries, and artificial lakes and ponds created in dry land and used primarily for such uses as stock watering, irrigation, etc. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," for a broad discussion of the final rule's exclusions. See summary responses for section 6.0, "Ditches," and 6.2, "Excluded Ditches," in this RTC for a focused description of ditches, the regulatory history of ditches and how the exclusions for ditches were revised and clarified for the final rule.

Wyoming Water Development Commission (Doc. #17059)

- 8.54 Tributaries are defined to have a bed, a channel, and an ordinary high water mark. The fact that water is not required to be present with any frequency seems counter intuitive because the intent of the CWA is to regulate pollutant discharges into streams and rivers. In an arid state such as Wyoming, most of the terrain is marked by dry channels that only flow water during periods of intense rainfall or melting snow. To propose that "navigable

waters" are to now include dry channels with a bed, channel and ordinary high water mark which resulted from an intense thunderstorm several years in the past defies logic. (p. 1-2)

Agency Response: See summary response for sections 8.1, 8.1.1 and 8.4. Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Indiana Cast Metals Association (Doc. #14895.1)

- 8.55 In defining a tributary as a drainage feature having a bed, bank and an ordinary high water mark (OHWM), the agencies want the public to believe that the assertion of CWA authority over "tributaries" is appropriate. This assertion fails to recognize the unnecessary inclusion of numerous other land features that fall within the definition of "tributary," such as those areas with drainage features that do not even resemble any stream, brook or creek. Instead, the agencies advance new jurisdictional authority by introducing ambiguity and vague concepts of connectivity. (p. 2)

Agency Response: See summary response for section 8.1. Section II of the Technical Support Document describes the agencies' significant nexus analysis, which includes discussions on "connectivity."

Golf Course Superintendents Association of America et al. (Doc. #14902)

- 8.56 The proposed rule's "tributary" definition vastly expands the scope of features that are currently regulated as tributaries, extending jurisdiction to features like ephemeral drainages, irrigation and ornamental ponds, and stormwater conveyances (like non-wetland swales) that contribute to flow. These have not been and should not be jurisdictional. Conveyances that were once not jurisdictional may not provide ecological value and should not be regulated. This only adds to the permitting burden for landowners and regulatory agencies. (p. 13)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," for a broad discussion of the final rule's exclusions.

Institute of Scrap Recycling Industries, Inc. (Doc. #15041)

- 8.57 Taken as a whole, the subdefinition of "Tributary" also arguably allows for the possibility that a tributary could be "man-made" and could "lack a bed and banks or ordinary high water mark[] if [it] contribute[s] flow, either directly or through another water to a water identified in [the first three inclusions] of this definition". That possibility could conceivably allow pipes and storm sewers to be tributaries and thus "waters of the U.S." by the fifth inclusion and would effectively render the proposed definition unclear and its applicability uncertain. (p. 7)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions.

National Association of Manufacturers (Doc. #15410)

- 8.58 Beyond being inconsistent with the holding of *Rapanos*, the proposed rule’s definition of tributary is also arbitrary and capricious because it is based on the erroneous assumption that all “tributaries,” as broadly defined, have a “significant nexus” to traditional navigable waters—an assumption that is fundamentally inconsistent with the “significant nexus” test used to define “other waters,” which, as proposed, is a multi-factored, case-by-case test that recognizes, for example, that the distance between the water-in-question and a traditional navigable water is highly relevant to whether there is a “significant nexus.” 79 Fed. Reg. at 22214.

Yet the factors found by the proposed rule to define “significant nexus” are entirely ignored when it comes to defining “tributaries” even though the agencies purport to be basing their definition of “tributaries” on the “significant nexus” standard. The proposed rule classifies all “tributaries” as “navigable waters” even when they would not, in fact, satisfy the very “significant nexus” definition that the agencies are now proposing. Having found the controlling legal issue—“significant nexus”—requires a fact-intensive, case-by-case analysis, the agencies cannot simply decree that relevant variations in individual tributaries can be ignored because it analyzes these landform features in aggregate. See *Business Roundtable v. SEC*, 647 F.3d 1144, 1153 (D.C. Cir. 2011) (vacating agency action as “arbitrary” because it was “internally inconsistent”); *Gen. Chem. Corp. v. United States*, 817 F.2d 844, 846 (D.C. Cir. 1987) (vacating agency action as “arbitrary and capricious” because it was “internally inconsistent and inadequately explained”).

Certainly, at a minimum, the agencies cannot just assert that all tributaries have a “significant nexus” without explaining how that “significant nexus” is determined. Even if all tributaries individually have some impact on downstream water quality, that does not mean the impact is significant. An agency cannot simply declare a standard is satisfied without even explaining what the standard is—in such circumstances, there can be no reasoned basis for its decision. See *Motor Vehicle Mfrs. Ass’n*, 463 U.S. at 43; *Int’l Union, UAW v. NLRB*, 514 F.3d 574, 583 (6th Cir. 2008); *U.S. Tel. Ass’n v. FCC*, 188 F.3d 521, 526 (D.C. Cir. 1999). (p. 16)

Agency Response: Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section II of the Technical Support Document describes the agencies’ significant nexus analysis, and Section I describes the legal basis of the final rule, including its consistency with the statute and case law.

Texas Chemical Council (Doc. #15433)

- 8.59 As written, the proposed definition would include features on land that do not necessarily have a continuous surface hydrological connection to a traditional navigable water. It is conceivable that an EPA or Corps employee could determine on their own and without additional scrutiny, whether a bed and bank, or an ordinary high water mark, exists. Locating and utilizing the ordinary high water mark as a demarcation point for jurisdictional purposes presents a number of complications, including the lack of adequate notice to the public upon whom jurisdiction will be exercised.

In considering the potential enforcement actions that are furnished by the CWA, including civil judicial enforcement, civil administrative enforcement, criminal enforcement, and citizen suits, it is absolutely imperative that the public have adequate notice of what waters are considered jurisdictional.

Additionally, the proposed rule is too light regarding specific temporal and geographic limits related to tributaries. First, there are no limitations on whether or how often water needs to be present in the “tributary.” For example, tributary streams could appear no more than once every 10 years under this definition. Additionally, there are no geographical or distance limitations regarding how far a tributary can be located from a traditional navigable waterway to constitute a jurisdictional water. EPA is proposing to use the “significant nexus” test as defining which waters are jurisdictional, and therefore need to tie specific limitations to tributaries that in fact represent a *significant* nexus. (p. 5-6)

Agency Response: See summary responses in sections 8.1, 8.1.2, 8.2 and 8.4. Concerns regarding “due process” as it pertains to similarly situated waters within a region are addressed in the Technical Support Document.

GBMC & Associates (Doc. #15770)

- 8.60 2. The agencies (USACE and EPA) note in the Supplementary Information that “...the scope of the regulatory jurisdiction in this proposed rule is narrower than that under the existing regulations.” In addition much of the rhetoric from EPA in their public meetings and webcasts on this subject have indicated that this proposed rule is only a clarification and that no new waters would be considered jurisdictional under the proposed rule, than are currently considered jurisdictional. It is difficult to see how this could be accurate. It appears as though the agencies have maintained their current concept of a “significant nexus” to a traditionally navigable water (TNW) being necessary to a finding that a water is a water of the US (WOUS) and jurisdictional under Section 404 of the Act. The proposed rule makes this claim in several locations but none better than where it states that “...a significant nexus is touchstone for CWA jurisdiction.” (Sec.III.G.1.) However, the proposed rule goes through great effort to show that all tributaries, no matter their size, form, function or distance from a TNW have a significant nexus to the TNW and are by definition jurisdictional (Sec III.F). The agencies also state on several occasions that this is consistent with Rapanos ruling (Sec. III.F.3.) However, after the *Rapanos* decision the USACE and EPA issued a memorandum *Regarding Clean Water Act Jurisdiction Following Rapanos v. United States* and guidance entitled *US Army Corps of Engineers Jurisdictional Determination Form Instructional Guidebook*. These documents state that

the "...agencies will assert jurisdiction over the following categories of water bodies: TNWs; all wetlands adjacent to TNWs; non-navigable tributaries of TNWs that are relatively permanent (i.e. tributaries that typically flow year-round or have continuous flow at least seasonally); and wetlands that directly about such tributaries. In addition, the agencies' will assert jurisdiction over every water body that is not an RPW if that water body is determined (on the basis of fact specific analysis) to have a significant nexus with a TNW."¹¹ The agencies' own guidance at that point in time limits their authority, and clearly indicates that not all tributaries would be considered jurisdictional. Now, under the proposed rule all tributaries that meet the definition of tributary (defined bed and banks with ordinary high water (OHW) features) would be jurisdictional water no matter its size. We request that the agencies re-evaluate their definition of significant nexus, clarify what constitutes a tributary and explain how the Rapanos decision supports their conclusion that all tributaries have a significant nexus to TNW in their response to these comments. (p. 1-2)

Agency Response: Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, and also includes a summary of the historic scope of the existing regulatory definition of "waters of the United States."

Federal Water Quality Coalition (Doc. #15822.1)

- 8.61 The proposed rule expands jurisdiction over this category of water by proposing to define tributaries to include features on the land where an EPA or Corps employee believes he or she can discern a bed, bank, and ordinary high water mark (OHWM), even if these features disappear underground, as long as these features can be identified upstream of where they disappear.³ And even these features would not be required for a wetland, lake, or pond to qualify as a tributary. A tributary would include wetlands and manmade conveyances. A tributary must contribute flow to a navigable or interstate water or territorial sea, but there are no temporal limits on how often a tributary contributes such flow. It could take years, decades, or even centuries for flow to reach a navigable water. There also are no geographic limits on how distant the flow that is per se jurisdictional is from navigable water and no need to show that the flow could carry pollutants to navigable water. Finally, given the fact that a tributary that disappears remains a tributary, it appears that the flow can be contributed through groundwater, which can take centuries to recharge to surface water.¹² (p. 10)

Agency Response: See summary responses for sections 8.1 and 8.2. Section VII of the Technical Support Document discuss the science supporting the agencies'

¹¹ RPW is "relatively permanent water". The concept came out of the Rapanos ruling

¹² Nadeau, T. L., and M. C. Rains, Hydrological connectivity of headwaters to downstream waters: Introduction to the featured collection. Journal of the American Water Resources Association 43:1-4 (2007), at 126 (a survey article cited in the Draft Connectivity Report).

determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See summary response 8.3 below for discussion of how breaks in OHWM are addressed. See summary response in Compendium 7.3.6 for discussion of the exclusion for groundwater.

8.62 3. Evolution of the expansion of “tributary” jurisdiction.

The agencies did not originally assert jurisdiction under the CWA over ephemeral water features. In fact, their assertion of authority over ephemeral water is relatively recent. In 1975, the preamble to the Corps’ interim final regulations specified that the upstream limit of jurisdiction is the headwaters, or point where average annual stream flow is five cubic feet per second.¹³ In 1977, the preamble to the final Corps regulations specified that jurisdiction extends to the entire surface tributary system.¹⁴ In 1994, the Corps Baltimore District issued a guidance letter specifying that ephemeral waters act as rain gutters, conveying water for a brief period of time following rain events. As such, they do not ordinarily develop an ordinary high water mark that would indicate they are part of a tributary system. Consequently, they were not regulated.¹⁵ However, in 2000, the Corps Nationwide Permits preamble specified that federal jurisdiction extends to ephemeral streams, provided they have an ordinary high water mark, overturning the Baltimore District’s presumption that ephemeral streams would not have an ordinary high water mark.¹⁶ This assertion of jurisdiction led to abuses.¹⁷ Moreover, even though the Corps took this position in 2000, as discussed below, both the plurality and Justice Kennedy were not persuaded that an ordinary high water mark is a basis for jurisdiction.

The agencies also did not assert authority over ditches until relatively recently. In fact, the 1977 Corps definition of waters of the U.S. expressly excluded “manmade nontidal drainage and irrigation ditches excavated on dry land” from the definition of tributaries, stating that they “are not considered waters of the United States under this definition.” 33 C.F.R. § 323.2(a)(3)(1977).¹⁸

¹³ 40 Fed. Reg. 31,320, 31,321 (July 25, 1975).

¹⁴ 42 Fed. Reg. at 37,129.

¹⁵ Branch Guidance Letter, COE, Baltimore District, CENAB-OP-R, No.95-01, Oct. 17, 1994 (“Project Managers are frequently required to determine the upstream limits of regulatory jurisdiction, including differentiating between intermittent streams, which are regulated (33 CFR § 328.3(a)(3)), and ephemeral streams, which are not regulated.”) (attached). This has been relied upon by numerous entities. See attached Montgomery County, MD guidance.

¹⁶ 65 Fed. Reg. 12,818, 12,823 (Mar. 9, 2000).

¹⁷ For example, in a March 30, 2004, hearing of the Water Resources and Environment Subcommittee of the House Committee on Transportation and Infrastructure on “Inconsistent Regulation of Wetlands and Other Water,” one witness testified that a Corps official used a 25-year old skidder rut to connect a wetland to a ditch to a stream. House Doc. No. 108-58 at 81-82 (attached). Under the proposed rule, Corps officials would remain free to conclude that a skidder rut has an OHWM and therefore is part of the tributary system.

¹⁸ “We have adopted the suggestion of many commenters that we incorporate into our definition (and not in the Preamble as we did in 1975) the statement that nontidal drainage and irrigation ditches that feed into navigable waters will not be considered ‘waters of the United States’ under this definition. To the extent that these activities cause water quality problems, they will be handled under other programs of the FWPCA, including Sections 208 and 402.” 42 Fed. Reg. at 37127. Even though the preamble stated that the regulations were merely reorganized, the

In addition, the agencies have not traditionally asserted jurisdiction over water based on subsurface connections that are not diversions of former surface streams and have never done so categorically.¹⁹ For example, a 2001 policy issued by the Galveston District of the Corps of Engineers states that it does not use groundwater connections to establish jurisdiction.²⁰ Moreover, directly contradicting the position in the proposed rule, in litigation, EPA has taken the position that identification of a connection to surface water via groundwater must be made on a site-specific basis.²¹

Yet the agencies now claim that all waters proposed to be defined as “tributaries,” including ephemeral waters, ditches, and waters with subsurface connections, have a “significant nexus” to navigable or interstate waters or the territorial sea and therefore are per se jurisdictional. This is an expansion of jurisdiction.

This proposed expansion of the definition of tributary has created tremendous uncertainty regarding the status of land that exhibits erosion features from wind or water even if dry for many years, the status of water conveyance systems, the status of water drainage systems, the status of ephemeral streams, and the status of features that have no continuous surface connection to navigable water. (p. 12-13)

Agency Response: See summary responses for sections 8.1 and 8.1.1. See summary responses for the Ditches Sections 6.0 and 6.2 for a focused description of ditches, the regulatory history of ditches and how the exclusions for ditches were revised and clarified for the final rule. Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, and also includes a summary of the historic scope of the existing regulatory definition of “waters of the United States.”

Water Advocacy Coalition (Doc. #17921.1)

- 8.63 By its terms, the proposed rule expands CWA jurisdiction to ephemeral drainages, ditches (including roadside, flood control, irrigation, stormwater, railroad right-of-way, and agricultural ditches), waters in riparian and floodplain areas, industrial ponds, and isolated waters that have not previously been regulated as “waters of the United States.” (p. 14)

1986 definition of waters of the U.S. moved this clarification from rule language to preamble language and reserved the right to regulate ditches on a case by case basis. 51 Fed. Reg. at 41217.

¹⁹ Waters and Wetlands, Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction (GAO-04-297), at 24 (discussing using connections through subsurface closed conveyances to establish jurisdiction only if the pipe replaced a historic stream) (attached). No such limitation appears in the proposed rule.

²⁰ Adjacent/Isolated Criteria, Galveston District Policy Number 01-001 (attached).

²¹ *Conservation Law Foundation et al. v U.S. EPA, et. al.*, Case No. 1:10-cv-11455-MLW, Memorandum in Support of Defendants’ Motion for Summary Judgment, at 20-21 (noting that a hydrological connection to surface water via groundwater is a site-specific determination) (attached).

Agency Response: Paragraph (b) of the final rule excludes many features. See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. Sections IV(F) and IV(G) of the preamble discusses the revisions and clarifications of “tributaries” and “adjacent waters,” respectively.

- 8.64 This definition allows for regulation of ephemeral drainages, ditches, and conveyances, including stormwater conveyances, that are not currently treated as “waters of the United States.” The agencies’ determination that these features, many of which may flow for only a few hours or days following a rain event, categorically have a significant nexus is not supported by science. As explained in the GEI Report, “all tributaries . . . exist on a gradient of connectivity, and the science has not identified the point on that gradient (i.e., the strength of connectivity) where the significant nexus falls.”²² The studies cited by the agencies “largely fail to assess the significance of connectivity,” and therefore “the existing scientific literature and analyses presented by EPA do not support these categorical jurisdictional determinations.” *Id.*

...

Ephemeral drainages, for example, should not be *per se* jurisdictional. Although they may exhibit a bed, bank, and OHWM, ephemeral drainages only flow in response to precipitation events, which in some parts of the country only occur occasionally during a portion of the wet season. In particular, the arid West is covered with dry washes, arroyos, seasonal waterbodies, and ephemeral drainages. Rarely can a development project or industrial facility be constructed without affecting one or more of these ubiquitous features. Many stormwater conveyances are constructed to prevent degradation of downstream waters and should not become a source of regulatory burden for property owners. Ephemeral drainages were historically outside CWA jurisdiction,²³ and for good reason – they flow only rarely, and even more rarely in quantities that could affect other more permanent or significant waterbodies.²⁴ Indeed, the science does not demonstrate that treating ephemeral features as waters of the United States will have benefits for downstream waters. As Dr. Michael Josselyn notes, “These low order features may have flow for only a few hours or days following storm events and are the most likely candidates for being on the low end of the [connectivity] gradient. . . .”²⁵ These are not features with significant effects on downstream navigable waters. The State of Missouri, for instance, determined, based on a U.S. Geological Survey (“USGS”) analysis, that data did not exist to support a significant connection between ephemeral

²² GEI Report, Exhibit 6 at 4.

²³ Even the 2008 Rapanos Guidance, which is still in effect, requires “continuous flow at least seasonally (e.g., typically three months).” Rapanos Guidance at 5-6 (emphasis added). The agencies have failed to explain this change.

²⁴ In fact, the reasons cited by the agencies for not regulating puddles are similarly applicable for ephemeral drainages. The preamble states that a puddle, which “forms . . . immediately after a rainstorm,” “cannot reasonably be considered a water body or aquatic feature at all, because usually it exists for only a brief period of time before the water in the puddle evaporates or sinks into the ground.” 79 Fed. Reg. at 22,218. Such is the case with ephemeral drainages.

²⁵ SAB Panel Member Comments, Exhibit 7 at 42 (comments of Dr. Michael Josselyn).

streams and aquatic uses.²⁶ Accordingly, the State of Missouri (with EPA approval) determined that it would not set water quality standards for certain ephemeral streams.²⁷ Similarly, if ephemeral drainages are now jurisdictional “waters of the United States,” as proposed, Kansas estimates a more than four-fold increase from 32,000 miles of streams to 134,000 miles of streams that will be “waters of the United States” and therefore subject to water quality standards.²⁸ Neither the Connectivity Report nor Appendix A of the preamble demonstrates that ephemeral features have significant chemical, physical and biological effects on TNWs. Instead, the agencies have not assessed the significance of these connections and have ignored the caution from the SAB Panel that “temporal and spatial predictability of connectivity is especially important to quantify when assessing potential for downgradient effects in systems without permanent or continuous flowpaths.”²⁹ Dr. Michael Josselyn of the SAB Panel notes that “the science needs to be more substantial than currently demonstrated in the Draft Science Report” for the agencies to assert jurisdiction over ephemeral drainages.³⁰ Indeed, these “very small drainages” “are not usually considered in the scientific studies that deal with headwater streams,” and the agencies should recognize the “uncertainty and limits of the scientific knowledge” with respect to these features.³¹ As Dr. Mark Murphy of the SAB Panel observed, “inclusion by rule of all ephemeral tributaries, ‘regardless of size or flow duration,’ is not scientifically justified.”³² Furthermore, by asserting jurisdiction over such attenuated waters and potentially wet features, the agencies will misuse their limited resources and the limited resources of the States and regulated community. For all these reasons, ephemeral drainages should not be considered “waters of the United States.”

...

Asserting categorical jurisdiction over all features covered by the proposed “tributary” definition would result in huge land areas, in all parts of the country, becoming subject to federal control. For an illustration of the reach of the proposed rule’s “tributary” definition, one need look no further than the EPA maps, released to the public by Rep. Lamar Smith and the U.S. House of Representatives Committee on Science, Space, and Technology, that rely on USGS data and appear to depict the scope of CWA jurisdiction.³³ These maps indicate a total of approximately 8.1 million miles of

²⁶ See Missouri Department of Natural Resources, Regulatory Impact Report In Preparation for Proposing An Amendment to 10 CSR 20-7.031, Missouri Water Quality Standards at 4, 25 (Nov. 9, 2012), available at <http://www.dnr.mo.gov/env/wpp/docs/master-rir-wqs-112312.pdf> (Based on USGS study, “A Gap Analysis for Riverine Ecosystems of Missouri” (2005), Missouri decided to designate all perennial rivers and streams, intermittent streams with permanent pools, and those waters spatially represented by the 1:100,000 scale NHD, but not ephemeral waters.)

²⁷ See Mo. Code Reg. Ann. tit. 10, § 20-7.031.

²⁸ See Presentation of Mike Tate and Tom Stiles, Kansas Department of Health and Environment, Waters of the U.S. (May 2, 2014) (attached hereto as Exhibit 9) at 11-12 (map of currently designated “Waters of the United States” in Kansas and map of additional “waters of the United States” in Kansas if ephemerals are added).

²⁹ SAB Panel Review of Connectivity Report, Exhibit 5 at 15.

³⁰ SAB Panel Member Comments, Exhibit 7 at 42 (comments of Dr. Michael Josselyn).

³¹ See *id.*

³² *Id.* at 99 (comments of Dr. Mark Murphy).

³³ See EPA State and National Maps of Waters and Wetlands, *available at* <http://science.house.gov/epamaps-state-2013#overlay-context>. (last visited Oct. 29, 2014).

perennial, intermittent, and ephemeral streams across the 50 States, all of which would be categorically regulated as tributaries under the proposed rule.³⁴ Unfortunately, these maps are just the tip of the iceberg, as they depict only a fraction of the land and waters that would be “tributaries” subject to federal CWA jurisdiction because they do not depict ditches and other manmade conveyances that would be categorically jurisdictional tributaries under the proposed rule. The agencies go too far in asserting such broad jurisdiction over tributaries without legal or scientific support. (p. 43-46, 47)

Agency Response: See section IV(I) of the preamble to the final rule and summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments. Section I of the Technical Support Document describes the legal basis of the final rule, and also includes a summary of the historic scope of the existing regulatory definition of “waters of the United States.” The agencies do not have maps illustrating the extent of jurisdictional waters of the United States. Determining the jurisdictional status of a water feature often requires site specific knowledge. Although the final rule provides increased clarity and “bright line” distinctions to help differentiate waters of the United States from non-jurisdictional features, it will not eliminate the need for consideration of site specific knowledge. The agencies generally only conduct jurisdictional determinations at the request of individual landowners, thus we do not have maps depicting the geographic scope of the CWA. Such maps do not exist and the costs associated with a national effort to develop them are cost prohibitive and would require access to private property across the country. The U.S. Geological Survey and the U.S. Fish and Wildlife Service collect information on the extent and location of water resources across the country and use this information for many non-regulatory purposes, including characterizing the national status and trends of wetlands losses. This data is publicly available and the agencies have relied on USGS and USFWS information to characterize qualitatively the location and types of national water resources. This information is depicted on maps but not for purposes of quantifying the extent of waters covered under CWA regulatory programs.

³⁴ In a blog post, EPA states that these maps “do not show the scope of waters . . . proposed to be covered under EPA’s proposed rule” and “cannot be used to determine Clean Water Act jurisdiction – now or ever.” Tom Reynolds, Mapping the Truth, EPA Connect Blog (Aug. 28, 2014), <http://blog.epa.gov/epaconnect/2014/08/mapping-the-truth/>. But why not? The proposed rule indicates that the agencies intend to treat all perennial, intermittent, and ephemeral streams as per se jurisdictional (no case-specific analysis), and the preamble suggests that the agencies will identify tributaries using USGS maps and other appropriate information. 79 Fed. Reg. at 22,202. How, then, can the agencies claim that these maps do not show the scope of streams subject to federal CWA jurisdiction under the proposed rule?

8.65 **B. The Proposed Rule’s Treatment of Tributaries Is Not Supported by Science and Will Result in Confusion in the Field.**

One of the most problematic aspects of the proposed rule is how the agencies propose to regulate tributaries. As we have noted in previous comments, the regulation of “tributaries” has caused longstanding problems.³⁵ The proposed rule categorically determines that tributaries, regardless of size or significance, have a significant nexus to TNWs, interstate waters, and the territorial seas. 79 Fed. Reg. at 22,201. Thus, any water that meets the rule’s broad definition of “tributary” will be a jurisdictional “water of the United States.” *Id.* And waters and wetlands adjacent to tributaries will be automatically jurisdictional. *Id.* at 22,263. As explained in the Appendix to these comments, the proposed rule’s categorical regulation of all channelized features with an ordinary high water mark (“OHWM”) and flow is contrary to the limits of CWA jurisdiction recognized by the plurality and Justice Kennedy in *Rapanos*. In addition to these legal concerns, the proposed treatment of tributaries is overbroad and would extend jurisdiction to many features that the agencies have not previously regulated. Equally troubling, the proposed definition of “tributary” is vague and confusing, and will likely lead to inconsistent application in the field.

...

Instead of categorically regulating all channels, canals, and ditches, and then trying to exempt particular features such as stormwater conveyances, the agencies should identify a new standard for tributaries that is based on scientific evidence and covers only traditionally understood tributaries that either themselves qualify as TNWs or have the requisite relationship under Supreme Court limits with TNWs. Constructed stormwater, process water, and wastewater conveyances (swales, channels, ditches, and detention/retention ponds), excavated or otherwise constructed as part of site development projects, agricultural fields, or other sites, should not be treated as jurisdictional “waters of the United States.” (p. 43, 49)

Agency Response: Section III of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” in the final rule have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries, erosional features that do not meet the definition of “tributary,” waste treatment systems designed to meet the requirements of the CWA and stormwater control features created in dry land. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions and Compendium 6, Section 6.2 of this

³⁵ See WAC Comments on 2011 Draft Rule, Exhibit 1 at 61-62; AFBF Comments on 2008 *Rapanos* Guidance, Exhibit 2 at 73-75; FEPP Comments on 2003 ANPRM, Exhibit 3 at 20-21.

RTC, “Excluded Ditches,” for a more focused discussion on the revisions and clarifications of the ditch exclusions.

American Society of Civil Engineers (Doc. #19572)

- 8.66 EPA and USACE propose definitions for a number of critical terms used in the proposed rule. We provide the following examples and comments of definitions that are too broad in scope, ambiguous or may require additional revisions.

Tributary: The proposed definition of tributary is too broadly defined. In the proposed rule a tributary is characterized by a bed, bank and ordinary high water mark which contributes flow directly or through other water bodies to a “water of the U.S.”³⁶ The proposed rule states that a tributary does not lose its status if there are man-made breaks (such as bridges, culverts, pipes, dams) so long as a bed, bank and ordinary high water mark can be identified up and downstream of the break. Importantly, a tributary can be a natural, man-altered, or man-made and includes rivers, streams, lakes, impoundment, canals and ditches (unless excluded). Our members have expressed particular concern that, broadly read, the rule may significantly impact municipalities who manage local streets that could be considered jurisdictional under proposed definition. Taken to the extreme, the question has been posed: are rain gutters subject to jurisdiction? ASCE urges EPA and USACE to consider adding exemptions and clarifications to this definition. (p. 7-8)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries, erosional features that do not meet the definition of “tributary” and stormwater control features created in dry land. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions and Compendium 6, Section 6.2 of this RTC, “Excluded Ditches,” for a more focused discussion on the revisions and clarifications of the ditch exclusions. As stated in the preamble to the final rule, curbs and gutters have never been considered “waters of the United States.”

Minnkota Power Cooperative, Inc. (Doc. #19607)

- 8.67 The expanded definition of a tributary in this Proposed Rule seeks to expand CWA jurisdiction to potentially include any channelized feature, such as a ditch, ephemeral drainages, storm water conveyances, wetlands, ponds, impoundments, erosional features, etc. that directly or indirectly may contribute water flow to a navigable water, disregarding frequency or duration of flow. (p. 2)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries, erosional features that do not meet the definition of “tributary” and stormwater control features created in dry land. See summary responses in Compendium 7 of this RTC, “Features and Waters Not

³⁶ See Definition of “Waters of the United States” Under the Clean Water Act; Proposed Rule, 79 Fed. Reg. 22, 201.

Jurisdictional,” for a broad discussion of the final rule’s exclusions and Compendium 6, Section 6.2 of this RTC, “Excluded Ditches,” for a more focused discussion on the revisions and clarifications of the ditch exclusions.

Kerr Environmental Services Corps. (Doc. #7937.1)

- 8.68 The "Jurisdictional Determination Form Instructional Guidebook" prepared jointly by the USEPA and USACE (May 30, 2007) as a means of interpreting the *Rapanos* decision indicates that: "Tributary is a natural man-altered, or man-made water body. Examples include Rivers, streams and lakes that flow directly or indirectly into TNWs."

We recommend the proposed rule adopt the standard used in the Guidebook. The proposed definition as written is far too vague and broad will undermine clarity and predictability and is contrary to congressional intent and court-precedent. (p. 8)

Agency Response: The agencies disagree and believe instead that the revised definition of “tributary” in the final rule, together with the revised and clarified exclusions under paragraph (b), will limit jurisdiction to only those waters that have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas. See summary response for section 8.1.

Kansas Independent Oil & Gas Association (Doc. #12249)

- 8.69 There is no language in the proposal that would provide for any limit as to which tributaries (and most ditches) are part of the "navigable waters" as contemplated by Congress. Quite the contrary, the definition of "tributary" and the preamble discussion go to great lengths to explain away potential distinctions that would result in a less inclusive jurisdictional result. As proposed, all tributaries would become jurisdictional. Absent from the proposal or the docket is a clear assessment of whether this definition delivers a jurisdictional water that is based on a threat to "waters of the United States" that is more than speculative. The agencies' goal of "eliminating the need to make a case-specific determination for tributaries" is not a goal that is consistent with the Clean Water Act. (p. 14)

Agency Response: The agencies disagree and believe instead that the revised definition of “tributary” in the final rule, together with the revised and clarified exclusions under paragraph (b), will limit jurisdiction to only those waters that have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas. See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions and Compendium 6, Section 6.2 of this RTC, “Excluded Ditches,” for a more focused discussion on the revisions and clarifications of the ditch exclusions.

Pennsylvania Coal Alliance (Doc. #13074)

8.70 The Proposed Rule broadens the definition of “waters of the United States” by revising the definitions and scope of tributaries... Under the Proposed Rule, all tributaries are categorically presumed to have a significant nexus to a traditional navigable water, interstate water or territorial sea. In contrast, under current guidance,³⁷ jurisdiction over tributaries that are not relatively permanent is determined on a case-by-case basis. The Proposed Rule broadly defines tributary to include any water with a bed and banks and ordinary high water mark (OHWM), or any wetland, lake or pond, that contributes flow, either directly or indirectly to other jurisdictional waters. Ditches are only excluded from this definition in certain, narrow circumstances. (p. 3)

Agency Response: See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions and Compendium 6, Section 6.2 of this RTC, “Excluded Ditches,” for a more focused discussion on the revisions and clarifications of the ditch exclusions.

O'Neil LLP (Doc. #14651)

8.71 Tributary

The Proposed Rule's definition of the term "tributary" as any feature with a bed and bank that contributes flow to any water on the Proposed Rule's initial list of Waters of the United States allows for a far too broad potential application of the term, and thus a too broad definition of what the Agencies can regulate under the CWA. Many features - particularly in large portions of the arid western United States, including many parts of California -- such as dry arroyos and mountain channels, have a bed and bank even though they only flow when it rains or the snow melts. Manmade ditches can also exhibit these features which the Proposed Rule would now define as a "tributary" to be regulated under the CWA. This new definition is too expansive, and significantly exceeds the limits of the agencies' authority to regulate "waters" under the language of the CWA. (p. 3)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions and Compendium 6, Section 6.2 of this RTC, “Excluded

³⁷ At present, industry relies extensively on the December 2, 2008 guidance memorandum issued by the EPA and Corps (2008 Guidance) to interpret the meaning of “waters of the United States” under the CWA. “*Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in Rapanos v. United States and Carabell v. United States*,” (December 2, 2008).

Ditches,” for a more focused discussion on the revisions and clarifications of the ditch exclusions.

West Valley Planned Communities (Doc. #18906)

- 8.72 A lake, pond, or other ornamental water feature in combination with drainage canals/washes could be considered a tributary and, thus, by rule "waters of the U.S." if it could contribute flow into a traditionally navigable or interstate water either directly or through a tributary. Recall, a tributary can be perennial, seasonal, or ephemeral. Consequently, as written, this rule would allow the EPA, Army Corps, or a citizen using the Citizen Suit provision, to assert that a lake, pond, other ornamental water feature, or drainage canal/wash is a tributary if during ephemeral flow conditions, i.e., seasonal flooding, water could flow through such water features into the Gila River or the Colorado River directly or through any other natural or manmade tributary.

Because this definition does not require a "significant nexus" finding, rather, by rule, a "significant nexus" is assumed and the burden is shifted from the EPA and Army Corps and placed onto the planned community to demonstrate a particular water feature does not have a "significant nexus" to downstream interstate or traditionally navigable water. This poses significant regulatory uncertainty, with the prospect of significant fines if the EPA or Army Corps determines that a particular water feature, i.e., anything from a stormwater drainage ditch to a lake on a golf course, is a "tributary" because it contributes flows, directly or even through a flood control canal owned by the flood control district, to an interstate or traditionally navigable water. Given the uncertainty and regulatory burden, the proposed definition of "tributary" must be abandoned. (p. 3-4)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including stormwater control features created in dry land and most ditches that are not relocated tributaries or excavated in tributaries. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions and Compendium 6, Section 6.2 of this RTC, “Excluded Ditches,” for a more focused discussion on the revisions and clarifications of the ditch exclusions.

CEMEX (Doc. #19470)

- 8.73 Contrary to the claims of the EPA and the Corps, the proposed rule will actually cause more confusion than clarity. The agencies "categorical" inclusion of all tributaries defined by an observed "mark" on the landscape and its regulation of wetlands and waters adjacent to tributaries based on vague "neighboring," "riparian," "floodplain" and "shallow subsurface" connection criteria makes it virtually impossible to know what areas are regulated and what areas are not. Adjacent waters cannot and should not arbitrarily be considered tributaries. (p. 2)

Agency Response: See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters,

and the territorial seas. Similarly, section IV(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.”

National Association of Home Builders (Doc. #19540)

8.74 3. The Agencies have Expanded Clean Water Act Jurisdiction by Requiring only Three Geomorphic Traits to Meet the Tributary Definition.

According to the Agencies, a water must only have a bed, bank, and an OHWM and contribute flow, directly or indirectly, to a traditional navigable water, an interstate water, a territorial sea, or an impoundment to be a tributary. Any water meeting the tributary definition would be jurisdictional by rule. This definition is both significant and an unlawful expansion of the jurisdictional scope of the CWA, as it is overbroad and inconsistent with the Supreme Court's *Rapanos* ruling. In *Rapanos*, Justice Kennedy opined, "[T]he Corps deems a water a tributary if it feeds into a traditional navigable water (or a tributary thereof) and possesses an ordinary highwater mark . . . [T]he breadth of this standard—which seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes toward it—precludes its adoption"38 He continued, "[T]he dissent would permit federal regulation whenever wetlands lie alongside a ditch or drain, however remote and insubstantial, that eventually may flow into traditional navigable waters. The deference owed to the Corps' interpretation of the statute does not extend so far."39

Justice Kennedy was not alone in his opinion regarding the limited jurisdiction that should be extended to tributaries. Justice Scalia, in his four-Justice plurality, wrote ". . . the Corps interpreted its own regulations to include 'ephemeral streams' and 'drainage ditches' as 'tributaries' that are part of the 'water of the United States,' see 33 CFR section 328.3(a)(5), provided that they have a perceptible 'ordinary high water mark' . . . This interpretation extended 'the waters of the United States' to virtually any land feature over which rainwater or drainage passes and leaves a visible mark - even if only 'the presence of litter and debris.' 33 CFR section 328.3(e) . . . Prior to our decision in *SWANCC*, lower courts upheld the application of this expansive definition of 'tributaries' to such entities as storm sewers that contained flow to cover waters during heavy rainfall . . . and dry arroyos connected to remote waters through the flow of groundwater over 'centuries.'"⁴⁰ Justice Scalia continued, "Even after *SWANCC*, the lower courts have continued to uphold the Corps' sweeping assertions of jurisdiction over ephemeral channels and drains as 'tributaries.'"⁴¹ The Supreme Court has interpreted a definition of "tributary" based upon the presence of an OHWM as "expansive," yet the Agencies conveniently ignore this and publicly attest on their website,⁴² on official EPA blog posts,⁴³ during outreach

³⁸ *Rapanos*, 547 U.S. at 781.

³⁹ *Id.* at 778-779.

⁴⁰ *Id.* at 725-726.

⁴¹ *Id.* at 726

⁴² See www.epa.gov/uswaters. Under the heading "What the Rule Does Not Do," we read, "Does not broaden coverage of Clean Water Act" (last visited Nov. 6, 2014); see also http://www2.epa.gov/sites/nroductionlfiles/2014-09/documents/facts_about_wotus.pdf, "The proposed rule does not expand jurisdiction [of the Clean Water Act]" (last visited Nov. 6, 2014)

⁴³ In a blog post EPA Office of Water Acting Assistant Administrator Nancy Stoner, entitled "Setting the Record

with stakeholder,⁴⁴ in op-eds,⁴⁵ and in testimony at congressional hearings⁴⁶ that the proposed rule does not broaden coverage of the CWA. This is simply not true. What's more, the Agencies cite no studies supporting the premise that the presence of an OHWM indicates a channel has sufficient flow to significantly impact the chemical, physical, and biological integrity of an (a)(1) through (4) water.

The Agencies consider ephemeral features to be tributaries and jurisdictional by rule provided they meet the tributary definition: "All tributary streams, including perennial, intermittent, and ephemeral streams, are physically and chemically connected to downstream traditional navigable waters, interstate waters, and the territorial seas . . ."⁴⁷ The proposed rule continues, "The flow in the tributary may be ephemeral, intermittent or perennial . . ."⁴⁸ Indeed, asserting categorical jurisdiction over ephemeral and intermittent flow is inconsistent with current regulatory guidance which states, "[R]elatively permanent' waters do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally. However, CWA jurisdiction over these waters will be evaluated under the significant nexus standard . . ."⁴⁹ By categorically asserting jurisdiction over ephemeral and intermittent streams on the purported basis that all tributaries have a significant nexus to downstream waters, the Agencies are sweeping in millions of miles of predominantly dry channels for which they are currently required to perform a significant nexus test. Indeed, of the nation's river miles reported on recent EPA maps developed by the U.S. Geological Survey, some 4.6 million miles of streams in the United States (77% of all mapped river and stream miles) are listed as ephemeral or intermittent.⁵⁰ Expanding the tributary definition will undoubtedly expand the number of waters deemed under the jurisdiction of the CWA.

Equally problematic, the science does not demonstrate that treating ephemeral features as "waters of the United States" will have benefits for downstream waters. The state of Missouri, for instance, determined based on U.S. Geological Survey analysis, that it would not set water quality standards for ephemeral streams because data do not exist to support a significant connection to aquatic uses.⁵¹ Neither the draft Connectivity Report

Straight on Waters of the US," she writes, "The, proposed rule does not expand jurisdiction [of the Clean Water Act]." (June 30, 2014) available at <http://blog.epa.gov/epaconnect/2014/06/setting-the-record-straight-on-wous/> (last visited Nov. 6, 2014)

⁴⁴ During a July 2014 stakeholder meeting with farmers in Missouri, EPA Administrator Gina McCarthy stated, "you don't need a permit now you won't need one [under the proposed rule]."

⁴⁵ See EPA Administrator Gina McCarthy's Huffington Post op-ed (March 25, 2014) ("Some may think that this rule will broaden the reach of EPA regulations -- but that's simply not the case. Our proposed rule will not add to or expand the scope of waters historically protected under the Clean Water Act.") available at http://www.huffingtonpost.com/gina-mccarthy/clearer-protections-for-c_b_5029328.html

⁴⁶ In testimony before the House Committee on Science, Space and Technology on July 9, 2014, EPA Deputy Administrator Robert Perciasepe stated at 1:04:40: "We're not expanding the jurisdiction of the Clean Water Act.", available at <http://www.c-span.org/video/?320360-1/hearing-clean-water-act-regulations>

⁴⁷ 79 Fed. Reg. at 22,197 (emphasis added).

⁴⁸ *Id.* at 22,202 (emphasis added)

⁴⁹ 2008 Rapanos Guidance at 7 (emphasis added).

⁵⁰ See <http://science.house.gov/epa-maps-state-2013#overlay-context>

⁵¹ See Missouri Department of Natural Resources, Regulatory Impact Report In Preparation for Proposing An

nor Appendix A of the preamble refute this decision, as they do not demonstrate that ephemeral features have significant chemical, physical, or biological effects on traditional navigable waters. For these reasons, ephemeral drainages should not automatically be considered "waters of the United States." (p. 58-60)

Agency Response: See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law. See summary response for section 8.1.1, "Relevance of Flow Regime." Regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow, but may not declare an ephemeral stream non-jurisdictional altogether. The agencies do not have maps illustrating the extent of jurisdictional waters of the United States. Determining the jurisdictional status of a water feature often requires site specific knowledge. Although the final rule provides increased clarity and "bright line" distinctions to help differentiate waters of the United States from non-jurisdictional features, it will not eliminate the need for consideration of site specific knowledge. The agencies generally only conduct jurisdictional determinations at the request of individual landowners, thus we do not have maps depicting the geographic scope of the CWA. Such maps do not exist and the costs associated with a national effort to develop them are cost prohibitive and would require access to private property across the country. The U.S. Geological Survey and the U.S. Fish and Wildlife Service collect information on the extent and location of water resources across the country and use this information for many non-regulatory purposes, including characterizing the national status and trends of wetlands losses. This data is publicly available and the agencies have relied on USGS and USFWS information to characterize qualitatively the location and types of national water resources. This information is depicted on maps but not for purposes of quantifying the extent of waters covered under CWA regulatory programs.

Home Builders Association of Tennessee (Doc. #19581)

- 8.75 The Proposed Rule establishes a one-size-fits-all designation for all tributaries to covered waters. The proposed deconstructed definition of tributary means a water: [P]hysically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (1)(i) through (iv) of this definition.

Amendment to 10 CSR 20-7.031, Missouri Water Quality Standards at 4.25 (Nov. 9, 2012) available at <http://www.dor.mo.gov/env/wpp/docs/master-rir-wqs-112312.pdf>

(Based on USGS study, "A Gap Analysis for Riverine Ecosystems of Missouri" [2005], Missouri decided to designate all perennial rivers and stream, intermittent streams with permanent pools, and those waters spatially represented by the 1 : 100,000 scale NHD, but not ephemeral waters.)

In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (1)(i) through (iii) of this definition.

A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.

A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (2)(iii) or (iv) of this definition.

The definition of tributary causes substantial concern for the construction industry. For example, jurisdictional waters may require lateral buffering, permitting and costly compensatory mitigation. When all tributaries are considered jurisdictional, even all ephemeral streams, including Tennessee's wet weather conveyances, they become federalized and not only create additional jurisdictional waters, but also cause significant land use determinations that now are within the sole province of the states. Construction projects require regulatory certainty particularly when platting subdivisions and making investment decisions. Identifying nearly all conveyances as jurisdictional may increase certainty, but hinders actual operations. For example, in Tennessee with the general permit for wet weather conveyances, excess material, such as rock and dirt, can be disposed of in wet weather conveyances. If, however, these wet weather conveyances are waters of the United States, as described in the Proposed Rule, the ability to use such features could be severely restricted if not entirely eliminated. This creates extra cost to the home builder with no appreciable environmental benefit as described in Paragraph III of these comments. Likewise, some wet weather conveyances may require construction buffers which would limit the footprint of a subdivision, and, in some cases make development impractical. Impacts to wet weather conveyances from moving equipment across a wet weather conveyance during construction will also become a substantial issue and create enforcement concerns. This results in notices of violations, agency orders, or even civil or criminal enforcement for what has been a lawful activity. (p. 3-4)

Agency Response: See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Planning and zoning for land use decisions is solely a local and/or state authority, and is beyond the scope of this rule.

Freeport-McMoRan Inc. (Doc. #14135, #14135.1, and #14135.2)

8.76 The plain text of the Clean Water Act limits EPA and the Corps’ jurisdiction to waters of the United States.⁵² While it is well-established that this means something more than simply navigable waters,⁵³ Justice Kennedy’s concurrence in *Rapanos* requires the Agencies to demonstrate that waters “either alone or in combination with similarly situated lands in the region, *significantly affect* the chemical, physical, and biological integrity of other covered waters more readily understood to be ‘navigable’” in order to establish jurisdiction.⁵⁴ The Agencies themselves recognize this in their proposed definition of “significant nexus,” which requires that the connection be more than speculative and insubstantial.⁵⁵ However, when applied to the arid west, the Proposed Rule’s definition of “tributary” and its conclusion that all tributaries are jurisdictional does not meet this requirement.

II. Features that would be defined as “tributaries” in the arid west under the Proposed Rule may not have the biological connection to traditional navigable waters that the Draft Connectivity Report and Proposed Rule assert.

With respect to biological connectivity, the Proposed Rule concludes that “[t]ributaries, including intermittent and ephemeral streams, are critical in the life cycles of many organisms capable of moving throughout river networks.”⁵⁶ The Proposed Rule further finds that tributaries “have important effects on the biological integrity of . . . [traditional navigable] waters, contributing materials to downstream food networks and supporting populations for aquatic species, ...”⁵⁷ With respect to ephemeral streams specifically, the Proposed Rule notes that they can play an important role in sediment storage that improves downstream water quality.⁵⁸ While all of these observations may be correct in humid systems and perennial streams that receive regular flows, they do not hold when applied to the channels of the arid west, in which the impact of ephemeral tributaries in particular is frequently insignificant and insubstantial, much less critical.

Most biological communities require the sustained presence of water in channels to form.⁵⁹ As a result, they are unlikely to exist in arid west channel systems where flow is

⁵² See 33 U.S.C. § 1362(7) (defining “navigable waters” to be “waters of the United States, including the territorial seas.”).

⁵³ *United States v. Riverside Bayview Homes*, 474 U.S. 121, 133 (1985).

⁵⁴ 547 U.S. 715, 780 (2006) (emphasis added). In rejecting the Corps’s existing standard for tributaries at the time of *Rapanos*, Justice Kennedy noted that the standard “seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes towards it.” *Id.* at 781. Justice Kennedy stated that this flawed standard “*precludes* its adoption as the determinative measure of whether adjacent wetlands are likely to play an important role in the integrity of an aquatic system comprising navigable waters as traditionally understood.” *Id.* (emphasis added). The existing standard for tributaries rejected in *Rapanos* (*i.e.*, “the Corps deems a water a tributary if it feeds into a traditional navigable water (or a tributary thereof) and possesses an ordinary high-water mark” (*id.*)) is the same flawed standard that the Agencies are attempting to support in the Proposed Rule.

⁵⁵ 79 Fed. Reg. at 22,220.

⁵⁶ 79 Fed. Reg. at 22,205.

⁵⁷ *Id.*

⁵⁸ *Id.* at 22,231.

⁵⁹ Technical Comments at 3.

an abnormal condition.⁶⁰ The Draft Connectivity Report notes that isolated pools in dryland rivers are key refuges for fish and aquatic insects to survive in ephemeral waters during periods when there is no flow.⁶¹ However, the Draft Connectivity Report provides no evidence of biological connectivity or support of fish or aquatic insect populations in cases where the predominant condition of the water is not only no flow but also a completely dry channel bed for most of the year. In cases such as the Santa Cruz River where both the mainstem and channels flowing into it are nearly always dry, the biological connections posited by the Draft Connectivity Report and the Proposed Rule simply do not exist.

III. Features that would be defined as “tributaries” in the arid west under the Proposed Rule do not always have the chemical connection to traditional navigable waters that the Draft Connectivity Report and Proposed Rule assert.

The Proposed Rule concludes that tributaries “influence the chemical composition of downstream waters, through the transport and removal of chemical elements and compounds, such as nutrients, ions, dissolved and particulate organic matter, pollutants, and contaminants.”⁶² However, the Proposed Rule notes that “chemical effects are closely related to hydrological connectivity.”⁶³ The Proposed Rule further suggests that ephemeral streams can play an important role in nutrient cycling.⁶⁴ Based on the San Pedro River “case study” the Proposed Rule concludes that “[e]xtensive downstream river riparian communities are supported by water, sediment, and nutrients exported to the river from ephemeral tributaries”⁶⁵

However, these conclusions are not relevant to arid west channel systems that lack sustained flows. In most arid west systems, water flows are “flashy,” meaning that water moves quickly across the landscape in response to a rain event and quickly dissipates. In contrast, many of the chemical processes described in the Proposed Rule only occur when waters have a long residence time in channels.⁶⁶ Because of the flashy nature of flows in arid west channels, the potential for chemical transformations is minimal.⁶⁷

...

V. Even when “tributaries” in the arid west have a physical connection with traditional navigable waters, it is not possible to conclude this is more than a mere hydrologic connection without site-specific data.

The Proposed Rule claims that its legal basis is Justice Kennedy’s concurrence in *Rapanos* and concedes that under this test “a mere hydrologic connection may not suffice in all cases to establish CWA jurisdiction and there needs to be ‘some measure of the

⁶⁰ Id. at 4.

⁶¹ Draft Connectivity Report at 4-68.

⁶² 79 Fed. Reg. at 22,205.

⁶³ Id.

⁶⁴ Id. at 22,231.

⁶⁵ Id. at 22,232.

⁶⁶ Technical Comments at 3.

⁶⁷ Id.

significance of the connection for downstream water quality.”⁶⁸ According to the Proposed Rule, there are two measures by which tributaries meet this criterion based on a physical connection to traditional navigable waters. First, the Proposed Rule concludes that even seasonally dry tributaries are the dominant source of flow for the rivers they feed and that “[t]he physical effects of tributaries are particularly clear after intense rainfall occurs over only the upper tributary reaches of a river network.”⁶⁹ As explained in the attached Technical Comments, in the “losing streams” common in the arid west, rainfall events over the upper reaches of a network will often fail to reach downstream traditional navigable waters.⁷⁰ In these cases, without site-specific data confirming the continuity of flows, EPA and the Corps cannot interpret a continuous network of features that appear to be dry channels as more than a “mere hydrologic connection” that evidences water at one time flowed there. This does not meet the standard of *Rapanos* and therefore cannot be used as a basis for the broad assertion of jurisdiction resulting from the Proposed Rule’s definition of “tributary.”

Second, the Proposed Rule finds that “[t]ributaries, particularly headwaters, shape and maintain river channels by accumulating and gradually or episodically releasing sediment and large woody debris into river channels.”⁷¹ The proposal also concludes that evidence of sediment transport is seen in ephemeral streams.⁷² However, as explained in the attached Technical Comments, the losing nature of arid west streams means that there is no hydrologic connection (and therefore no sediment transport) for most rainfall events.⁷³ Further, because of the likely disconnection between headwaters and traditional navigable waters in losing streams, neither sediment nor water will be conveyed to them through arid west channels at any regular intervals.⁷⁴

The Proposed Rule fails to demonstrate that the occasional connection between arid west channels and traditional navigable waters in losing streams rises above the level of a “mere hydrologic connection.” To do so, the Agencies would need to establish threshold criteria for flow—in terms of both volume and duration—that are required for the connectivity the Agencies assume to be present.⁷⁵ Further these criteria should be crafted in a way that recognizes continuous flows from headwater “tributaries” to traditional navigable waters will depend on the specific geologic characteristics of the watershed. Therefore, without site-specific data to demonstrate that these losing streams have a physical connection that has relevance to downstream flows or water quality, the Agencies do not have the authority to adopt the broad proposed definition of “tributary” and apply it to arid west systems. (Doc. #14135, p. 3-5, 6-7)

- 8.77 Because of the lack of review of arid landscape headwaters in the Agencies' analysis of connectivity, below we begin with a brief review of the relevant processes and features in

⁶⁸ 40 79 Fed. Reg. at 22,195 (quoting 547 U.S. at 784-85).

⁶⁹ Id. at 22,227.

⁷⁰ Technical Comments at 12.

⁷¹ 79 Fed Reg. at 22,227.

⁷² Id.

⁷³ Technical Comments at 13.

⁷⁴ Id.

⁷⁵ Id. at 14.

arid landscapes and how they operate at the most distal extent of the channel network in arid landscapes.

2. Relevant Processes in Arid Tributaries

The objective of the Clean Water Act is to sustain and restore the physical, chemical, and biological integrity of the nation's waters. This objective provides a rubric with which to consider what types of processes are important when evaluating the potential upstream reach of jurisdiction that is legally supportable under the CWA. Here we briefly review processes relevant to headwater arid systems.

Chemical transformations of materials (e.g., nitrogen, carbon, phosphorus) occur in tributaries, and thus downstream waters can be affected by the characteristics of the tributaries. For instance, the width and depth, along with sediment size of the tributary, can affect the chemical transformations that occur. These types of transformations are one of the primary factors for the agencies expanding their jurisdiction beyond navigable waters and upstream into tributaries. However, it is increasingly recognized that these chemical transformations are quite dependent on the flows in the channel; during high flows, there is limited, and possibly no opportunity for transformations to occur.⁷⁶ During lower flows when flowing water is in contact with channel boundaries for longer periods of time, the channel itself can be a location of transformations, and thus make the tributary important in and of itself and not just as a conveyor of chemicals. In systems in which most materials and water are moved during infrequent, rare storm events, the role of “flashy” tributaries in chemical transformations will be minimal or negligible.⁷⁷

Similarly, **biological processes** and communities can occur in tributaries. Clearly, many of these communities and processes are unique to tributaries, and thus often the impetus for the protection of channels—to protect the channel-dwelling organisms and associated ecosystems. Similar to chemical processes, the duration of water flowing within channels is a clear necessity for many, if not most, of the biological characteristics to form and be sustained. While some biological processes and communities can recover and occur quickly and for short periods of time, many biological processes and communities require sustained presence of some water, and often sustained quantities of flowing water; discharge is often considered the “master variable” for stream ecosystems.⁷⁸ While certainly droughts—the lack of flow in stream ecosystems—are important ecological events, the research that has emphasized the importance of droughts has emphasized its importance as a disturbance event, i.e., its importance when it is unusual in comparison to the usual characteristics of baseflow.⁶ In arid streams, no-flow can be the normal condition and flow the abnormal condition.

As an example, the Santa Cruz River in Arizona (at the Continental USGS gage) has a drainage area of 1,682 square miles yet has a median annual flow of 0 cfs and typically has no flow in the river for 326 days per year (see case study below). Flow in the river

⁷⁶ Doyle, M.W., 2005. Incorporating hydrologic variability into nutrient spiraling. *Journal of Geophysical Research – Biogeosciences* 110, G1, doi:10.1029/2005JG000015.

⁷⁷ Ibid, Doyle, 2005.

⁷⁸ Poff, N.L., J.D. Allan, M.B. Bain, J.R. Karr, K.L. Prestegard, B.D. Richter, R.E. Sparks, and J.C. Stromberg, 1997. The natural flow regime. *BioScience* 47, 769-784.

occurs only in response to unusually heavy rain events, with flows lasting only a few days at a time. That is, the normal condition for this large arid river is no flow. Most tributaries of the Santa Cruz River will have even rarer flows as headwater systems are more “flashy” than their downstream main channels, thus making biological processes nonexistent and expectations of chemical transformations unrealistic in either the main channel or, in particular, the headwater tributaries. Federal regulatory agency researchers have relied heavily on the San Pedro River as their prototype arid system. Importantly, the San Pedro River behaves quite differently from most arid rivers like the Santa Cruz (discussed in more detail in case study below). This marked contrast between these two adjacent systems emphasizes the fact that arid systems are distinct from humid systems, and are often distinct from each other. These distinctions translate to large differences in expectations of chemical or biological processes that might occur. In many arid systems, the sustained lack of flow makes the expectation of chemical transformations or sustaining of biological processes unrealistic.

In sum, some type of sustained water presence and flow must be present for chemical or biological processes or communities to exist in a channel. *Absent sustained flow, a channel will function solely as a physical conveyance of water, sediment, and materials. Absent sustained flow, a tributary will have minimal, if any role in transforming materials through biogeochemical processes. Absent sustained flow, a channel’s primary role in the surface water system will be in its physical conveyance of water, sediment, and materials. Absent sustained flow, the regulatory justification for asserting jurisdiction on a channel must be its influence on downstream waters through its physical conveyance of water, sediment, and materials.*

Based on this rationale, it is clear that the physical processes which occur in arid stream systems are essential to understand, along with the potential for identifying the longitudinal extent of characteristic “fluvial” processes. (Doc. #14135.1, p. 3-4)

Agency Response: See summary responses for sections 8.1, 8.1.1 and 8.1.2. See also TSD Section VII, including Section VII.B.vi, and the Compendium 9 summary response for specific discussion of how intermittent, ephemeral and headwaters tributaries significantly affect the physical chemical and biological integrity of (a)(1) through (a)(3) waters.

- 8.78 While EPA and the Corps have, in some cases, historically asserted CWA jurisdiction over these types of features, assertion of such jurisdiction has been controversial. It has also been limited by the requirement that these features are only jurisdictional if they have a “significant nexus” to a traditionally-navigable water. The Draft Proposed Rule does away with this important limitation on CWA jurisdiction, expanding CWA jurisdiction to features that are effectively dry land so long as they ever---or might ever---contribute the slightest increment of water flow to downstream traditional navigable waters, no matter how small that flow or how far away a navigable water might be. While this is flatly inconsistent with *Rapanos*,⁷⁹ this submission focuses on the scientific and land-use issues, not the legal ones. Moreover, the Draft Proposed Rule’s exemption of “gullies” and “rills” does not suffice to address this concern, because the rule provides no

⁷⁹ 547 U.S. 784-5 (“mere hydrologic connection should not suffice in all cases”) (Kennedy, J.).

well-defined basis to distinguish when something is a gully or rill in contrast to an ephemeral "tributary" - all of which may have an "ordinary high water mark" as that term is used in the Draft Proposed Rule. In fact, it has not been our experience that any drainage or dry wash has ever been deemed exempt as a gully or rill. (Doc. #14135.2, p. 2)

Agency Response: See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Similarly, section IV(G) of the preamble and section VIII of the Technical Support Document discuss "adjacent waters." Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

National Stone, Sand and Gravel Association (Doc. #14412)

8.79 The "jurisdiction by rule" means that any water meeting the new definition of "tributary" has a significant nexus to a TNW based on the evidence of some flow based on an observed "Ordinary High Water Mark" (OHWM) or presence of a "bed and banks" (even for water features that are dry most of year.) This proposed rule will categorically sweep in any waters meeting this definition, including all adjacent waters, and stretches Justice Kennedy's significant nexus test beyond any logical reading. (p. 7)

...the Association respectfully requests that EPA and the Corps withdraw the proposed rule, and any new rule must incorporate the following recommendations:

- Eliminating "jurisdiction by rule" for any water that meets the tributary definition including adjacent waters and wetlands. Defining "tributary" to require clear evidence of (1) an OHWM and (2) clear evidence that the water and its adjacent wetlands provide identifiable water quality benefits to the closest TNW due to demonstrated overland flow. Clarify that a water loses its tributary status if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, dams or roads) unless site specific evidence demonstrates that, under normal circumstances, it is likely that water will flow on the other side of the break. This clarification should also state that the presence of a continuous OHWM on the opposite side of the break is not determinative of a significant nexus to the closest TNW.

... (p. 7, 55)

Agency Response: See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Similarly, section IV(G) of the preamble and section VIII of the Technical Support Document discuss "adjacent waters." Section I of the

Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Wyoming Mining Association (Doc. #14460)

8.80 ...The Science Advisory Board (SAB) stated in their review of the Connectivity Report that it is not appropriate to treat connectivity as a binary property (connected versus not connected). Further the SAB recommended "that the interpretation of connectivity be revised to reflect a gradient approach that recognizes variation in the frequency, duration, magnitude, predictability and consequences of connections."⁴ As pointed out in the GEI report provided in the WAC comments, "all tributaries ... exist on a gradient of connectivity, and the science has not identified the point on the gradient (i.e., the strength of connectivity) where the significant nexus falls." Additionally this connectivity report, on which the EPA is relying to support their proposed definition of "tributary", has failed to go through the process of peer review for finalization prior to the close of the comment period on the proposed rule.

Ephemeral streams are common in the state of Wyoming and many surface mines traverse numerous ephemeral drainages throughout the life of a mine. Under the tributary definition, ephemeral drainages are *per se* jurisdictional⁸⁰. This is a huge shift from the current regulations as ephemeral drainages have historically been outside CWA jurisdiction⁸¹ because they flow only infrequently and the flows are rarely in quantities that could affect other more permanent or significant water bodies. Neither the Connectivity Report nor Appendix A of the preamble demonstrate that all ephemeral features have significant chemical, physical and biological effects to TNW and therefore ephemeral drainages should not be considered jurisdictional in an all-inclusive manner. Note that according to the proposed rule "Approximately 59% of streams across the United States (excluding Alaska) flow intermittently or ephemerally...".⁸² This proposed rule has the potential to drastically increase the number of streams currently considered jurisdictional if all ephemeral drainages become automatically jurisdictional. (p. 4)

Agency Response: See summary responses for sections 8.1, 8.1.1 and 8.1.2. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Section 9 "Scientific Evidence Supporting the Rule" of the Response to Comments.

8.81 Indefinite Definition of Tributaries

⁸⁰ 79 Fed. Reg. at 22,218-19.

⁸¹ See Missouri Department of Natural Resource, Regulatory Impact Report In Preparation for Proposing An Amendment to 10 CSR 20-7.031, Missouri Water Quality Standards at 4, 25 (Nov. 9,2013), *available at* <http://www.dnr.mo.gov/env/wpp/docx/master-rir-wqs-112312.pdf> (Based on USGS study, "A Gap Analysis for Riverine Ecosystems of Missouri" (2005), Missouri decided to designate all perennial rivers and streams, intermittent streams with permanent pools, and those waters spatially represented by the 1:100,000 scale NHD, but no ephemeral waters.)

⁸² 79 Fed. Reg. at 22,231.

The proposed rule catalogs tributaries in an all-inclusive manner which will lead to over-reaching jurisdiction. According to the proposed definition, tributaries can be natural, man-altered, or manmade waters and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches. Open ended statements regarding such matters as "indefinite lengths of disruptions" to tributary features (bed, bank, or Ordinary High Water Mark [OHWM]) and waters contributing flow directly or indirectly to jurisdictional waters in any way create concern as the ambiguity of the tributary definition effectively classifies nearly all bodies of water, even those remote from navigable-in-fact water and those that carry minor volumes of water ephemerally, as categorically jurisdictional.

The rule proposes that any water considered as a tributary even if there is a man-made (e.g., bridge, culvert, pipe or dam) or natural break (e.g., debris piles, boulder fields) *for any length* as long as the bed, bank and OHWM can be identified upstream of the break will remain jurisdictional. This is a common occurrence in arid regions and is an unreasonable requirement. Assuming a significant nexus based on such tenuous connections is not supported by any science (cite SAB report on connectivity as a gradient and GEI report). It greatly expands the scope of waters that would be considered tributaries and therefore jurisdictional. (p. 5)

Agency Response: See summary response for section 8.1. See summary response for section 8.3, “Ordinary High Water Mark (OHWM).” Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

The Mosaic Company (Doc. #14640)

- 8.82 The determination of significant nexus for all waters defined as tributaries in the proposed rule is based on the draft EPA Connectivity Report as well as additional information presented in Appendix B of the preamble. The proposed rule states that all tributaries, including small, intermittent, and ephemeral systems either alone or in combination with other tributaries in a watershed have a significant nexus to downstream traditional navigable waters. Mosaic agrees that tributaries have the potential to provide important functions as sources and sinks of materials and pollutants, and as a source of flow to downstream waters. But Mosaic disagrees that the scientific evidence allows for a categorical determination that all tributaries, regardless of flow magnitude or duration, or position in the watershed meet the significant nexus standard. Additionally, Mosaic disagrees that aggregating the potential effects of multiple small waterbodies in a watershed is a defensible approach to determining significant nexus.

...An alternative approach for determining what tributaries categorically have a significant nexus and are, therefore, jurisdictional is to refine the existing 2008 Guidance on jurisdiction and the Supreme Court's plurality opinion concerning relatively

permanent waters (RPW) . Ignoring the plurality opinion, the proposed definition of tributary eliminates any discussion of RPWs and resorts to the more tenuous aggregation of certain connections to establish significant nexus. The agencies should define RPW in terms of metrics such as flow rate, volume and duration of hydrologic connection, and distance from traditional navigable water in conjunction with ecological metrics to establish a threshold above which a tributary not only has a connection, but meets a threshold of "significance" necessary to establish jurisdiction. This RPW threshold would define when an individual conveyance meets the definition of tributary and is categorically jurisdictional by rule. Conveyances not meeting the RPW threshold as a tributary for jurisdictional purposes would not automatically be considered non-jurisdictional, but would be subject to an individual determination based on the site specific potential to affect the nearest downstream traditional navigable water.

The above approach is more scientifically defensible given the draft EPA Connectivity Report conclusion that individual effects from small intermittent and ephemeral conveyances may be "small", but aggregation "might" make the effects substantial. The recommended approach allows for site specific identification of potential aggregation effects that "might" be substantial for a given watershed or region , but does not categorically assume that potential effects of small, intermittent, and ephemeral conveyances will be substantial. The conclusion that downstream effects "might" be substantial when aggregated is not justification for the determination that all small, intermittent, or ephemeral conveyances have a significant nexus to downstream waters and directly contravenes both the plurality's and Kennedy's *Rapanos* opinions. (p. 20, 21)

Agency Response: Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section II of the Technical Support Document describes the agencies' significant nexus analysis, and Section I describes the legal basis of the final rule, including its consistency with the statute and case law.

Continental Resources, Inc. (Doc. #14655)

- 8.83 A number of additional aspects of the proposed definition of "tributary" are also troublesome. First, there is no requirement that a tributary (or ditch) have a bed, bank, or ordinary high water mark ("OHWM"). The definition includes the entire length of the tributary including areas upstream of a natural or man-made break (e.g., bridges, culverts, pipes, dams, debris, or underground flow). Second, the definition of tributary no longer requires a certain volume of flow, frequency of flow, or notion of proximity to a traditional navigable water. Third, all tributaries are per se jurisdictional if they contribute directly or indirectly to flow. See generally 79 Fed. Reg. at 22,262 (Proposed 33 C.F.R. § 328.3(a)(5)). The agencies' legal and scientific justifications for this expanded definition of tributaries are utterly insufficient. There is every reason to believe the majority of the justices in *Rapanos* would have struck down this definition of "tributary" in the Proposed Rule based on its lack of any statutory or judicial support and the agencies' not-so-subtle effort to expand markedly the limited extent of their jurisdictional reach. (p. 7)

Agency Response: See summary response for section 8.1. See summary response for section 8.3, “Ordinary High Water Mark (OHWM).” Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Sinclair Oil Corporation (Doc. #15142)

- 8.84 While it is possible that categorical determinations could be condoned if the proposed rule defined the categories of water which are *per se* jurisdictional with a degree of specificity sufficient to ensure that jurisdiction did not extend beyond the limits established by SWANCC, and only applied to waters that did, in fact, have a significant nexus to traditional navigable waters, the proposed rule does not do that. Instead, the proposed rule establishes *per se* jurisdiction over "tributaries" and "adjacent" waters and defines both in such ambiguous terms that there is no perceptible limit to the reach of those definitions. In addition to making it practically impossible to know whether a particular water is going to be considered *per se* jurisdictional, the ambiguity in the definitions destroys any legal basis for making categorical jurisdictional determination.

For example, the proposed rule asserts that all tributaries are *per se* jurisdictional, because tributaries have a "significant nexus to a traditional navigable water, interstate water, territorial sea." 79 Fed. Reg. 22,201. However, the Agencies define "tributaries" to include *any* water that contributes *any* flow to a downstream jurisdictional water. *Id.* at 22,263. Such a definition is a clear contradiction of Justice Kennedy's warning that a significant nexus cannot be presumed for a water with a hydrologic connection because "a mere hydrologic connection should not suffice in all cases; the connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood." *Rapanos*, 547 U.S. at 784. (p. 7-8)

Agency Response: Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Similarly, section IV(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.” Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

- 8.85 If the Agencies move forward with a version of the proposed rule, the Agencies must modify several aspects of the proposed rule. To withstand review and provide the clarity, certainty and efficiency the Agencies claim is the reason for the proposed rule, the rule must at a minimum:

...

- Limit the definition of "tributary" to those channelized features exhibiting a bed and bank and ordinary high water mark that is consistently identifiable all the way to the downstream "water of the United States" into which it flows.
- Amend the definition of "tributary" to set a minimum contribution of flow to the traditional navigable water, interstate water, or territorial sea that is necessary to establish the channelized feature as a "water of the United States."

... (p. 19)

Agency Response: See summary response for section 8.1. See summary response for section 8.3, "Ordinary High Water Mark (OHWM)."

Halliburton Energy Services, Inc. (Doc. #15509)

8.86 In effect, federal jurisdiction would extend to all tributaries, no matter how remote or ephemeral and without regard to the significance of a specific tributary's relationship to a traditional navigable water - i.e., without regard to the nature of the flow in the stream, the evaporative losses within the stream and distance to a navigable-in-fact water (which might preclude a contaminant from ever reaching that water), or the relative effect of the tributary on navigable waters compared to the impact of more directly adjacent but unregulated areas. Indeed, the proposed definition goes further, extending beyond what would commonly be viewed as a "tributary" by ignoring breaks in the OHWM to capture additional upstream stretches with even further attenuated connections to traditional navigable waters. Thus, no matter how implausible the likelihood of conveyance of pollutants to navigable waters, the "tributary" would be per se jurisdictional.

The Agencies justify this result by aggregating the impacts of *all* streams in a watershed on the physical, chemical and biological integrity of traditionally navigable waters, concluding that the aggregated effects are significant without any analysis of specific facts relevant to particular watersheds or streams within them. Thus, while Justice Kennedy suggested that the Agencies could identify categories of tributaries that are "significant enough that wetlands adjacent to them are likely . . . to perform important functions for an aquatic system incorporating navigable waters,"⁸³ the Agencies have instead adopted the simple expedient of claiming that all tributaries fit neatly into a single category. (p. 3-4)

Agency Response: See summary response for section 8.1. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also summary response for section 8.3, "Ordinary High Water Mark (OHWM)."

⁸³ *Rapanos v. United States*, 547 U.S. 715, 781 (2006) (Kennedy, J., concurring).

Illinois Coal Association (Doc. #15517)

8.87 Yet the Proposed Rule, with its revised definition of "tributary," seeks to do just that, sweeping all tributaries, including most ditches, into the definition of waters of the U.S., without regard to flow, duration of flow, proximity to or effect upon traditional navigable waters. See Proposed Rule at 22263. To compound this error, the Agencies jettison even the barest and minimal requirements of OHWM and bed and bank, well-established features of the historical definition of tributaries under the CWA, by proposing to expand the definition of tributaries to water features, such as wetlands, that lack bed and bank and OHWM. See Proposed Rule at 22202. ("T]he water must also have a bed and banks and ordinary high water mark (except where a wetlands is a tributary) . . .").

8.88 The new definition of "tributary" in the Proposed Rule would also radically alter this term's traditional meaning and long-held practice by extending the term to lakes, ponds and wetlands, even where they lack traditional indicia of tributary - i.e., OHWM and bed and bank. Provided the tributary "contribute[s] flow, either directly or through" (a)(1) to (a)(4) waters, no matter how significant or insignificant the flow is, under this Proposed Rule it will be deemed jurisdictional. Proposed Rule at 22272.

The Agencies' proposed approach deeming all tributaries as per se jurisdictional is inconsistent with the Agencies' desire for consistency, clarity and certainty to the extent the new definition of "tributary" includes wetlands and other water bodies that do not contain clear and discernible features such as bed and bank: and OHWM. The definition is also at odds with the Agencies' description of a tributary elsewhere in the Proposal, where the agencies seem to acknowledge the necessary presence of bed and bank: and OHWM. ("A tributary is a longitudinal surface feature that results from directional surface water movement and sediment dynamics demonstrated by the presence of bed and banks, bottom and lateral boundaries, or other indicators of OHWM "). Id. at 22202 (emphasis added).

In addition to the questionable legality of the Agencies' significant departure from established terminology and meaning, we are deeply concerned about the practical hardships that the new definition of "tributary" would impose on the regulated community. The revised definition is hardly the picture of clarity that has been promised. Even after this revision, the question will remain - where does a tributary begin? As the Proposed Rule notes, although the upper limit of a tributary is usually established "where the channel begins" (see id.), under this new definition, which now includes waters without an OHWM or bed and bank, a tributary could begin well into the headwaters far above any defined channel and remote from traditional navigable waters, provided that it merely "contributes flow, either directly or through another water. ... " Id. at 22272.

The use of OHWM as the primary physical indicator in determining the lateral limits of jurisdiction has been the Corps' practice for many years.⁸⁴ To abandon its use and redefine a jurisdictional tributary as any feature that "drains" to a traditional navigable

⁸⁴ See Corps RGL 05-05, *Ordinary High Water Mark Identification*, located at [http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa guide/app 11 rg105-05.pdf](http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa%20guide/app%2011%20rg105-05.pdf); See also GAO-04297 Report, *Waters and Wetlands, Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction*, located at <http://www.gao.gov/assets/250/241520.pdf>

water, regardless of the volume of flow or presence of an OHWM, creates even greater confusion and uncertainty regarding the lateral limits of a tributary. (p. 9-10)

Agency Response: See summary response for section 8.1. See summary response for section 8.3, “Ordinary High Water Mark (OHWM).” Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions and Compendium 6, Section 6.2 of this RTC, “Excluded Ditches,” for a more focused discussion on the revisions and clarifications of the ditch exclusions.

Dominion Resources Services, Inc. (Doc. #16338)

8.89 The proposed rule categorically establishes that tributaries have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas. In a separate definition, the proposed rule categorically establishes waters and wetlands “adjacent” to a “tributary” as jurisdictional. Any channelized feature, including ditches and other man-made conveyances, no matter how remote from navigable waters, will be jurisdictional tributaries if they exhibit a bed, bank and ordinary high water mark. The proposed rule’s “tributary” definition would significantly expand the scope of features that are currently regulated as tributaries, extending jurisdiction to features like ephemeral drainages and stormwater conveyances that have not been and should not be jurisdictional.

...many of our new construction projects and existing operations, both on the electric and the natural gas side of the business, conduct activities that are likely to impact ephemeral drainages and ditches that could now be considered jurisdictional as a “tributary”. We request the agencies meet with stakeholders and federal and state regulatory agencies to fully understand the implications of the definition of “tributary” on the regulated community and on other federal and state regulatory programs and revise the rule to avoid duplication and conflicting requirements...

...To the extent the agencies move forward with the proposal, we make the following recommendations:

- The inclusion of all features that have a bed and bank and contribute flow to another WOTUS extends jurisdiction to ephemeral conveyances that have not been and should not be jurisdictional. We request that ephemeral features be included as features that are not WOTUS as identified in 33 CFR 328.3(b) and associated regulatory references. This would be consistent with the rules handling of similar features such as “gullies and rills” which are categorically excluded.

... (p. 7)

Agency Response: The commenter is incorrect that “any channelized feature, including ditches and other man-made conveyances, no matter how remote from navigable waters, will be jurisdictional tributaries if they exhibit a bed, bank and ordinary high water mark.” See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including most ditches that are not

relocated tributaries or excavated in tributaries, erosional features that do not meet the definition of tributary and stormwater control features created in dry land.

Montana Wool Growers Association (Doc. #5843.1)

- 8.90 The Preamble states Section (a)(5) provides a categorical rule that requires "no additional analysis." 79 Fed. Reg. at 22189. In the same paragraph, the Preamble says determining whether a water is a Section (a)(5) tributary requires an inquiry into the "data, science, the CWA, and caselaw." 79 Fed. Reg. at 22189. If one statement is true, the other cannot be. (p. 7)

Agency Response: The agencies categorical finding of jurisdiction for tributaries and adjacent waters was based on a determination that the nexus, alone or in combination with similarly situated waters in the region, is significant based on data, science, the CWA and caselaw. Because the agencies have determined that such waters are jurisdictional by rule, no additional analysis of such waters is required. See Section III(C) of the Preamble and Section VII of the Technical Support Document.

Alameda County Cattlemen (Doc. #8674)

- 8.91 **The Proposed Rule Is Beyond the Scope of Authority Provided to the Agencies Under the Clean Water Act and Therefore Is Arbitrary, Capricious, an Abuse of Discretion, or Otherwise Not in Accordance with the Law**

... Never before have the agencies claimed per se jurisdiction over features simply because they have a bed, bank and ordinary high water mark and might flow once per 100 years into a jurisdictional water... And never before have the agencies claimed and it been upheld by the Supreme Court that an isolated pond or wetland could become a "water of the U.S." based on some tenuous connection to downstream waters. Even the Congressional Research Service (CRS) stated that the proposed rule has a "broadly defined" new definition of tributary, validating our concern that the proposed rule is a significant expansion compared to current regulations.⁸⁵ (p. 5-6)

Agency Response: Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Also see summary response for section 8.1.

⁸⁵ Congressional Research Service, *EPA and the Army Corps' Proposed Rule to Define "Waters of the United States"*, available at http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&sqi=2&ved=0CB4QFjAA&url=http%3A%2F%2Ffas.org%2Fsgp%2Fcrs%2Fmisc%2FR43455.pdf&ei=JRYGVJJIZqjIBPjvgcgK&usg=AFQjCNGq5dlTONE-KCN-v-5FOmTuh38v2w&sig2=UBrr5c69WZitk_UwSF9Odg&bvm=bv.74115972,d.aWw, (accessed on Sept. 2, 2014) ("the term "tributary" is newly and broadly defined in the proposal").

National Sorghum Producers (Doc. #10847)

8.92 **Significant Nexus Test is not Fully Applied**

Third, the significant nexus test under the proposed rule does not appear to be applied in determining whether tributaries are waters of the United States but rather the existence of a bed, banks, and an ordinary high water mark is regarded as sufficient...

But, again, in *Rapanos*, Justice Kennedy wrote that, in *SWANCC*, “the Court held...that to constitute “navigable waters” under the Act, a water or wetland must possess a “significant nexus” to waters that are or were navigable in fact or that could reasonably be so made.” However, under the proposed rule, all tributaries and adjacent waters as cavernously defined, are off the hook from having to bear any significant nexus to an authentically jurisdictional water...

Our assertion here is not necessarily that Justice Kennedy articulated the true reaches of the Clean Water Act in *Rapanos* but rather to point out that beyond far exceeding textbook definitions of terms and the reaches of federal jurisdiction according to the plurality opinion in *Rapanos*, the proposed rule appears to also vastly exceed the extra latitude that Justice Kennedy was extending. In so doing, we believe that federal and constitutional considerations and the private property rights of our producer members are at stake here. (p. 5)

Agency Response: Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Similarly, section IV(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.” Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Nebraska Cattlemen (Doc. #13018)

8.93 Much of the cause for unlawful expansion of jurisdiction is due to the broad scope of definitions contained in the proposed rule. The definition of "tributary" is overly broad. As proposed, the definition is a land feature which has two banks, a bed and a high water mark. The land feature does not lose its tributary status if there are man-made breaks (bridges, culverts, etc.) so long as the bed and bank can be identified upstream and downstream of the break. And, a tributary can be natural, man-altered, or man-made and includes rivers, streams, lakes, impoundments, canals, and ditches (unless excluded).

In direct contradiction to this definition the proposed rule also states, a tributary need not even have two banks, a bed and a high water mark if the water feature contributes flow directly or through another water to a traditionally navigable water. (Proposed rule at 22241). The definition also goes on to include isolated water features that might somehow be connected through groundwater to a traditionally navigable water. Lastly, EPA has entirely excluded any consideration of flow or impact to traditionally navigable waters, by including in the definition of tributaries intermittent and ephemeral streams. (Proposed rule at 22206). Clearly the plain sense reading of the definition of tributary is virtually limitless in its jurisdictional application.

There are many examples in Nebraska of waterways that have a bed and bank and a high water mark but only run during precipitation events. And, unless there is a significant amount of precipitation, many of those examples are waters that flow only a short distance before evaporating or seeping into the ground. Many rarely, if ever, have flow that actually reaches a flowing stream. This is especially true in the more arid western part of the state. (p. 9)

Agency Response: See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Missouri Agribusiness Association (Doc. #13025)

- 8.94 Regarding tributaries, the proposed rule states that "*while the agencies have not defined tributary in any previous regulation, this proposed definition is consistent with long-standing practice and historical implementation of CWA programs.*" The key point here is that the 'long-standing practices' that many were unaware of is now being codified in rulemaking and is counter to law and rulings of the Supreme Court. (p. 4)

Agency Response: Section I of the Technical Support Document reviews the historic scope of the existing regulatory definition of "waters of the United States" and also describes the legal basis of the final rule, including its consistency with the statute and case law.

North American Meat Association and American Meat Institute (Doc. #13071)

- 8.95 --The proposal, if adopted, however, would 1) be an unjustified expansion of Clean Water Act (CWA) jurisdiction beyond the limits established by Congress and affirmed by the courts and 2) create more uncertainty and confusion for entities subject to CWA regulation and those that have not.

For example, EPA recently developed and released detailed maps showing more than 8.1 million miles of rivers and streams across the 50 states subject to CWA regulation under the revised "waters of the United States" (WOTUS) definition. Those values dwarf the 3.5 million miles estimate of currently regulated waters as detailed in EPA's January 2009 report to Congress. This increase represents an expansion in federally jurisdictional "of tributary" miles of at least 130%. For the reasons set forth below, AMI and NAMA oppose the proposed rule and urge the agencies to withdraw it. (p. 2)

Agency Response: Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law. The agencies do not have maps illustrating the extent of jurisdictional waters of the United States. Determining the jurisdictional status of a water feature often requires site specific knowledge. Although the final rule provides increased clarity and "bright line" distinctions to help differentiate waters of the United States from non-jurisdictional features, it will not eliminate the need for consideration of site specific knowledge. The agencies generally only conduct jurisdictional

determinations at the request of individual landowners, thus we do not have maps depicting the geographic scope of the CWA. Such maps do not exist and the costs associated with a national effort to develop them are cost prohibitive and would require access to private property across the country. The U.S. Geological Survey and the U.S. Fish and Wildlife Service collect information on the extent and location of water resources across the country and use this information for many non-regulatory purposes, including characterizing the national status and trends of wetlands losses. This data is publicly available and the agencies have relied on USGS and USFWS information to characterize qualitatively the location and types of national water resources. This information is depicted on maps but not for purposes of quantifying the extent of waters covered under CWA regulatory programs.

Illinois Corn Growers Association (Doc. #13996)

- 8.96 None of the following should be categorically considered jurisdictional waters of the United States: includes intermittent and ephemeral tributaries; man-made ditches, including ditches constructed in dry lands and drain only dry lands or ditches dug in dry lands which do not flow all the time or do not flow into a jurisdictional water; normal farming and ranching water-related activities such as irrigation which are not regulated under the CWA; wet areas on fields or erosional features on fields; farm ponds; impoundments with any of the foregoing features; and adjacent wetlands or any other waters adjacent to such features (whether in floodplain or riparian areas or otherwise physically proximate with some hydrological connection). (p. 3)

Agency Response: See summary response for section 8.1. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering or irrigation, and erosional features that do not meet the definition of "tributary" in the final rule. See section IV(I) of the preamble. Additionally, all statutory exemptions, including those exempting normal farming, silviculture and ranching activities from CWA section 404 permitting, remain in effect and unchanged by the final rule.

Indiana Farm Bureau, Inc. (Doc. #14124)

- 8.97 According to the online version of Merriam-Webster¹, a "tributary" is "a stream that flows into a larger stream or river or into a lake." This is a logical definition and one that is generally understood. This stands in stark contrast to the proposed definition of "a water physically characterized by the presence of a bed and banks and ordinary high water mark... which contributes flow, either directly or through another water" to a jurisdictional water. 79 Fed Reg. at 22,263. This definition is so expansive that it includes

features which are ephemeral in nature and those which would normally be considered ditches or erosional features.

The expansive reach of this definition is demonstrated by activities in southern Indiana related to construction of I-69. As one drives down the newly constructed interstate, the side of the road is regularly marked with white signs in black letters that state “JURISDICTIONAL WATER.” From the road, those signs appear to be frequently placed along the valleys between small ridgelines in which water is channeled during storms. There is no doubt they are ephemeral in nature. Those areas are covered in vegetation, yet they are jurisdictional. If those areas are jurisdictional, there would seem to be no limit to what will be claimed to have a bed and bank and ordinary high water mark. As noted by the plurality in *Rapanos*, in defining what may be a “water of the US,” the phrase “does not include channels through which water flows intermittently or ephemeral, or channels that periodically provide drainage for rainfall.” 547 U.S. at 739. Justice Kennedy, in his separate opinion, noted that “mere hydrologic connection should not suffice in all cases: the connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters.” *Id.* at 784-85. In summary, we believe that the interpretation given to declare all “tributaries” to be jurisdictional is not consistent with the principles established by the U.S. Supreme Court. (p. 2-3)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries, as well as erosional features that do not meet the definition of “tributary” in the final rule. Tributaries are discussed in section IV(F) of the preamble and section VII of the Technical Support Document. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Irvine Ranch Water District (Doc. #14774)

- 8.98 CWA jurisdiction should be limited to the surface expression of natural waters and wetlands on a project site, including on-site tributaries. Applicants should not be required to provide information on upstream tributaries unless they are trying to prove that a surface expression on site has no connectivity to a natural tributary and is therefore non-jurisdictional. (p. 6)

Agency Response: In this final rule, EPA and the Corps clarify the scope of “waters of the United States” that are protected under the CWA, using the text of the statute, Supreme Court decisions, the best available peer-reviewed science, public input, and the agencies’ technical expertise and experience in implementing the statute. This rule makes the process of identifying waters protected under the CWA easier to understand, more predictable, and consistent with the law and peer-reviewed science, while protecting the streams and wetlands that form the foundation of our nation’s water resources. The final rule does not change the way jurisdictional determinations will be processed by the Corps, where insufficient information is provided by the requesting party, whether that be information about the specific site or the landscape and watershed context of the site, the Corps will gather the information necessary to make a decision.

Iowa Farmers Union (Doc. #15007)

8.99 The proposed rule is the first time that EPA and the Corps have proposed a regulatory definition of "tributary," and in general, we support the creation of clearly defined per se categories of jurisdictional waters to promote increased regulatory certainty. However, the proposed definition of "tributary" has led to considerable confusion and concern among farmers particularly regarding the inclusion of wetlands, lakes, and ponds that lack the specific enumerated features of a tributary (bed, banks, and an ordinary high water mark). To further the goal of crafting an easily applied bright-line rule, we propose incorporating the following changes in the final rule:

- Include the plain language definition of "ordinary high water mark" in the text of the rule, rather than referring back to another regulation.
- Clarify that the specific enumerated features of a tributary (bed, banks and an ordinary high water mark) take years to form, and that the rule will not regulate temporary accumulations of water resulting from isolated events, such as heavy precipitation.
- As part of the non-exhaustive list of examples of regulated tributaries (rivers, streams, lakes, ponds, impoundments, canals, and ditches), specify that regulated ditches are only those ditches that are constructed through a wetland or stream and that have a perennial flow. Agricultural drainage ditches have been a particularly sore topic among farmers in discussing the proposed rule, and any additional clarity that can be directly incorporated into the language of the final rule on this topic would be extremely helpful.
- Limit the definition of "tributary" to those waters that actually have a bed and banks and an "ordinary high water mark. Wetlands and other waters lacking these features can be adequately covered as either "adjacent waters" under paragraph (6), or on a case-by-case basis pursuant to the "significant nexus" text under paragraph (7). Including wetlands and other waters with no bed or banks or ordinary high water mark within the definition of "tributary" undermines the goal of creating a clear, bright-line rule, making it more difficult for the regulated community to easily apply the rule, and is not necessary to the overall goal of protecting and enhancing water quality. (p. 5)

Agency Response: See summary response for section 8.1.

J.R. Simplot Company (Doc. #15062)

8.100 In the proposed rule, the agencies claim jurisdiction broadly over all tributaries with no site-specific analysis needed. The agencies, in the proposal, have declared anything with a bed, bank and OHWM that might ever contribute flow to be a jurisdictional water; the proposed rule would make all tributaries "waters of the U.S."

Under the current guidance, tributaries that flow greater than 90-days/year to a TNW are jurisdictional, while tributaries that typically flow less than 90-days/year have to meet the significant nexus criteria (the current, not proposed, definition) to be considered waters of the U.S. Under the proposed rule, tributaries also include wetlands, lakes, and ponds, even if they lack a bed and bank ordinary high watermark (OHWM), if they contribute

flow, either directly or indirectly, to jurisdictional water. The potential impact of this rule are shown in these examples.

Example 1: A remote ephemeral drainage that carries water infrequently (i.e., during large storm events) and does not have a defined bed and bank throughout it (but does in some places), would be a tributary and categorically a water of the U.S. under the proposed rule.

Example 2: Is a livestock watering pond that is in a remote area within an ephemeral drainage, and that at times could overflow water back into the drainage, be a water of the U.S.? The exemption states “artificial lakes or ponds created by excavating and/or dry diking land and used exclusively for purposes as stock watering, irrigation, settling basins, or rice growing.” If a pond is within an ephemeral drainage (as the case for many watering ponds in remote areas in the West, the in appears to be classified as a water of the U.S. under the proposed rule.

For example 1, a review of a 3,000 acre potential mineral extraction area located in the arid West, that has a number of ephemeral natural depressions and drainage pathways, shows that number of acres considered "waters of the U.S." will double under this proposed rule. Such pathways may have water in them for a period of just several days or weeks during snowmelt or intense rain storms; such waters may never actually flow/connect with a perennial stream. And there is no aquatic community present in such pathways, rather just barren earth and typical high desert steppe vegetation (an example being sagebrush). Defining such landscape features as 'waters of the U.S.' defies reason.

Livestock watering ponds (example 2) are often built in ephemeral drainages. The purpose of such ponds is to capture the snowmelt and rain events for the purpose of providing water for livestock throughout the spring and summer. Under the definitions proposed in the rule, such ponds would be considered "waters of the U.S." making them subject to water quality standards among other requirements. Once again, this defies reason; these are man-made ponds made for very specific purpose. Also, this proposed rule would likely hinder new livestock pond creation as the construction of such ponds would likely have to go through Section 404 permitting.

Having this broad definition of "tributaries" will have a significant impact and burden on businesses that utilize the landscape (i.e., ranching and mining being two examples). (p. 4)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering or irrigation, and erosional features that do not meet the definition of “tributary” in the final rule. Additionally, all statutory exemptions, including those exempting normal farming, silviculture and ranching activities from CWA section 404 permitting, remain in effect and unchanged by the final rule.

Klamath Water Users Association (Doc. #15063)

- 8.101 The agencies should provide assurances in a final rule that the definition of “tributary” will be limited to those with “bed and banks with an ordinary high water mark” that have

formed over several years and that would not include systems or facilities developed for irrigation water or agricultural drainage conveyance. Definitions must be further clarified for the terms “ordinary high water mark,” “bed and banks,” and other terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule.

Jurisdictional tributaries should meet a new bright line test related to the size of bed and banks, amount of flow, or distance from the jurisdictional navigable water in order to be considered a “water of the U.S.” This test would establish a limit on just how small or dry, or how far upstream, the tributary can be from the traditionally jurisdictional water for the CWA to apply... (p. 5)

Agency Response: See summary response for section 8.1, as well as the summary response for Section 6.2 of this RTC, “Excluded Ditches.” The term “ordinary high water mark” has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. As described in the preamble, for purposes of the rule, “bed and banks” means the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual.

Colorado Cattlemen's Association (Doc. #15068)

- 8.102 CCA assert that the agencies' definition of "tributary" is a limitless category that has the potential to wrap every natural pond, isolated wetland, or ditch into the federal regulatory scheme, which violates the language and spirit of the Supreme Court's decisions in *SWANCC* and *Rapanos*.⁸⁶ It is clear that the phrase "waters of the U.S." is not limitless, yet that is exactly what the agencies have proposed through their broad and ill-defined term "tributary." Key phrases have been left undefined. The definition for "through another water," a key phrase in the definition, was simply left out by the agencies. Not only does this foster confusion instead of clarity in the regulated community, it could be stretched by regulators or litigants now or in the future. If the agencies' intent was not to create such a broad definition, than they should have put such intent in the regulation.

The agencies have excluded consideration of flow, making the definition completely dependent on land features, not actual water. And even with regard to the land features, the agencies contradict themselves. The agencies state that a tributary needs a bed, bank and OHWM but then turned around in the next sentence and contradicted themselves, saying that in fact a regulator does NOT need to find a bed, bank or OHWM to find a jurisdictional tributary. (Proposed Rule at 22241). Again, these contradictions only provide added confusion.

⁸⁶ *Rapanos v. United States*, 547 U.S. 715 (2006); (1. Scalia, Indicating "navigable" invokes a limit on the CWA jurisdiction the plurality stated " ...that the qualifier "navigable" is not devoid of significance ...the waters of the United States in 1362(7) cannot bear the expansive meaning that the Corps would give it"); *SWANCC v. Us. Army Corps of Engineers*, 531 U.S. 159 (2001); (In striking down the agencies' Migratory Bird Rule the court stated, "we find nothing approaching a clear statement from Congress that it intended 404(a) to reach an abandoned sand and gravel pit such as we have here").

The agencies cannot categorically make anything with a bed, bank and OHWM that takes water somewhere downstream jurisdictional. The proposed rule is clear that the definition of 'tributary' does in fact include all ephemeral streams; intermittent and perennial features and that rate of flow (or any flow) is simply not a factor. (Proposed Rule at 22206; (" ...the agencies conclude that tributaries, including headwaters, intermittent, and ephemeral streams, and especially when all tributaries in a watershed are considered in combination, have a significant nexus to traditional navigable waters, interstate waters, or territorial seas ...")). CCA believes that the definition of tributary is overly broad because the agencies cannot make all tributaries per se jurisdictional without satisfying the significant nexus analysis. (p. 4-5)

Agency Response: The agencies disagree that the definition of "tributary" is a limitless category that will include every natural pond, isolated wetland, or ditch. See summary response for section 8.1. Tributaries are discussed in section IV(F) of the preamble and section VII of the Technical Support Document. The definition of "adjacent waters" in the final rule has been revised and clarified. See section IV(G) of the preamble and section VIII of the Technical Support Document. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

American Forest Foundation (Doc. #15093)

- 8.103 ...by defining "all tributaries" as WOTUS including man-made ditches, and certain lands adjacent to tributaries such as riparian areas and floodplains, the proposed rule would significantly increase the reach of federal jurisdiction, regardless of whether or not the tributary has a significant nexus to, or relative permanence of, water. We would encourage you to more clearly define "all tributaries." (p. 4)

Agency Response: See summary response for section 8.1. Tributaries are discussed in section IV(F) of the preamble and section VII of the Technical Support Document. The definition of "adjacent waters" in the final rule has been revised and clarified. See section IV(G) of the preamble and section VIII of the Technical Support Document. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

El Dorado Irrigation District, Placerville, California (Doc. #15231)

- 8.104 Extending the definition of tributaries to man-made, non-stream conveyances is unnecessary because such conveyances may already be regulated as point sources when they add pollutants to waters of the United States. The proposed rule's justification for extending the definition of tributaries to man-made, non-stream conveyances fails to recognize important distinctions between CWA sections 402 and 404. The Supreme Court and the Ninth Circuit Court of Appeals have noted that the definition of "waters of the United States" for both sections 402 and 404 is functionally equivalent. (See *Rapanos*, 547 U.S. at 742; *San Francisco Baykeeper, et al. v. Cargill Inc.*, 481 F.3d 700, 705, 704, n.4 (9th Cir. 2007).) Nevertheless, there are important distinctions between the two sections. Section 402 is an exception to the general prohibition against the discharge of any pollutant to navigable waters. (33 U.S.C. § 1342(a).) That section allows for the discharge of pollutants from point sources by permit and is primarily concerned with

regulation of pollution-which when discharged into waters of the United States, travels downstream. (*Id.* at § 1342(a); *Rapanos*, 547 U.S. at 744-745.) By contrast, section 404, which allows for the discharge of dredged or fill material, is primarily concerned with the regulation of material "which is typically deposited for the sole purpose of staying put, [and] does not normally wash downstream" (*Rapanos*, 547 U.S. at 744.) This distinction is important because, as discussed more fully below, the requirements of section 402 may still apply to man-made, non-stream conveyances that are not themselves jurisdictional, whereas, the requirements of section 404 do not.

The Supreme Court has noted that "there is no reason to suppose that our construction [of 'waters of the United States' under section 404] significantly affects the enforcement of § [402] The [CWA] does not forbid the 'addition of any pollutant *directly* to navigable waters from any point source,' but rather the 'addition of any pollutant to navigable waters.'" (*Id.*, emphasis in original.) Consequently, a water body that is nonjurisdictional under section 404, may still be subject to EPA's enforcement authority under section 402. For example, it is possible that a pollutant discharged to an intermittent channel such as a gully, rill, or non-wetland swale (not considered "waters of the United States" even under the proposed rule (79 Fed. Reg. 76, 22 199)) may eventually wash downstream into navigable water. Even though the channel to which the pollution was originally discharged does not constitute "waters of the United States," EPA may still regulate such a discharge because it constitutes the addition of a pollutant to navigable waters. (*Rapanos*, 547 U.S. at 743.)

The Supreme Court noted that, in fact, some courts have held that upstream intermittently flowing channels themselves constitute point sources under the Act. (*Rapanos*, 547 at 743 (citing 33 U.C.S. § 1362(14); *United States v. Ortiz*, 427 F.3d 1278, 1281 (10th Cir. 2005) (a storm drain that carried flushed chemicals from a toilet to the Colorado River was a "point source").) A point source need not be the original source of the pollutant; it need only convey the pollutant to navigable waters. (*South Fla. Water Management Dist. v. Miccosukee Tribe*, 541 U.S. 95, 105 (2004).)

Thus, characterizing man-made, non-stream conveyances as tributaries is unnecessary for subjecting them to the permitting requirements of section 402. Such facilities, when discharging pollutants to waters of the United States (which may affect the physical, chemical, or biological integrity of navigable waters), constitute point sources that are subject to the permitting requirements of section 402, whether or not they constitute tributaries under the definition of waters of the United States. Such man-made, non-stream conveyances, however, should not automatically be subject to the permitting requirements of section 404 because the discharge of "fill" material does not necessarily affect the physical, chemical, or biological integrity of navigable waters that might be located some distance downstream. For example, replacing a length of pipe on a flume (such as those found on EID's Project 184) that may indirectly contribute flow to a traditional navigable water, does not affect the chemical, physical, or biological integrity of that water.

In this sense, the proposed rule would unnecessarily expands jurisdiction of "tributaries" to manmade facilities simply because they are capable of conveying pollution to navigable waters. (p. 6-8)

Agency Response: See summary response for section 8.1. Section I of the Technical Support Document provides the legal framework under which a ditch could be considered both a point source and a water of the United States. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Union County Cattlemen (Doc. #15261)

- 8.105 **FR Page 22205** *More generally, in addition to providing critical habitat for complex life cycle completion, tributaries provide refuge from predators and adverse physical conditions in rivers, and they are reservoirs of genetic- and species-level diversity. These connections between tributaries and (a)(1) through (a)(3) waters significantly influence the biologic integrity of these waters. Tributaries have important effects on the biological integrity of (a)(1) through (a)(3) waters, contributing materials to downstream food networks and supporting populations for aquatic species, including economically important species such as salmon, etc.,*

Comment: We disagree and find the information about critical habitat to be a stretch across the country. All tributary connections do not have a significant influence on the biologic integrity of the waters. This is an over-blown statement and exaggeration of the science research results. (p. 1)

Agency Response: See summary response for section 8.1 and section VII of the Technical Support Document.

Weyerhaeuser Company (Doc. #15392)

- 8.106 The proposed rule's new definition of "tributary" and the categorical assertion of jurisdiction over all water features that meet that definition go too far. The Agencies should withdraw the proposed definition and instead adopt a standard that: (i) includes bright-line, objective scientific standards for identifying tributaries with a significant nexus to navigable waters; (ii) is not dependent on an overly broad categorical determination that effectively cannot be rebutted; and (iii) does not depend upon a flawed interpretation of the significant nexus test. (p. 6)

Agency Response: See summary response for section 8.1.

Minnesota Soybean Growers Association (Doc. #15542)

- 8.107 The definition of "tributary" is confusing and circular. The definition uses terms such as "another water" which is not defined. There is no guidance as to whether "another water" has to be a WOTUS or can be an exempted water. It is hard to imagine that a water that is connected through a non-WOTUS can then itself be a WOTUS and not be confusing or take a great deal of hours of staff time to determine. The definition also states that there needs to be a "bed and banks and ordinary high water mark." Except, those requirements are not required for "wetlands, lakes and ponds." The rule is unclear then if a wetland was drained 100 years ago and is now "prior converted cropland" if it is a tributary since that designation is forever, or if it is exempted from the rule. How the designation of

"tributary" actually works with and "compares to the exemptions should be better defined. This definition adds uncertainty to the rule and invites litigation. Every area that is poorly defined or drafted is another potential Supreme Court case that could take years and years to resolve with no set answer to what a WOTUS actually is under the CWA... (p. 2)

Agency Response: Section III of the preamble and section II of the Technical Support Document address “significant nexus” evaluations as they pertain to connections provided by non-jurisdictional waters. See summary response for section 8.1. Paragraph (b) of the final rule excludes many features of concern to the agriculture community. Such exclusions include prior converted cropland, most ditches that are not relocated tributaries or excavated in tributaries, artificially irrigated areas that would revert to dry land should application of water to that area cease, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering or irrigation, and erosional features that do not meet the definition of “tributary” in the final rule. Paragraph (b) also makes it clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, any feature excluded under paragraph (b) may not be considered waters of the United States under any other provision of the rule. Additionally, all statutory exemptions, including those exempting normal farming, silviculture and ranching activities from CWA section 404 permitting, remain in effect and unchanged by the final rule.

Alabama Farmers Federation (Doc. #16539)

- 8.108 Ephemeral streams would be regulated as a "tributary" under this rule. Ditches that are dry most of the year would be categorically regulated as a "tributary" under this rule if they ever carry any amount water that eventually flows to a traditionally defined "navigable" water. Low areas or depressions in a farm field that the agencies deem as being adjacent to jurisdictional waters or located in a floodplain would be regulated as well. In addition, the concept of "significant nexus" as defined by the agencies in the proposed rule would allow for the regulation of virtually any other feature not specifically or categorically defined as a water of the United States by the rule. Collectively, this rule would give the agencies the ability to regulate virtually every isolated wetland, pond, ditch or low area on farms across the country. (p. 1)

Agency Response: See the summary response for section 8.1 for a general description of the definition of “tributary” in the final rule. Paragraph (b) of the final rule excludes many features of concern to the agriculture community. Such exclusions include prior converted cropland, most ditches that are not relocated tributaries or excavated in tributaries, artificially irrigated areas that would revert to dry land should application of water to that area cease, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering or irrigation, and erosional features that do not meet the definition of “tributary” in the final rule. Paragraph (b) also makes it clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, any feature excluded under paragraph (b) may not be considered waters of the United States under any other provision of the rule.

Additionally, all statutory exemptions, including those exempting normal farming, silviculture and ranching activities from CWA section 404 permitting, remain in effect and unchanged by the final rule.

Missouri Corn Growers Association (Doc. #16569)

- 8.109 The definition of “tributary” creates another boundless regulated category that has the potential to bring ponds, isolated wetlands, and dry ditches into federal jurisdiction. This definition of tributary will encompass an enormous number of isolated and predominately dry features that, for no other reason than practicability, should be far beyond EPA’s authority. Appendix A provides images of several features that are common in fields across Missouri. (p. 4)

Agency Response: The agencies disagree that the definition of “tributary” in the final rule will categorically bring ponds, isolated wetlands and dry ditches into federal jurisdiction. See the summary response for section 8.1 for a general description of the definition of “tributary” in the final rule. Paragraph (b) of the final rule excludes many features of concern to the agriculture community. Such exclusions include prior converted cropland, most ditches that are not relocated tributaries or excavated in tributaries, artificially irrigated areas that would revert to dry land should application of water to that area cease, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering or irrigation, and erosional features that do not meet the definition of “tributary” in the final rule.

Agribusiness Association of Kentucky et al. (Doc. #18005)

- 8.110 The Agencies' stated goal for this rule is to provide "clarity" and reduce the confusion, red tape and uncertainty allegedly caused by the Supreme Court over what waters are jurisdictional. This proposal, however, clarifies only that the Agencies could regulate almost any low spot on a farmer's field where water sometimes stands or channels. The proposal would categorically regulate as "navigable waters" countless ephemeral drainages, ditches and other features across the countryside that are wet solely from precipitation and may be miles from the nearest truly "navigable" water. It would also regulate small, remote "wetlands"—which may look like nothing more than low spots on a farm field — just because those areas happen to be near a jurisdictional ditch or ephemeral, or located in a floodplain.

The proposal does not provide clarity to farmers and ranchers; it only exposes them to unknowing violations of the law by farming in, and discharging typical farm nutrients and pesticides into, features that look more like land than water. Because farmers and ranchers can be liable for heavy CWA civil and even criminal fines and jail time for unlawful discharges to "navigable waters," they must be able understand how that term applies to their land.

... The Agencies also provide an incomplete description to the general public about what types of waters the Agencies intend to regulate. EPA's marketing campaign provides images of flowing rivers, streams and marshes teeming with wildlife and recreational activity. These waters bear no resemblance to the majority of the features that the rule would regulate as "tributaries," wetlands or ponds. Typical features on farms and across the countryside include low areas that collect water from local drainage and over time

develop wetland characteristics.⁸⁷ Others are subtle channels formed by rolling hills or even more subtle changes in elevation, where water naturally channels when it rains. Just as common are ditches that carry water only when it rains but that fall outside proposed ditch exclusion because they contain wetlands somewhere along their length, or because they sometimes receive stormwater flows from nearby ephemeral drains or wetlands. These are all common features found on our nation's farms and ranches, and they will all be open to regulation under the proposed rule.

The proposed rule will cause continued confusion over the boundaries of federal jurisdiction. As explained in the following sections, it provides little clarity in the three primary definitional changes described below, each of which results in a significant expansion of federal control over land and water resources across the nation. (p. 5-6)

...

Nor can the Agencies point to explicit regulatory language to justify reliance on past agency ephemeral streams have historically been regulated and can be WOUS under current practice. For example, the Agencies claim to have always regulated ephemeral streams. But the term "ephemeral" (unlike the term "intermittent" or "perennial"), which is used 75 times in the current proposal, is never mentioned in prior regulations. The text and preamble of the current regulations (promulgated in 1986 by the Corps and in 1988 by EPA) contain no reference to regulating "ephemeral" streams or drainages. Neither do the 1977 regulations. Likewise, current and past regulatory text says nothing to suggest that ditches are a category of "tributaries." (The Agencies have indicated in past preambles that certain ditches may qualify as "navigable waters" on a case-specific basis, but they were never categorically defined as "tributaries.") The Agencies have asserted in guidance documents and in enforcement actions that certain ditches and "ephemeral streams" are subject to CWA jurisdiction, but those are examples of ad hoc "regulatory creep," not notice-and-comment rulemaking. In other words, the fact that the Agencies have occasionally asserted jurisdiction over these types of features in the past does not make it lawful to categorically assert jurisdiction over them now. (p. 5-6, 19)

Agency Response: The agencies do not believe that the final rule will “regulate almost any low spot on a farmer's field where water sometimes stands or channels.” See the summary response for section 8.1 for a general description of the definition of “tributary” in the final rule. Paragraph (b) of the final rule excludes many features of concern to the agriculture community. Such exclusions include prior converted cropland, most ditches that are not relocated tributaries or excavated in tributaries, artificially irrigated areas that would revert to dry land should application of water to that area cease, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering or irrigation, and erosional features that do not meet the definition of “tributary” in the final rule. Paragraph (b) also makes it clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, any feature excluded under paragraph (b) may not be considered waters of the United States under any other provision of the rule.

⁸⁷ U.S. Army Corps of Engineers, Wetlands Delineation Manual, January 1987.

Additionally, all statutory exemptions, including those exempting normal farming, silviculture and ranching activities from CWA section 404 permitting, remain in effect and unchanged by the final rule. Section I of the Technical Support Document reviews the historic scope of the existing regulatory definition of “waters of the United States” and also describes the legal basis of the final rule, including its consistency with the statute and case law.

New Mexico Cattle Growers Association et al. (Doc. #19595)

8.111 Specific Concerns and Comments

i. Section (a)(5) and definition of “tributary”: For legal and scientific clarity, the agencies should withdraw the Proposed Rule and replace it with a rule that defines tributaries as only those waters that maintain a permanent, surface water connection to an (a)(1) or (a)(3) water.

The proposed definition of “tributary” will substantially increase the burdens on our nation’s agricultural producers. As currently drafted, the definition includes “ditches” that contribute water directly or through another water (even if only intermittently or ephemerally) to an (a)(1) through (a)(4) water.

... Because the determination is automatic, the costs of complying with permitting and restrictions should be more properly analyzed. Ephemeral and intermittent waters and erosional features that lack permanent surface water connections should be exempted from any proposed definition of “tributary.” (p. 11-12)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and erosional features that do not meet the definition of “tributary” in the final rule. Additionally, all statutory exemptions, including those exempting normal farming, silviculture and ranching activities from CWA section 404 permitting, remain in effect and unchanged by the final rule.

Georgia Department of Transportation (Doc. #14282.1)

8.112 The proposed rule defines tributaries of certain other waters as jurisdictional by rule and includes a new definition of "tributary." We agree with the concept of defining certain tributaries as jurisdictional by rule. We also agree that it is appropriate and useful to include a definition of the term "tributary" in the regulations. However, we are concerned that the proposed rule would, in effect, substantially broaden the universe of tributaries that are deemed jurisdictional by rule. We recommend revising the rule to be more consistent with the treatment of tributaries in the 2008 Guidance. (p. 5)

Agency Response: See summary response for section 8.1.

Lake Charles Harbor and Terminal District, Louisiana (Doc. #14448)

8.113 The District is concerned that the proposed treatment of "tributary" and "adjacent" waters will result in a significant expansion of features (both natural and artificial) subject to regulation as "waters of the United States." Definitions like "all tributaries" and "all

waters adjacent" are too broad and could impact port facilities. We recommend clarification of these definitions. (p. 2)

Agency Response: The final rule has been revised and clarified in response to public comments. See section IV(F) and IV(G) of the preamble to the final rule for a discussion of “tributaries” and “adjacent waters,” respectively.

Airports Council International - North America (Doc. #16370)

- 8.114 In an effort to further understand the jurisdictional reach and related impacts of the Proposed Rule the following general questions need to be answered:

...

The definition of tributary seems excessive, especially if there are manmade breaks, which under the proposal does not disqualify status. Would complex drainage networks in many urban settings be considered tributaries? Does the definition of tributaries eliminate many end-of-pipe BMPs or regional approaches to stormwater management and treatment? (p. 6-7)

Agency Response: The agencies are unclear what the commenter means in his reference to “complex drainage networks in urban settings” or “end-of-pipe BMPs.” Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including stormwater control features created in dry land.

Mohave Electric Cooperative, Inc. (Doc. #10953)

- 8.115 The Agencies assert that one of the primary purposes of the Proposed Rule is to provide a level of clarity regarding the extent of waters of the U.S. that both the regulated public and the Supreme Court have demanded. However, despite the broad conclusion in the Proposed Rule that “[m]ost prairie streams and southwest intermittent and ephemeral streams are likely to be considered tributaries to (a)(1) through (a)(3) waters....”, and that tributaries are, by definition, jurisdictional under the Proposed Rule, the extent of federal jurisdiction over non-navigable tributaries is still very much in question.

Tributaries are defined in the Proposed Rule as “a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4).” However, as noted right in the definition of “tributary”, only the term “ordinary high water mark” is defined in the regulations. The Agencies make no attempt to define “bed and bank” or, more problematically, “contributes flow”. (p. 3-4)

Agency Response: As described in the preamble, for purposes of the final rule, “bed and banks” means the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual. Section IV(F) of the preamble describes that a water that does not contribute flow to a traditional navigable water, interstate water or the territorial seas is fundamentally not a “tributary” by definition in the final rule.

Duke Energy (Doc. #13029)

- 8.116 Duke Energy recommends that the agencies reexamine the definition for tributary and modify it to represent actual tributaries that have the requisite relationship with TNWs and the meet the requirements set for in *Rapanos*. In general, this category of water should not include impoundments; lentic-type waters (lakes, ponds, or wetlands) whether natural, man-made or man-altered; or ephemeral waters. In addition, the definition should remove the references to man-made or natural breaks since there is no evidence that these categorically have significant physical, chemical, and biological effects on downstream traditional navigable waters. The definition for tributary should also remove the explicit references to ditches as tributaries. (p. 26)

Agency Response: See summary responses for Section 8.1 and 8.1.1. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries.

Peabody Energy (Doc. #13560)

- 8.117 Although the stated purpose of the rule is to clarify jurisdiction, the proposed rule is confusing and contradictory both within the document and in light of public statements by the Environmental Protection Agency (EPA) and the ACOE about the rule. The EPA and ACOE publicly state that tributaries must have a bed and bank and ordinary high water mark (OHWM) to be jurisdictional. However, the proposed rule states that a tributary is anything that connects downstream, including ponds, canals, concrete channels and manmade ditches. The connection does not have to be direct but can be through groundwater, occasional pond overflow or flows that occur on a limited basis. Based on the subjective language in the proposed rule, arguably anything can be called a tributary. Tributaries are jurisdictional per se as opposed to applying the significant nexus test as is currently required. The proposed rule repeatedly points to importance and use of the OHWM. However, it is difficult to evaluate the effect of this variable because the definition keeps changing. The latest version was quietly placed on the ACOE's website only a few weeks ago. The proposed rule claims to increase clarity but asks for comments on the definition of gullies, how to determine adjacent, the use of significance, vernal pools, how to determine floodplain size, etc. The lack of definition of critical components of the proposed rule not only makes evaluation of its impacts virtually impossible but also eliminates the possibility of clarity in implementation. (p. 1)

Agency Response: See summary response for Section 8.1, 8.1.2 and 8.3. The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. As described in the summary response for Section 8.1, the final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a

tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. The term “ordinary high water mark” has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Florida Power and Light Company (Doc. #13615)

8.118 ...the proposed definitions of tributary should be revised as follows to make clear that the wastewater treatment exclusion applies regardless of other aspects of the rule, with additions in **underlined bold** and deletions shown in ~~strikethrough~~:

(5) Tributary. The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section **provided that hydric soils or hydrophytic vegetation are present**. In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (a)(1) through (3) of this section **provided that hydric soils or hydrophytic vegetation are present**. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. **However, these interrupted portions are not considered a jurisdictional tributary.** A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (b)(1), (3), ~~or (4)~~ **or (6)** of this section. **Man-made structures with engineered bed, banks, and top of banks that are not created from jurisdictional waters or whose construction pre-dates the Clean Water Act are not considered a jurisdictional tributary.** (p. 5-6)

Agency Response: Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including waste treatment systems designed to meet the requirements of the CWA, stormwater control features created in dry land and most ditches that are not relocated tributaries or excavated in tributaries. Paragraph (b) of the final rule also makes clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, any feature excluded under paragraph (b) may not be considered waters of the United States under any other provision of the rule.

Arizona Public Service Company (Doc. #15162)

- 8.119 -The proposed final rule contains a definition of “tributary” is so broad that it overlaps and includes other waters that are separately defined as WOTUS, such as impoundments. Again, the Agencies fail to include any specifics to clarify the definition... (p. 10)

Agency Response: See summary response for Section 8.1.

Louisville and Jefferson County Metropolitan Sewer District (Doc. #15413)

- 8.120 Tributary: The proposed definition of tributary is too broadly defined. In the proposed rule a tributary is characterized by a bed, bank and ordinary high water mark which contributes flow directly or through other water bodies to a "water of the U.S." The proposed rule states that a tributary does not lose its status if there are man-made breaks (such as bridges, culverts, pipes, dams) so long as a bed and can be identified up and downstream of the break. A tributary can be a natural, man-altered, or man-made and includes rivers, streams, lakes, impoundment, canals and ditches (unless excluded). As written and applied to the management of stormwater from streets and roads, it is arguable that rain gutters and other collection appurtenances are subject to this rule. Accordingly, MSD requests clarifications to this definition. (p. 1-2)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including waste treatment systems designed to meet the requirements of the CWA, stormwater control features created in dry land and most ditches that are not relocated tributaries or excavated in tributaries. As the preamble to the final rule notes, curbs and gutters have never been considered waters of the United States.

Orange County Sanitation District, California (Doc. #16335.1)

- 8.121 [The] overly broad definition of tributary could potentially increase the number of manmade conveyances, ditches and conveyance facilities, including those utilized by wastewater entities, under federal jurisdiction, and the lack of certainty surrounding the rule's definition of a tributary could lead to regulation of previously unregulated waters. This broad classification of "tributaries" would be considered jurisdictional regardless of perennial, intermittent or ephemeral flow. Even dry washes could be considered jurisdictional under the proposed rule. This is significant for a variety of reasons.

One example of the potential impacts of defining what constitutes a "tributary" too broadly is the potential discharge from sanitary sewer systems to dry creeks/sloughs/washes when no pollutants ever actually reach water. It is entirely unclear whether this constitutes a discharge of pollutants to a water of the U.S. Under the broad definition of tributary in the proposed rule, it is possible that spills to dry creeks, sloughs, or washes would be considered a "discharge" even if there are absolutely no real or potential impacts to surface waters of any kind. Similarly, there are circumstances where sewer spills occur in a street that drains to a roadside ditch or local creek bed that has no flow and is unconnected to a water of the U.S. The responsible party may fully remediate the spill and address all real and potential water quality impacts before the spill ever reaches a water source. It is difficult to understand how can this kind of circumstance

could be envisioned as a discharge to "waters of the United States" when there is no actual water in a dry creek or ditch nor an adverse impact to the environment. (p. 6-7)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including waste treatment systems designed to meet the requirements of the CWA, stormwater control features created in dry land and most ditches that are not relocated tributaries or excavated in tributaries.

West Bay Sanitary District, Novato Sanitary District, West County Wastewater District, Union Sanitary District and West Valley Sanitation District, California (Doc. #16610)

8.122 NOTE: Although edits are only suggested for the regulatory language most applicable to the District, similar changes should be made to each of the proposed sections dealing with Waters of the United States (e.g., Parts 112, 116, 117, 230, 232, 300, 302, and 401). Alternatively, to simplify the program, a single section setting forth the definition should be adopted and utilized for each of the Clean Water Act programs.

...

~~(5) Tributary: The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR C.F.R. §328.3(e), which contributes perennial flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this definition. In addition, abutting wetlands, lakes, and ponds are may be tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute perennial flow, either directly or through another water to a water identified in paragraphs (a)(1) through (3) of this definition. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, or boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. A tributary, including wetlands, can be a natural, man-altered, or man-made water, but does not and includes waters such as rivers, intermittent or seasonal streams, channels, lakes, ponds, impoundments, canals and ditches not and other water-related features excluded in paragraphs (b)(3) or (4) of their definition of Waters of the United States.~~

... (p. 13)

Agency Response: See summary response for Section 8.1. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries.

Metropolitan Water District of Southern California (Doc. #14637)

8.123 a. The Agencies should evaluate tributaries on a case-by-case basis

...this policy stance means that the jurisdictional scope of the proposed rule is expanded from current practice to include features in the bright-line categories that might not be found to have a significant nexus to waters of the U.S. on a case-by-case basis. However, this same approach was rejected by Justice Kennedy in *Rapanos*. As stated in *Rapanos*, the Corps deemed water a tributary "if it feeds into a traditional navigable water (or a tributary thereof) and possesses an ordinary highwater mark." *Rapanos*, at 781. Justice Kennedy found this standard too broad because it seemed "to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes toward it." *Id.* In this way, the breadth of the standard "precludes its adoption as the determinative measure of whether adjacent wetlands are likely to play an important role in the integrity of an aquatic system comprising navigable waters as traditionally understood." *Id.* Justice Kennedy went on to state that "in many cases wetlands adjacent to tributaries covered by this standard might appear little more related to navigable-in-fact waters than were the isolated ponds held to fall beyond the Act's scope in *SWANCC*." *Rapanos*, at 781-82. Accordingly, Metropolitan requests that the Agencies continue to evaluate tributaries on a case-by-case basis since under the current proposal, many remote and ephemeral tributaries in the arid west, that would not significantly affect the (a)(1) through (a)(4) waters, would become jurisdictional, resulting in significant additional regulatory burdens on agencies like Metropolitan. (p. 7, 8)

Agency Response: See summary response for section 8.1. The agencies disagree that tributaries should be evaluated on a case-by-case basis. Section III(C) of the preamble and VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Arizona's Generation & Transmission Cooperatives (Doc. #14901)

8.124 Tributaries are defined in the Proposed Rule as "a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4)." However, as noted right in the definition of "tributary", only the term "ordinary high water mark" is defined in the regulations. The Agencies make no attempt to define "bed and bank" or, more problematically, "contributes flow". (p. 4)

Agency Response: As described in the preamble, for purposes of the final rule, "bed and banks" means the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual. Section IV(F) of the preamble describes that a water that does not contribute flow to a traditional

navigable water, interstate water or the territorial seas is fundamentally not a “tributary” by definition in the final rule.

Utility Water Act Group (Doc. #15016)

- 8.125 In the Proposed Rule, the Agencies often remark on the function of tributaries as the source of inorganic and organic constituents (including particulate organic matter) and nutrients, which are transported and utilized by the biota in these reaches. This paradigm has parallels to the River Continuum Concept (“RCC”), Vannote et al. (1980),⁸⁸ one of many models that describe the sources of energy in rivers and streams, how this energy is utilized downstream, and the trophic structure of the biota. The Proposed Rule states:

Tributaries also influence the chemical composition of downstream waters, through the transport and removal of chemical elements and compounds, such as nutrients, ions, dissolved and particulate organic matter, pollutants, and contaminants. Ecosystem processes in tributaries transform, remove, and transport these substances to downstream waters. In turn, these chemical compounds can influence water quality, sediment deposition, nutrient availability, and biotic functions in rivers . . . Organic carbon, in both dissolved and particulate forms, exported from tributaries is consumed by downstream organisms. The organic carbon that is exported downstream thus supports biological activity (including metabolism) throughout the river network.

79 Fed. Reg. at 22,205 cols. 2-3.

While this generalized hierarchical model – or variations of it – likely is relevant to many waterbodies, it is not the only paradigm of an energy source-receptor linkage. Autochthonous production and energy inputs from lateral sources occur in streams and rivers also. Where instream energy sources are important, the role of energy sources from upstream reaches is less. Zale et al. (1989) states:

Headwaters of streams have traditionally been considered heterotrophic (i.e., community respiration exceeds production) because seminal studies of stream metabolism were conducted in forested regions. Within forests, riparian vegetation shades streams and contributes large amounts of allochthonous leaf litter. . . . However, in prairie ecosystems canopies are open, insolation is high, and litter inputs are low. Primary production by benthic algae produces most of the organic material. Therefore, headwaters of intermittent streams in the plains tend to be autotrophic except perhaps where turbidities are high.

Id. at 5 (emphasis added).

Karr and Dudley (1978)⁸⁹ paint a similar picture of the sources of energy for medium-sized rivers:

⁸⁸ Robin L. Vannote et al., *The River Continuum Concept*, 37 Canadian J. Fisheries & Aquatic Sci. 130 (1980).

⁸⁹ James R. Karr & Daniel R. Dudley, *Biological Integrity of a Headwater Stream: Evidence of Degradation, Prospects for Recovery*, in EPA, EPA-905/9-77-007-D, Environmental Impact of Land Use on Water Quality, Final Report on the Black Creek Project (Supplemental Comments) at 3 (Sept. 1978).

Functional attributes are markedly different in undisturbed intermediate-sized rivers. The stream becomes autotrophic (P/R [production to respiration ratios] > 1) as the stream becomes less shaded and algae and vascular plants increase in abundance. CPOM [coarse particulate organic matter] inputs are reduced Incoming allochthonous material is primarily FPOM [fine particulate organic matter] from headwater areas

Id. at 8.

The applicability of the RCC model to lower reaches of rivers has been questioned. Thoms (2006) states:

The River Continuum Concept . . . was the first of a number of conceptual models that have been later criticized . . . because of its inability to evaluate biotic assemblages in large rivers and metabolic interactions in ecosystems and its emphasis on longitudinal linkages rather than lateral transfers between the channel and floodplain.

Id. at 177.

Similarly, Thorp and Delong (1994)⁹⁰ question the RCC's relevance to large rivers:

Previous models of large rivers have ignored or minimized the role of authochthonous production. The RCC stated that primary production is often severely limited by depth and turbidity, with most production derived from phytoplankton. Field studies have shown, however, that benthic algae and aquatic macrophytes are substantial sources of organic carbon in some large rivers with constricted channels.

Id. at 307.

Lastly, Thorp et al. (2006) review the various riverine functional models that were proposed after the RCC, including the flood pulse concept. The authors themselves propose and describe a new lotic functional model termed the riverine ecosystem synthesis.

In summary, UWAG believes that the Agencies should have provided more discussion on the role of authochthony, a process that is important in some flowing waterbodies. In addition, we believe the Agencies were too simplistic in conveying the concept that all tributaries conform – more or less – to the principal attributes of the RCC. (p. 126-129)

Agency Response: Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Compendium 9 on the Scientific Evidence Supporting the Rule. In addition, the Science Report on connectivity also addresses the important role of autochthonous production especially in prairie streams, see Science Report sections 3.4.2 and Case study B.4 Prairie streams.

⁹⁰ James H. Thorp & Michael D. Delong, *The Riverine Productivity Model: An Heuristic View of Carbon Sources and Organic Processing in Large River Ecosystems*, 70 OIKOS 305 (1994).

NiSource Inc. (Doc. #15112)

8.126 The proposed rule categorically determines that tributaries have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas. 79 Fed. Reg. at 22,201. Likewise, waters and wetlands adjacent to tributaries will be automatically jurisdictional. Id. at 22,263. Any channelized feature, including ditches and other man-made conveyances, no matter how remote from navigable waters, will be jurisdictional tributaries if they exhibit a bed, bank and ordinary high water mark. The proposed rule's "tributary" definition, vastly expands the scope of features that are currently regulated as tributaries, extending jurisdiction to features like ephemeral drainages and stormwater conveyances that have not been and should not be jurisdictional. (p. 4)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and stormwater control features created in dry land. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," provide a broad discussion of the final rule's exclusions. Section 6.2 of this RTC, "Excluded Ditches," provides a more focused discussion on the revisions and clarifications of the ditch exclusions.

Northern Colorado Water Conservancy District, Berthoud, Colorado (Doc. #15114)

8.127 The proposed definition of a jurisdictional "tributary" would significantly expand the scope of CWA jurisdiction. "Tributary" would be defined as any water that is physically characterized by the presence of a bed and bank and ordinary high water mark and which contributes flow (directly or indirectly) to other waters that eventually flow into a traditional navigable water or interstate water.⁹¹ We have the following concerns with this approach:

A. The treatment of all "tributaries" as jurisdictional-by-rule would inappropriately lump together large rivers and perennial streams with minor, often dry ephemeral and intermittent drainages. Under the proposed rule, there would be no minimum frequency, duration or volume of flow required-perennial, intermittent, and ephemeral streams would all automatically qualify as jurisdictional tributaries.⁹² This fails to recognize that there are differences among various types of drainages and even within individual drainages in terms of their associated resources and potential for affecting the chemical, physical or biological integrity of downstream waters. This is especially true for drainage areas that are dry during all or part of most years. It is important to preserve a process for individually determining the jurisdictional status of ephemeral and intermittent drainages that can consider and accommodate the variability between drainage types and how they differ regionally.

B. The assertion of jurisdiction over relatively remote intermittent and ephemeral drainages is not supported by Justice Scalia's plurality opinion in Rapanos v. United

⁹¹ Definition of "Waters of the United States" under the Clean Water Act, 79 Fed. Reg. at 22 199 (proposed amendment to 33 C.F.R. 328.3(a) (5)).

⁹² Definition of "Waters of the United State s" under the Clean Water Act, 79 Fed. Reg. at 22202.

States.⁹³ As described in that opinion, CWA jurisdiction would extend only to "those relatively permanent, standing or continuously flowing bodies of water 'forming geographic features' that are described in ordinary parlance as 'streams [...] . . . oceans, rivers, [and] lakes.'" ⁹⁴ The *Rapanos* plurality stated that CWA jurisdiction does "not include channels through which water flows only intermittently or ephemerally, or channels that periodically provide drainage for rainfall."⁹⁵ Even Justice Kennedy's concurring opinion in *Rapanos*, upon which this rulemaking effort relies most heavily, does not support a broad regulation of tributaries in the absence of more specific criteria.⁹⁶

...

Accordingly, if the agencies proceed to establish a jurisdictional-by-rule category for "tributaries," that category should be restricted to features that contribute flow to a traditional navigable water. On a relatively permanent basis, consistent with the plurality opinion in Rapanos. The agencies should evaluate intermittent and ephemeral water bodies on a case-by-case basis to determine whether to treat a given water as jurisdictional, consistent with current practice. These case-by-case evaluations could be facilitated through further guidance on factors (such as frequency, duration and volume of flow) indicative of the varying strengths of connections between features and the jurisdictional waters into which they convey flow. Other factors could include the strength (or lack) of the ordinary high water mark and bed/bank indicators, the presence and length of breaks in jurisdictional features, flow loss from infiltration and evaporation, and distance to a traditional navigable water. This type of approach would be consistent with Justice Kennedy's concurring opinion, which suggested the need for "more specific" criteria defining jurisdictional tributaries. (p. 4-5)

Agency Response: See summary response for Section 8.1. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters,

⁹³ *Rapanos v. United States*, 547 U.S. 715 (2006).

⁹⁴ *Id.* at 739.

⁹⁵ *Id.*

⁹⁶ Justice Kennedy's opinion in *Rapanos* concurred in the judgment but not in the plurality opinion's rationale regarding Congress's limits on the reach of CWA jurisdiction. Justice Kennedy's concurring opinion noted that the agencies' existing standard for tributaries (which relies on the presence of a connection to a traditional navigable water and certain physical characteristics indicating an ordinary high water mark) was too expansive to provide the basis for a jurisdictional determination regarding adjacent wetlands because it seemed to "leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes toward it." *Rapanos*, 547 U.S. at 781. He suggested that the agencies could "identify categories of tributaries that, due to their volume of flow (either annually or on average), their proximity to navigable waters, or other relevant considerations, are significant enough that wetlands adjacent to them are likely, in the majority of cases, to perform important functions for an aquatic system incorporating navigable waters." *Id.*

and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Nebraska Public Power District (Doc. #15126)

- 8.128 The Preamble uses the word "convey" when discussing the characteristics of tributaries: waters are tributaries when they "convey water to traditionally navigable waters, interstate waters, and territorial seas." But if most bodies of water eventually convey water somewhere else, would not most of them meet the definition of tributary under the proposed rule?

NPPD does not agree with the way tributaries are defined in the proposed rule. Many areas that were non-jurisdictional waters become jurisdictional. The statement that the jurisdiction in the proposed rule is narrower than that under the existing regulations is simply not true. For this reason, NPPD recommends the elimination of the proposed provision. (p. 7)

Agency Response: See summary response for Section 8.1. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Lower Colorado River Authority (Doc. #16332)

- 8.129 The Agencies' proposed definition for "tributary" is overly broad and lacks sufficient clarity. As noted above, the Agencies' definition fails to give adequate consideration to the plurality opinion in *Rapanos* and the holding in *SWANCC*, and it relies almost exclusively on legally irrelevant portions of Justice Kennedy's concurring opinion in *Rapanos*. Moreover, even if the Agencies' definition for "tributary" were consistent with the law, it is ambiguous, leaving the regulated public to guess as to which water bodies the Agencies intend to regulate. The Agencies propose to identify a "tributary" based on the presence of a bed, bank, OHWM, and any minimal amount of flow that eventually reaches navigable waters. As Justice Kennedy stated in his *Rapanos* opinion, however, these terms are not sufficiently detailed to provide appropriate limits on the Agencies' exercise of jurisdiction.⁹⁷ (p. 15)

Agency Response: See summary response for Section 8.1. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical,

⁹⁷ *Rapanos*, 547 U.S. at 734.

physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Tri-State Generation and Transmission Association, Inc. (Doc. #16392)

- 8.130 Reliance on the ordinary high water mark concept, which is known to be problematic in arid/desert regions for intermittent and ephemeral streams,⁹⁸ and categorizing all tributaries as jurisdictional by rule sets up a situation where individual landowners will have little ability to counter assertions of jurisdiction over a particular ephemeral tributary when absence of a significant nexus is likely. Accordingly, TriState requests that the final rule establish an off-ramp for intermittent and ephemeral tributaries and request the definition of tributaries in the final rule include a rebuttable presumption of jurisdiction for non-perennial tributaries rather than strict jurisdiction by rule. Alternatively, the definition of tributaries could be modified to specify perennially flowing tributaries and intermittent and ephemeral streams could be incorporated into the definition of other waters. This would address the lack of scientific basis for the jurisdictional by rule approach noted above by several SAB panelists while allowing regulated entities the option of either rapidly accepting a tributary as jurisdictional (e.g., similar to the present practice under Preliminary JDs), or providing a site specific significant nexus analysis to the Agencies for review. (p. 12-13)

Agency Response: See summary response for Section 8.1. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Section 9 "Scientific Evidence Supporting the Rule" of the Response to Comments. See summary response for Section 8.4 below, "Tributaries distinguished from non-jurisdictional gullies, rill, non-wetland swales."

Texas Water Development Board (Doc. #16563)

- 8.131 The proposed rule uses the existence of an ordinary high water mark as a minimal starting point for determining if a tributary has defined bed and banks and is potentially jurisdictional. This factor might be useful as a first step in eliminating waterways that are not jurisdictional. But the rule then goes on to suggest that tributaries with defined bed and banks and contributes flow, either directly or indirectly, would be expected to be jurisdictional. This presumption would apparently be applicable to intermittent and ephemeral streams as well.

⁹⁸ Engineer Research & Development Center, U.S. Army Corps of Engineers, "A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States," at 1 (August 2014).

All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers or open waters via channels and associated alluvial deposits. Headwater streams (primarily intermittent and ephemeral) are the most abundant stream type in most river networks and supply most of the water in rivers, to the greatest extent in arid areas. Headwater streams are the source of approximately 60% of the total mean annual flow to all northeastern U.S. streams and rivers. Based on the high level of in response to comments to provide increased clarity. The agencies believe that the connectivity, the EPA and Corps could claim all such waters as categorically waters of the U.S.

...

Specific Recommendations

...

3. EPA and the Corps should consider only relatively permanent tributaries as jurisdictional and provide objective steps to determine connectivity based on the plurality opinion in *Rapanos*. (p. 6, 7)

Agency Response: See summary response for Section 8.1. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Northern California Association (Doc. #17444)

8.132 The agencies should provide assurances in a final rule that the definition of "tributary" will be limited to those with "bed and banks with an ordinary high water mark" that have formed over several years, and that would not include temporary accumulations of sediment or hydraulic activity resulting from specific isolated precipitation or runoff events. Definitions must be fleshed out for the terms ordinary high water mark, bed and banks, and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule.

...

Jurisdictional tributaries should meet a new "bright line" test related to size of bed and banks, amount of flow, or distance from the jurisdictional navigable water in order to be considered a "water of the U.S.", establishing a limit on just how small, or dry, or how far upstream the CWA would apply from the jurisdictional navigable water. Wetlands should not be considered "tributaries" in the final rule, as they should have to meet "adjacency" or "significant nexus" tests associated with "adjacent" or "other waters" to be considered "waters of the U.S." (p. 6-7)

Agency Response: See summary response for section 8.1. The term "ordinary high water mark" has been defined in Corps regulations since 1986, and used by

Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. As described in the preamble, for purposes of the rule, “bed and banks” means the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries.

Cloud Peak Energy (Doc. #18010)

- 8.133 The expanded definition of WOTUS would include channels that flow infrequently such as ephemeral and intermittent drainages, non-navigable ditches and isolated waters. Currently there are rules in place to protect these non-navigable waters such as the Section 402 National Pollutant Discharge Elimination System (NPDES), Section 401 state water quality certification process, Section 311 oil spill program, and Section 303 water quality standards and total maximum daily load programs. The proposed rule does not provide any documentation to show that the existing rules do not adequately protect these non-navigable waters. The rule’s expansion of jurisdictional waters is unwarranted as there are regulations in place that protect these waters. (p. 2)

Agency Response: See summary response for section 8.1. Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and erosional features that do not meet the definition of tributary. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC and summary response for section 8.4 below. All provisions of the CWA referenced in the comment above utilize the same definition of “waters of the United States,” so those streams were and will continue to be protected because they are “waters of the U.S.” In this final rule, the agencies are responding to requests from across the country to make the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science.

Tucson Electric Power Company, UNS Energy Corporation (Doc. #19561)

- 8.134 We believe there needs to be a defined limit in the definition of tributary such as exact wash width, flow rate, distance from a TNW, and set by the rule that identifies with certainty the extent of CWA jurisdiction over [ephemeral drainages] local, regional and state waters. The agencies continue to profess that the proposed rule will not expand federal jurisdiction, but we believe otherwise.

Recommendations:

To reduce any uncertainty in identifying the limit of WUS subject to CWA jurisdiction, the final rule should include the following with regards to the definition of "tributary":

The agencies should provide assurances in the final rule that the definition of "tributary" will be limited to those with "bed and banks with an ordinary high water mark" that have

formed from ordinary precipitation events in the region, and that would not include temporary accumulations of sediment, debris or other indicators of extreme hydraulic activity resulting from specific isolated or peak-flow precipitation or runoff events.

Definitions for the terms "ordinary high water mark", "bed and banks", and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule should be more clearly and precisely described in the rule.

The final rule should establish a "bright line" or set of regionally-specific metrics, establishing a limit (i.e. specifically report indicates the size or width of bed and banks, amount of flow, or distance upstream) for a "tributary" to be considered WUS. (p. 5) that numerous features which contribute to the physical, chemical or biological integrity of downstream waters do not necessarily have hydric soils/hydrophytic vegetation within the channel.

Agency Response: See summary response for section 8.1. The term “ordinary high water mark” has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. As described in the preamble, for purposes of the rule, “bed and banks” means the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual.

Chesapeake Bay Foundation (Doc. #14620)

- 8.135 i. CBF supports the agencies’ finding that tributaries have a significant nexus with waters defined in (s) 1-3 of the proposed definition. This finding is consistent with our experience in the Chesapeake Bay Watershed where there is a clear chemical, physical, and biological interrelationship between a water, the tributary network, shallow groundwater aquifers and traditional navigable waters, interstate waters, and the territorial seas. This interrelationship is central to our efforts to reduce loads of nitrogen, phosphorus and sediment under the Chesapeake Bay TMDL and associated state Watershed Implementation Plans (WIP). For example, a U.S. Geological Survey investigation into the possible causes of the 1997 *Pfiesteria* outbreak which killed thousands of fish and sickened residents in the Pocomoke River, MD linked the contribution of nutrient sources from both surface and shallow groundwater as a contributing factor.⁹⁹ (p. 5)

Agency Response: The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States.

⁹⁹ Fish Health, Fungal Infections, and Pfiesteria: The Role of the U.S. Geological Survey, U.S. Geological Survey Fact Sheet 114-98 , By Vicki Blazer, Scott Phillips, and Edward Pendleton

National Wildlife Federation (Doc. #15020)

- 8.136 We support the agencies’ proposed rule that “all waters that meet the proposed definition of tributary are “waters of the United States” by rule, unless excluded under section (b), because tributaries and the ecological functions they provide, alone or in combination with other tributaries in the watershed, significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and territorial seas.” 79 Fed. Reg. 22201.¹⁰⁰ (p. 30)

Agency Response: The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States.

- 8.137 The proposed rule is strongly supported by the draft Connectivity Report, which thoroughly documents and supports its conclusion that “[a]ll tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported.” *Connectivity Report* at 1-3. The report includes a thorough examination of the literature with respect to ephemeral stream connectivity, particularly in the arid southwest.

This conclusion with regard to all tributary streams is strongly supported by the SAB Connectivity Peer Review Report as well,¹⁰¹ and is fully consistent with and relevant to Justice Kennedy’s significant nexus test. Justice Kennedy suggests the current definition of tributary “may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute ‘navigable waters’ under the Act.” *Rapanos* at 2249.

We urge the agencies to swiftly finalize this rule, clearly restoring longstanding protections for all tributary waters. Our research, as well as comments submitted by Corps officials, indicate that many lower order intermittent and ephemeral streams were left unprotected following issuance of the Guidance in 2007 and 2008, likely because of the inability to aggregate streams impacts. A Corps employee has commented that:

[O]ur district has determined that we cannot defensibly say that most individual first order/ephemeral stream reaches have a significant effect on a TNW. EPA and the Sierra Club argue that those first order/ephemeral headwater streams should be regulated because cumulatively they greatly effect [sic] the integrity of the

¹⁰⁰ We remind the agencies that Justice Kennedy does not assert that categorical regulation of tributaries is no longer permissible, or that a case-by-case determination of a “significant nexus” to TNWs or IWs is required to regulate any tributary. Justice Kennedy’s opinion limited his basis for remand to the lower court to the question of “whether the specific wetlands at issue possess a significant nexus with navigable waters.” 126 S. Ct. 2252. This contrasts with the plurality’s broader basis for remand to determine “whether the ditches and drains near wetlands are ‘waters,’” and “whether the wetlands in question” are also jurisdictional. *Id.* at 2235. This contrast is further indication Justice Kennedy may not require a case-by-case significant nexus determination for tributaries. It is only in regards to wetlands adjacent to minor tributaries that Justice Kennedy refuses to allow categorical assertion of jurisdiction under the current regulations. *Id.* at 2249 (“Absent more specific regulations, . . . the Corps must establish a significant nexus on a case-by-case basis when it seeks to regulate wetlands based on adjacency to non-navigable tributaries.”).

¹⁰¹ See discussion *supra* at 22.

TNWs. We do not argue that. However, the Supreme Court ruling and the Rapanos guidance did not say to look at them cumulatively. Not until several first or second order streams merge into a higher order stream can we defensibly argue that a stream has a significant effect.¹⁰²

We have also found several instances where streams, some quite sizable, are not being protected.¹⁰³ Some of these streams are being subjected to channelization and other projects that can have significant and harmful water quality and habitat implications. And failing to protect these streams leaves them vulnerable to other pollution, like the dumping of industrial and other waste that poses clear threats to downstream water quality, not to mention the tributary itself.

We urge the agencies to finalize this rule, confirming that any water that meets the definition of tributary (and is not excluded under section (b) of the proposed rule) has a significant nexus to a traditionally navigable water, interstate water, or territorial sea such that it is a ‘waters of the United States’ without the need for a separate, case-specific significant nexus analysis. *Id.* (p. 31-32)

Agency Response: See summary response for Section 8.1. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

8.138 A. The agencies’ definition of tributary is consistent with existing law and science, and does not expand Clean Water Act jurisdiction.

The agencies’ definition of “tributary” includes several clarifying elements, all of which are consistent with existing law, science, and past practice. See 33 CFR 328.3 (c)(5); 79 Fed. Reg. 22201-06, 22263. Fundamentally, the proposed rule defines “tributary” as:

[A] water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1)

¹⁰² Email from Cody Wheeler, codywheeler68@sbcglobal.net, Corps Employee, to OW-Docket@EPA (Nov. 16, 2007).

¹⁰³ See, e.g., Approved Jurisdictional Determination Form, U.S. Army Corps of Engineers, File NWK-2007-01586-1 (Aug. 17, 2007) (no jurisdiction found for second order stream with 384 acres of drainage, estimated to be 8,000 linear feet in length with 626 acre watershed); Approved Jurisdictional Determination Form, U.S. Army Corps of Engineers, File NWK-2007-01586-2, (Aug. 17, 2007) (no jurisdiction found for a first order stream with 115 acres of drainage and a watershed size that is also 115 acres. It is estimated to be 3,800 linear feet in length); Approved Jurisdictional Determination Form, U.S. Army Corps of Engineers, File NWO-2007-2195-DEN (Nov. 1, 2007) (ephemeral stream flowing into a reservoir used for water supply not jurisdictional).

through (4) [traditionally navigable waters, interstate waters, territorial seas, and impoundments of these waters as well as tributaries]. *Id.*

Importantly, and consistent with the science, law, and past practice, the agencies' tributary definition clarifies specific tributary circumstances where the OHWM is not determinative of tributary status: 1) "wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another waters to a water identified in paragraphs (a)(1) through (3);" and 2) a water "does not lose its status as a tributary if, for any length, there are one or more man-made breaks ..., or one or more natural breaks ... so long as a bed and banks and an ordinary high water mark can be identified upstream of the break." While the OHWM typically provides a strong indicator of relatively frequent flow for linear stream channels, it is not a reliable indicator of flow for non-linear water bodies such as wetlands, lakes, and ponds which none the less do contribute flow downgradient. *See* 79 Fed. Reg. at 22203; 22235.

Also consistent with the Act, the legal precedent, and the underlying connectivity science is the definition's clarification that a tributary, including a wetland, can be "natural, man-altered, or man-made" and includes "rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (b)(3) or (4) of this section." *Id.* There is significant case law that supports the regulation of man-made and man-altered waters as tributaries.¹⁰⁴ (p. 32)

Agency Response: See summary response for Section 8.1. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries. See summary response for section 8.2 below. These waters may still be considered "waters of the United States" under other provisions of the final rule.

Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233)

8.139 While tributaries, like other water bodies, vary in their degree of their influence on downstream waters, including traditionally jurisdictional downstream waters, overall, tributaries play a highly significant role in the chemical, physical, and biological

¹⁰⁴ See, e.g., *United States v. Moses*, 496 F.3d 984 (9th Cir. 2007), cert denied, 554 U.S. 918 (2008) (stream impacted by man-made diversion jurisdictional); Vierstra, *supra*, at *5 ("The fact that the Low Line Canal is man-made is of no moment. The canal is part of a tributary system connecting navigable waters upstream and downstream for six to eight months of the year. Its man-made nature makes it no less capable of carrying pollution to navigable and interstate waters. Moreover, there are many water-ways in the Intermountain West that have been re-routed, re-countered, and re-channeled in an effort to control, store, and use the limited water we have. Excluding these water-ways from the jurisdiction of the CWA when they might otherwise constitute tributaries of navigable waters makes little practical sense."); see also, *United States v. Gerke Excavating, Inc.*, 412 F.3d 804, 805-06 (7th Cir. 2005), vacated and remanded 548 U.S. 901 (2006) (ordering further consideration in light of *Rapanos*), remanded 464 F.3d 723, 725 (7th Cir. 2006) (remanding to district court for further fact finding to determine whether particular wetlands were jurisdictional "waters of the United States" under Justice Kennedy's significant nexus test). (Finding that, "A stream can be a tributary; why not a ditch? A ditch can carry as much water as a stream, or more; many streams are tiny. It wouldn't make much sense to interpret the [Corps'] regulation[s] as distinguishing between a stream and its man-made counterpart.").

character of their downstream waters. We therefore concur that tributaries, “as a category . . . play a critical role in the integrity of aquatic systems comprising traditional navigable waters and interstate waters, and therefore are ‘waters of the United States’ within the meaning of the Clean Water Act.” 79 Fed. Reg. 22260.

However, the conservation groups regard the proposed rule’s definition of “tributary” to be confusing and unwarrantedly cramped, and thus insufficiently protective of tributary water bodies and the downstream waters they affect. In particular, we are concerned that the overly narrow definitions may not adequately protect headwaters, as well as seasonal and ephemeral tributaries.

The proposed definition of tributary requires such a water body to be “physically characterized by the presence of a bed and banks and ordinary high water mark . . . which contributes flow, either directly or through another water” to a traditionally jurisdictional water body. 79 Fed. Reg. 22268. Your proposed definition then proceeds to hedge as to this requirement for an ordinary high water mark (hereinafter, “OHWM”) – reflecting your uncertainty as to this requirement – by stating that “[a] water that otherwise qualifies as a tributary . . . does not lose its status as a tributary if, for any length, there are one or more man-made breaks . . . or one or more natural breaks. . . so long as a bed and banks and an [OHWM] can be identified upstream of the break.”

In fact, your requirement for an OHWM, even an intermittent OHWM, would work to exclude from the definition and, thus, the protection accorded water bodies with tributary “status,” certain streams whose flow, either alone or in the aggregate, would have an important effect on the physical, chemical or biological integrity of traditionally jurisdictional water bodies. As the EPA’s SAB has observed, “[t]he absence of OHWM is relatively common in ephemeral streams within arid and semi-arid environments or low gradient landscapes.” SAB Sept. 2, at 5. With respect to streams in areas of limited precipitation, an EPA expert report previously concluded:

When functioning properly, arid and semi-arid region streams provide many of the same services as perennial streams that affect water quality and ecosystem health. These services include landscape hydrologic connections; surface and subsurface water storage and exchange; ground-water recharge and discharge; sediment transport, storage, and deposition; flood plain development; nutrient cycling; wildlife habitat including movement and migration corridors; support for vegetation communities that help stabilize stream banks and provide wildlife services; water supply and water quality filtering or cleansing; and stream energy dissipation associated with high-water flows that reduces erosion and improves water quality (USFWS, 1993; BLM, 1998). In addition, riparian areas associated with ephemeral and intermittent streams help mitigate and control water pollution by removing pollutants and sediment from surface runoff (Sonoran Institute, 2007). Thus, these streams play a significant role in the physical, biological, and chemical integrity of an ecosystem and must be afforded the same importance as other wetter systems in the U.S.

EPA, *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest* (2008), at 76.

As noted, a large number of ephemeral and intermittent streams may fail to generate an OHWM, yet still contribute substantial flows and ecosystem functions, either individually or collectively. Indeed, there are many such streams. Analysis presented by EPA establishes that intermittent and ephemeral streams comprise 59 percent of total stream length in the lower 49 states, and that one third of the U.S. population gets “some or all of their drinking water from public drinking water systems that rely in part on headwater, seasonal, or rain-dependent streams.” See “Map of seasonal and rain-dependent streams,” and “Map of county-by-county drinking water data,” viewed Sept. 26, 2014 at <http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm>.

The operative question is whether the water body contributes flow or otherwise influences the functioning of other waters, as evidenced by your inclusion of wetlands, lakes and ponds that contribute flow irrespective of whether they are characterized by an OHWM (or, for that matter, a discernible bed or a bank). 79 Fed. Reg. 22268.¹⁰⁵ Rather than relying on a morphological test, the conservation groups urge you to make the contribution of flows or their influence on downstream waters the center of the definition, while retaining the bed and bank and OHWM tests as operationally useful. Second, we also urge you to provide for those streams which are functionally important individually or collectively, but do not have they typical bed and bank or OHWM morphology. Accordingly, the conservation groups urge that you amend your definition of tributary as follows:

Tributary. The term tributary means a water that contributes flow to or influences the physical, chemical or biological characteristics of a water identified in paragraphs (a)(1) through (4) of this definition, either directly or through another water and either individually or in combination with other similarly situated waters in the region. A water contributes flow or influences the physical, chemical, or biological characteristics of a receiving water when the water is physically characterized by the presence of a bed and banks, physically characterized by an ordinary high water mark as defined at 33 CFR 328.3(e), or characterized by other evidence or indicators of flow, ~~which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this definition.~~

79 Fed. Reg. at 22268 (proposed 40 CFR 122.2 (c)(6)). This definition has three beneficial characteristics. First, it retains the key scientific principles that justify the inclusion of tributaries at its core such that in cases of disputes, it is the functions of the waterway that ultimately determine its status. Second, the two-stage definition allows field offices to rely on the important bed and bank and OHWM tests for the many waters where those approaches are appropriate. Third, the final prong allows the EPA and Army Corps of Engineers the flexibility to rely on other evidence where necessary to account for waters where the OHWM and bed and bank tests are not appropriate.

¹⁰⁵ SAB Sept. 17 at 2 also advises that tributaries “are not typically defined to include lentic systems (e.g., lakes, ponds, wetlands). Thus, the EPA may want to consider whether flow-through lentic systems should be included as adjacent waters and wetlands, rather than as tributaries.” The conservation groups agree with the SAB’s observation about the typical definition, but reserve comment at this time on whether your special definition is unmanageable.

As a companion to defining “tributary” in functional, rather than morphological, terms, we urge you to remove the exclusion of “gullies” and “rills” throughout the rule. As you note at 79 Fed. Reg. 22219, the definition of tributary cannot easily be reconciled with this exclusion, precisely because there is not a functional principle suggesting that gullies and rills function differently from other waterways of similar size and position. As described above, particularly in arid, semi-arid, and seasonal regions, deeply incised and erosional features contribute considerable flows and exert critical functional influence on downstream waters, and are often permanent features. In addition, in many contexts, human activities that remove vegetation and accelerate in-stream velocities, such as overgrazing or development, can convert existing streams into deeply incised “gullies.” These human activities can also divert surface or subsurface flows into defined and permanent streams that contribute important flows and sediments to downstream waters on an ongoing and permanent basis. As noted in section 3.3.6 of the SAB report, although these impacts may be recent in a dynamic and altered landscape, this does not mean that these waters are not functionally important and connected to down-gradient waters.

Simply because such streams are recent in origin does not remove their functional importance. In these contexts, morphological features such as deep incision, down-cutting and head-cutting do not provide any scientific basis for excluding such functionally important streams from regulation. Indeed, the EPA’s difficulty in differentiating between excluded “gullies” and “rills” on the one hand, and categorical jurisdictional ephemeral tributaries in arid regions on the other, points clearly to the fact that this exclusion is poorly grounded in terms of the hydrological function of such features. The discussion of the exclusion appears to rest on the age of features and their origin as erosional features on steep and erodible soils, yet neither of those characteristics have direct bearing on the hydrological connection to other waters. As noted above, gullies and rills may be permanent in some landscapes and in others may result from damage to existing waterways. In neither case is there a scientific basis for their exclusion. Therefore, we recommend that the exclusions of gullies and rills be removed from the rule entirely rather than seeking a contrived and cramped distinction that does not exist in real world terms. (p. 3-5)

Agency Response: See summary response for Section 8.1. The agencies’ interpretive task in this rule – determining which waters have a “significant nexus” – requires the integration of the science with policy judgment and legal interpretation. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries. See summary response for section 8.2 below. These waters may still be considered “waters of the United States” under other provisions of the final rule.

American Rivers (Doc. #15372)

8.140 *E. Effects of Ambiguous WOTUS Definition...*

3. Impacts to Drinking Water Supply

Approximately 286 million Americans get their water from a public water system monitored and regulated by the EPA.¹⁰⁶ Of those, 117 million get their drinking water from public systems that rely on seasonal, intermittent, and ephemeral headwater streams.¹⁰⁷ Restoring protections to these small streams and surrounding wetlands under the proposed rule is critical to protecting drinking water. The status quo puts protections for these waters into question, leaving them vulnerable to pollution and degradation.

Americans obtain two-thirds of their drinking water from surface water sources and the other one-third from groundwater.¹⁰⁸ However, surface water and groundwater are not exclusive entities. Groundwater can recharge surface water and surface waters can discharge into groundwater. The recharge that occurs from groundwater can be significant. In dry regions during the dry season as much as 95% of a stream's flow can come from groundwater.¹⁰⁹ Headwater streams and wetlands play a vital role in recharge due to their large surface area of soil to water contact.⁶⁶ If wetlands and small streams become altered and lose their connection to groundwater then downstream flow could be adversely impacted and may even start to dry up. (p. 13)

Agency Response: See summary response for Section 8.1. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries. See summary response for section 8.2 below. These waters may still be considered “waters of the United States” under other provisions of the final rule.

Center for Science in Public Participation (Doc. #15426)

8.141 Wetlands, ephemeral streams, intermittent streams, and headwaters provide vital ecological functions to downstream rivers. The EPA draft review correctly identifies the roles they play in cycling and transport of sediment, nutrients, and contaminants and in providing habitat for fauna that move between rivers and other water bodies, and the biological connectivity of migratory fauna.

I would encourage EPA to re-examine the definition of a tributary. Currently it is defined as having an ordinary high water mark. This is not always the case for important

¹⁰⁶ U.S. EPA, EPA 816-K-07-004, FACTOIDS: Drinking Water and Ground Water Statistics for 2007 4 (March 2008), available at http://www.epa.gov/ogwdw/databases/pdfs/data_factoids_2007.pdf.

¹⁰⁷ EPA, Geographic Information System Analysis of the Surface Drinking Water Provided by Intermittent, Ephemeral, and Headwater Streams in the U.S., http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm (last updated Oct. 29, 2013).

¹⁰⁸ Meyer, supra note 57, at 11. [J.L. Meyer, L.A. Kaplan, J.D. Newbold, D.L. Strayer, C.J. Woltemade, J.B. Zedler, R. Beilfuss, Q. Capenter, R. Semlitsch, M.C. Watzin, & P.H. Zedler, Where Rivers are Born: The Scientific Imperative for Defending Small Streams and Wetlands. American Rivers and Sierra Club 8 (February 2007), available at <http://www.americanrivers.org/assets/pdfs/reports-and-publications/WhereRiversAreBorn1d811.pdf?422fcb>]

¹⁰⁹ *Id.*

intermittent and ephemeral streams. The EPA’s SAB suggests changing the definition from “ordinary high water mark” to “bed, bank, and other evidence of flow”; I support this recommendation.

In Alaska, we expect earlier spring melt, longer dry periods, and a general increase in temperatures and precipitation¹¹⁰. Longer dry periods and low snowpack— such as have been observed in Prince William Sound¹¹¹ -- could create longer periods during which a stream becomes ephemeral or intermittent. Headwater streams that form in rivulets from snowmelt may be ephemeral, with no ordinary high water mark, but are critical to the physical, biological, and chemical character of downstream waters, particularly those that support a salmon ecosystem. A “high water mark” definition also would not include streams that form on peatlands, which can be important in supplying flow to streams¹¹², but a “bed and bank” definition might be applicable, although the bed and bank themselves are peat. A “bed and bank” definition should continue to include water bodies – such as off-channel habitat-- that seasonally connect with flowing systems and can be important biological habitat. If off-channel habitat such as gravel quarries are utilized as “mitigation” for the removal of wetland and aquatic habitat, then these must also come under the Clean Water Act for the extent of the period they are in use as mitigation.

Further north, as permafrost melts the land sinks, shifts, cracks and forms new wetlands and may form new hydrologic connections to downstream waters. These may not have defined ordinary high water marks with bank and bed characteristics. These new freeze-thaw wetlands along with ephemeral streams and land-locked pockets of water perform biological functions, such as mercury methylation¹¹³ that can be the basis of a significant nexus.

Additionally, ephemeral perched or flow-through ponds, such as those that may form at snowmelt or with new wetlands, may have important connections, particularly for maintaining groundwater resources¹¹⁴. (p. 1-2)

Agency Response: See summary response for Section 8.1. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries. See summary response for section 8.2 below. These waters may still be considered “waters of the United States” under other provisions of the final rule. See also TSD section VII for the rationale supporting the decisions made in the final rule regarding tributaries. See the Science Report on connectivity for discussion of Alaskan streams. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

¹¹⁰ <https://www.snap.uaf.edu/>

¹¹¹ <http://www.thecordovaitimes.com/article/1420water-supply-crisis-or-conservation;>
<http://www.cityofcordova.net/residents/services/water-status/490-water-update-may-22;> <http://nveyak.com/water-shortage-update/>

¹¹² Gracz, M, M Moffett, D Siegel, P Glaser. 2014. End member mixing analysis [in a homogenous watershed] to identify the contribution of peatlands to stream flow. In prep.

¹¹³ Zamzow comment, Docket #EPA-HQ-OA-2013-0582.

¹¹⁴ Rains, M. 2011 Water sources and hydrodynamics of closed-basin depressions, Cook Inlet Region, AK. Wetlands 31: 377-387; Rains, M. 2008. Surface-water and groundwater interactions in small pools on the Pebble property. Powerpoint to federal agencies, Anchorage, AK. November.

Natural Resources Defense Council et al. (Doc. #15437)

8.142 THE PROPOSED CATEGORICAL PROTECTIONS FOR TRIBUTARIES AND ADJACENT WATERS ARE LEGALLY AND SCIENTIFICALLY JUSTIFIED AND MUST BE INCLUDED IN THE FINAL RULE.

...

A. Tributaries

EPA and the Corps propose to define the term “waters of the United States” as including all tributaries of traditionally navigable waters, interstate waters, the territorial seas, and impoundments of those same waters, thereby categorically extending legal protections to all such tributaries. This approach is fully consistent with Justice Kennedy’s “significant nexus” test, even though – as discussed above – the Supreme Court’s decisions do not require any change in the existing regulations concerning tributaries.¹¹⁵

The scientific justification for categorically protecting tributaries is extremely robust. This conclusion is supported by a review and synthesis of more than 1,000 publications from the peer-reviewed scientific literature, often referred to as the Connectivity Report.¹¹⁶ In that report, EPA concluded that tributaries, as a class, have an undeniable impact on downstream navigable waters, stating:

The scientific literature demonstrates that streams, individually or cumulatively, exert a strong influence on the character and functioning of downstream waters. All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported. Headwater streams (headwaters) are the most abundant stream type in most river networks and supply most of the water in rivers. In addition to water, streams transport sediment, wood, organic matter, nutrients, chemical contaminants, and many of the organisms found in rivers. Streams are biologically connected to downstream waters by the dispersal and migration of aquatic and semiaquatic organisms, including fish, amphibians, plants, microorganisms, and invertebrates, that use both up- and downstream habitats during one or more stages of their life cycles, or provide food resources to downstream communities. Physical, chemical, and

¹¹⁵ Justice Kennedy indicated that an existing regulatory provision that uses the presence of an ordinary high water mark to identify the lateral limits of a tributary could itself “provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute ‘navigable waters’ under the Act.” 547 U.S. at 781. However, Justice Kennedy did not say that the presence of an OHWM is a necessary prerequisite to jurisdiction, and it certainly is not needed if tributaries are shown to have a significant nexus without regard to whether a OHWM is present. As proposed, the rule would use OHWM as a guidepost; it proposes to define “tributary,” with respect to flowing waters, as any water that: (1) is “physically characterized by the presence of a bed and banks and ordinary high water mark,” and that it (2) “contributes flow, either directly or through another water,” to a traditionally jurisdictional water. See, e.g., 79 Fed. Reg. at 22,263 (proposed 33 C.F.R. § 328.3(c)(5)). As discussed below, we are not convinced that these requirements are necessary, but they are certainly sufficient.

¹¹⁶ U.S. EPA, Office of Research & Development, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* – External Review Draft (Sept. 2013) (hereinafter “Connectivity Report”).

biological connections between streams and downstream waters interact via processes such as nutrient spiraling, in which stream communities assimilate and chemically transform large quantities of nitrogen (N) and other nutrients that would otherwise increase nutrient loading downstream.¹¹⁷

These conclusions apply equally to very small and infrequently flowing tributary streams. According to the Connectivity Report, “Even infrequent flows through ephemeral or intermittent channels influence fundamental biogeochemical processes....”¹¹⁸ And headwater streams, which are the smallest channels where stream flows begin, are the source of approximately 60% of the total mean annual flow to all northeastern U.S. streams and rivers, making their impact on the chemical, physical, and biological integrity of our waters indisputable.¹¹⁹

These findings have been confirmed by the Science Advisory Board in its peer review of the Connectivity Report. In its final report to EPA, the SAB wrote:

The Report concludes that these streams exert a strong influence on the character and functioning of downstream waters, and indeed that all tributary streams are physically, chemically, and biologically connected to downstream waters. Strong scientific support has been provided for this overall conclusion and related findings. The SAB notes that there is a gradient of connectivity that is a function of the frequency, duration, magnitude, predictability, and consequences of physical, chemical, and biological connections. The SAB recommends that the conclusions and findings concerning ephemeral, intermittent, and perennial streams be quantified when possible, related to the four dimensions of connectivity (longitudinal, lateral, vertical and temporal), and discussed with additional detail on biogeochemical transformations and biological connections. In addition, some hydrologic aspects of connectivity require additional detail; these include descriptions of key linkages and exchanges in tributary streams, such as groundwater-surface water interactions, and the role of transition areas between uplands and headwaters. Likewise, the Report should explain how hydrologic connectivity sustains both streams and aquifers, particularly in alluvial systems in the Southwest and in karst systems in the eastern United States.¹²⁰

Although this conclusion should surprise nobody, the fact that the Connectivity Report’s assessment that tributaries have a “strong influence” on downstream waters is backed by “[s]trong scientific support” is a more than adequate basis on which to conclude that tributaries, as a class, have a significant nexus to other covered waters and thus should be categorically protected. Indeed, in providing advice to EPA on the proposed rule (as opposed to the Connectivity Report), the SAB stated, “[t]here is strong scientific

¹¹⁷ *Id.* at 1-3.

¹¹⁸ *Id.* at 1-7.

¹¹⁹ *Id.*

¹²⁰ U.S. EPA Science Advisory Board, SAB Review of the Draft EPA Report *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, EPA-SAB-15-001, at 3-4 (Oct 17, 2014) (hereinafter “SAB Connectivity Review”), available at [http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/\\$File/EPA-SAB-15-001+unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf).

evidence to support the EPA’s proposal to include all tributaries within the jurisdiction of the Clean Water Act.”¹²¹

Ensuring that tributaries are covered under the Clean Water Act’s pollution control programs frequently means cleaner water for larger downstream rivers, estuaries, and oceans. Even when they are not helping to make downstream waters better, tributaries have significant impacts on the biological, chemical, and physical condition of downstream waters: pollution dumped into streams high up in the watershed can cause harm in larger water bodies (a classic example being the Gulf of Mexico “Dead Zone”); and filling in upstream tributaries can dramatically alter the physical hydrology of downstream waters (a simple example is a dam built to divert flow from the tributary to an industrial use). It is both intuitive and demonstrably true that processes occurring upstream within these small bodies of water affect the entire river network’s structure and function. As the Connectivity Report shows, the science conclusively establishes that tributaries have not only significant but overwhelming effects on downstream navigable waters. The proposal’s categorical protections for tributaries are both justified and compelled by these findings, and they must be included in the final rule. (p. 32-34)

Agency Response: The agencies agree that those features meeting the definition of “tributary” in the final rule have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

8.143 Finally, Defenders also objects to the limitation in the definition of tributaries in proposed subsection (u)(5) to waters identified in subsections (s)(1) through (s)(4). This definition should include tributaries to waters identified in subsections (s)(6) and (s)(7) as well. There is no principled scientific or legal basis to exclude tributaries to any waters of the U.S. from the Act’s jurisdiction.

In short, the inclusion of tributaries in the definition of waters of the U.S. is solidly grounded in science and the law and is required by the purpose and intent of the Act. See Chevron, USA v. NRDC, 467 U.S. 837, 842-43 (1984). At a minimum, including tributaries as waters of the United States is a reasonable interpretation of the Clean Water Act, while excluding them would be inconsistent with the science in the record and the purpose and intent of the statute and an impermissible interpretation of the agency’s authority. See *id.* Defenders urges the agencies to retain the inclusion of tributaries in the final definition and strengthen it as noted above. (p. 8)

¹²¹ U.S. EPA Science Advisory Board, Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA’s Proposed Rule titled “Definition of Waters of the United States under the Clean Water Act,” EPA-SAB-14-007, at (Sept. 30, 2014) (hereinafter “SAB Rule Review”), available at [http://yosemite.epa.gov/sab/sabproduct.nsf/0/518D4909D94CB6E585257D6300767DD6/\\$File/EPA-SAB-14-007+unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/0/518D4909D94CB6E585257D6300767DD6/$File/EPA-SAB-14-007+unsigned.pdf).

Agency Response: See summary response for Section 8.1. The agencies' interpretive task in this rule – determining which waters have a “significant nexus” – requires the integration of the science with policy judgment and legal interpretation. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Waterkeeper Alliance et al. (Doc. #16413)

8.144 III. ALL TRIBUTARIES TO ANY OTHER WATER OF THE U.S. MUST CONTINUE TO BE INCLUDED IN THE DEFINITION.

The Proposed Definition improperly narrows jurisdiction over tributaries. First, it limits jurisdiction to tributaries of traditionally navigable waters, interstate waters, territorial seas, and impoundments. Second, it improperly relies on the “significant nexus test” as the sole basis for asserting jurisdiction. Third, it adopts a new definition of tributaries that reduces the types of tributaries covered by the rule in a manner that is not supported by law and science. Fourth, it categorically exempts “ditches” from coverage even if the ditches are otherwise tributaries contrary to law and science.

Under the agencies' existing regulations, all tributaries to traditionally navigable waters, interstate waters, impoundments, and “other waters” are defined as “waters of the United States.”¹²² All of the tributaries protected under the existing regulation must continue to be covered in the Proposed Definition. As demonstrated previously, the Supreme Court has not issued any opinion that limits the jurisdiction over tributaries. To the contrary, it is well settled that tributaries are jurisdictional waters within the meaning of “waters of the United States.”¹²³ Neither *SWANCC* nor *Rapanos* invalidated or limited the scope of jurisdiction provided by the existing definition's inclusion of tributaries.¹²⁴ Additionally, all tributaries to all other “water of the United States” must be included with the definition and given categorical protection. Tributaries are obviously connected, and thus adversely impact, their downstream waters. This is consistent with the findings of the

¹²² See e.g., 40 C.F.R. §122.2; 33 C.F.R. § 328.3(a).

¹²³ See, e.g., *N. Cal. River Watch v. City of Healdsburg*, 496 F.3d 993, 997 (9th Cir. 2007) (“The Supreme Court has since confirmed that regulable waters of the United States include tributaries of traditionally navigable waters and wetlands adjacent to navigable waters and their tributaries. The only question reserved in *Riverside Bayview Homes* was the issue of CWA jurisdiction over truly isolated waters.” citing *Bayview*, 474 U.S. at 106; 33 C.F.R. 328.3(a)(1),(4),(7); and *Rapanos*, 547 U.S. at 792 n. 3); see also *Benjamin v. Douglas Ridge Rifle Club*, 673 F.Supp.2d 1210,1215 & n. 2 (D. Or. 2009) (indicating that jurisdiction over tributaries did not require demonstration of significant nexus); *United States v. Vierstra*, 2011 WL 1064526, at *5 (D. Id. Mar. 18, 2011) [“It is an open question as to whether Justice Kennedy's concurrence applies in the tributary context.”]. But see, e.g., *United States v. Robison*, 505 F.3d 1208 (11th Cir 2007) (applying “significant nexus” analysis to tributary stream).

¹²⁴ See 2011 Comments, supra note 48, at pp. 9-15; see also 2003 Comments, supra note 36 at pp. 46.

Connectivity Report and the SAB Report, as well as the individual comment of the SAB members.¹²⁵ (p. 26-27)

Agency Response: See summary response for Section 8.1. The agencies' interpretive task in this rule – determining which waters have a “significant nexus” – requires the integration of the science with policy judgment and legal interpretation. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and caselaw.

- 8.145 Another SAB member similarly commented that the Proposed Definition should allow "flexibility to for [sic] field personnel to define functional tributaries, even where those functional tributaries might lack obvious indicators of bed and bank (e.g., alluvial deposits on the bed of a headwater stream in a humid mountain 8 G setting) but have less obvious indicators of tributary flows (e.g., directionally bent herbaceous vegetation and subtle debris lines in swales connecting vernal pools to downstream waters in arid and semi-arid settings)."¹²⁶ (p. 33)

Agency Response: In this final rule, the agencies are responding to requests from across the country to make the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science. See summary response 8.1.2 below and TSD section VII(A) for further explanation. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

Association of State Floodplain Managers, Inc. (Doc. #19452)

- 8.146 **The proposed rule recognizes the importance of protecting and managing stream networks in totality – including tributaries – to maintain the physical, chemical, and biological integrity of navigable waters.**

All components of the stream continuum function together to protect the following: physical (channel and channel bank integrity), natural flood water storage, chemical (e.g. drinking water) and biological (e.g. habitat and migration) ecological services. These services are interrelated and not addressed by protection of only limited reaches of a stream. ASFPM supports the fundamental definition of streams and their tributaries in the proposed rule, based on the presence of physical structure which may include a bed,

¹²⁵ Compilation of Preliminary Comments from Individual Panel Members on the Scientific and Technical Basis of the Proposed Rule Title "Definition of 'Waters of the United States' Under the Clean Water Act" (August 14, 2014) (hereinafter "Member Comments").

¹²⁶ Member Comments, *supra* note 72, *Rains* at 71.

banks, floodplain and evidence of flow. This approach is consistent with most state legal definitions. It may, however, be helpful to discuss in more detail what the agencies are describing when they use the term “ephemeral” as it is used in the preamble to the proposed rule (or in future guidance), given that this term is defined differently by various states from both a legal and a scientific perspective. In addition some discussion of how the methodology used to identify streams takes into consideration their contribution to the physical, chemical, and/or biological integrity of navigable waters is recommended. (p. 4)

Agency Response: The preamble to the final rule describes ephemeral streams as those that “have flowing water only in response to precipitation events in a typical year, and are always above the water table.” Section III(C) of the preamble describes the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

American Association of Port Authorities (Doc. #13559)

- 8.147 AAPA members have also expressed concern that the proposed treatment of “tributary” and “adjacent” waters will result in a significant expansion of features (both natural and artificial) subject to regulation as “waters of the United States.” Definitions like “all tributaries” and “all waters adjacent” are too broad and could impact port facilities. We recommend clarification of these definitions.

AAPA is concerned with the term “contributes flow,” as no distinction is made between perennial, intermittent or ephemeral flows. This represents a significant departure from the current “continuous surface connection” standard. Under the proposed definition, most, if not all, of a port’s stormwater collection infrastructure, consisting of open ditches and canals (representing perennial, intermittent and ephemeral storm flows), could be considered “waters” if they have a permeable bed and banks and an ordinary high water mark (OHWM). We recommend further clarification of this definition. (p. 1-2)

Agency Response: See summary response for Section 8.1. Section III(C) of the preamble describes the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion, see specifically section VII(B). Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and stormwater control features created in dry land. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions.

The Association of State Wetland Managers (Doc. #14131)**8.148 6. The proposed rule recognizes the importance of protecting and managing stream networks in totality – including tributaries – to maintain the physical, chemical, and biological integrity of navigable waters.**

All components of the stream continuum function together to protect physical (e.g. water supply), chemical (e.g. drinking water) and biological (e.g. habitat and migration) ecological services. These services are interrelated and cannot be maintained by protection of only limited reaches of a stream. ASWM supports the fundamental definition of streams and their tributaries in the proposed rule, based on the presence of physical structure (a bed, banks, and evidence of flow). This approach is consistent with most state legal definitions. It may, however, be helpful to discuss in more detail what the agencies are describing when they use the term “ephemeral” as it is used in the preamble to the proposed rule (or in future guidance), given that this term is defined differently by various states from both a legal and a scientific perspective. In addition, some discussion of how the methodology used to identify streams takes into consideration their contribution to the physical, chemical, and/or biological integrity of navigable waters is recommended.¹²⁷ (p. 3-4)

Agency Response: The preamble to the final rule describes ephemeral streams as those that “have flowing water only in response to precipitation events in a typical year, and are always above the water table.” Section III(C) of the preamble describes the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Earthjustice (Doc. #14564)

8.149 Subsection (s)(5) identifies tributaries and it makes the same error as (s)(4). Again, there is no scientific or legal reason to exclude tributaries of any water that is identified as a water of the U.S. through this rule. Tributaries plainly affect downstream waters and if the downstream water is a water of the U.S. then its tributaries must be protected under the Clean Water Act. Indeed, a predecessor to the Clean Water Act recognized over a century ago that tributaries must receive federal protection from pollution. 33 U.S.C. §407. In enacting the comprehensive Clean Water Act, designed in part as a successor to that prior law, 33 U.S.C. §1342(a)(4) and (5), Congress clearly did not intend to cut back on the prior law’s safeguards for tributaries. In short, including these tributaries is required under *Chevron* Step One and would, at least, be a permissible and reasonable interpretation of the Act that comports with Step Two of *Chevron*. Conversely, given the Act’s broad protective scope and the scientific evidence that these tributaries have a hydrologic connection with covered waters and significantly affect them, excluding them

¹²⁷ ASWM recently compiled a *Report on State Definitions, Jurisdiction and Mitigation Requirements in State Programs for Ephemeral, Intermittent and Perennial Streams in the United States* (April, 2014), with financial support from EPA. This report may be downloaded at http://aswm.org/stream_mitigation/streams_in_the_us.pdf.

would fail under Step Two—and would not constitute reasoned decisionmaking supported by the record. (p. 6)

Agency Response: The agencies’ interpretive task in this rule – determining which waters have a “significant nexus” – requires the integration of the science with policy judgment and legal interpretation. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Center for Rural Affairs (Doc. #15029)

- 8.150 We are generally supportive of providing clarity to the regulated community by establishing tributaries to traditionally navigable waters, interstate waters, territorial seas, and impoundments ((a)(1) through (4) waters) as per se jurisdictional. Tributaries, especially headwater tributaries, greatly affect the chemical, physical, and biological integrity of (a)(1) through (4) waters by contributing flow and pollutants, impacting the geomorphology of the water bodies, and providing additional aquatic habitat. Given the impact of tributaries, it would be unreasonable to argue that they lack a significant nexus to waters of the United States. (p. 2)

Agency Response: The agencies agree that those features meeting the definition of “tributary” in the final rule have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States.

National Parks Conservation Association (Doc. #15130)

- 8.151 Recent regulatory uncertainties especially threaten headwater, ephemeral, and intermittent streams as well as other upstream areas that feed into park units. About 117 million (one-third of Americans) – and many park visitors – depend on drinking water from public water systems that are fed in whole or in part by intermittent, headwater, or ephemeral streams (EPA 2009). For the past 13 years, confusion resulting from both the Supreme Court decisions and agency guidance particularly muddled the protection status of these types of waters, which respectively comprise 53 percent (headwater, see Figure 2 in Appendix) and 59 percent (intermittent and ephemeral, see Figure 3 in Appendix) of total stream length in the United States, excluding Alaska (Nadeau and Rains 2007; Levick et al. 2008). The new rule provides a clear standard for treating these streams as jurisdictional tributaries (EPA Federal Register 2014, 22206), which benefits water quality and availability in downstream parks.

Headwaters include streams where surface water first collects and converges into visible channels. They provide the original source of water for watersheds by supplying more than half of the water volume of higher-order streams (Alexander et al. 2007), and as such they strongly indicate water quality, biological content, and habitat quality in downstream systems (Dodds and Oakes 2008; Snyder et al. 2013; Clarke et al. 2008; Finn

et al. 2011).¹²⁸ Also, due to their large spatial coverage, headwater networks are major entry points for non-point source pollution into riparian networks around parks.¹²⁹

Ironically, headwater, intermittent, and ephemeral streams, which science shows are important to protecting water quality and wildlife habitat, are the very waters at risk because of policy and legal decisions. Because these decisions called into question protections for streams without “strong connectivity” to traditionally navigable waterways, headwater streams potentially lost protection because 50 percent are seasonally ephemeral or intermittent (Nadeau and Rains 2007). Ephemeral and intermittent streams do not continually flow into higher order streams throughout the year. However, they still substantially affect traditionally navigable waterways (EPA Federal Register 2014). According to the EPA, ephemeral and intermittent streams:

“provide landscape hydrologic connections; stream energy dissipation during high-water flows to reduce erosion and improve water quality; surface and subsurface water storage and exchange; ground-water recharge and discharge; sediment transport, storage, and deposition to aid in floodplain maintenance and development; nutrient storage and cycling; wildlife habitat and migration corridors; support for vegetation communities to help stabilize stream banks and provide wildlife services; and water supply and water-quality filtering” (Levick et al. 2008).

In terms of biological connectivity, the extensive spatial coverage of headwater, ephemeral, and intermittent streams allows these areas to host large portions of an entire river system’s biodiversity (for macro invertebrates, see Finn et al. 2011; for microbes, plants, and other animals, see Meyer et al. 2003 and 2007). Scientists have repeatedly shown that the water quality of headwater streams directly affects biological (through nutrient concentration and flux) and chemical (Peterson et al. 2001) signatures of higher-order stream features and downstream water bodies (Lowe and Likens 2005; Gomi, Sidle, and Richardson 2002). All of these scientific considerations have direct implications for how these streams affect national park waters.

In addition to protecting scientifically-important headwater, ephemeral, and intermittent streams themselves, the rule also provides for the evaluation of these waters in “networks” and aggregation of small features. When considered together, these networks represent a collection of waters with strong connectivity to downstream water bodies and other features (Gomi, Sidle, and Richardson 2002), like park units. Taken individually, small streams in headwater systems may not always display discretely significant contributions to higher order streams; however, their strong biological and chemical connections become more apparent when headwater streams are analyzed as the networks

¹²⁸ Areas with headwaters overlap many national park unit boundaries such as Shenandoah, Yellowstone, and Rocky Mountain National Parks.

¹²⁹ NPS studies show that nonpoint source pollution and sedimentation are responsible for more than 70 percent of the known threats to park water quality and wetland loss. National park lands surrounding headwaters and streams provide important cleansing services by regulating nutrient and pollutant loads, but this filtering capacity can be degraded overtime if it is overtaxed, as was observed to some extent, for example, in Great Smoky Mountain National Park (Cai et al., 2010).

that science has clear methods for identifying (e.g., see NCDWQ 2010 and various guidance documents from USACE).¹³⁰ (p. 1-3)

Agency Response: The agencies agree that those features meeting the definition of “tributary” in the final rule have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States.

Endangered Habitats League (Doc. #3384)

8.152 EHL supports the many important clarifications provided by the Clean Water Protection Rulemaking, including defining “tributary” for the first time and affirming once again that Waters of the U.S. categorically include all tributaries to Traditional Navigable Waters (TNW) and interstate waters. (p. 2)

Agency Response: See summary response for section 8.1.

George Washington University Regulatory Studies Center (Doc. #13563)

8.153 Under the proposed rule, all tributaries are now per se or categorically jurisdictional. “Tributaries” are defined as being “a water physically characterized by the presence of a bed and banks and ordinary high water mark...which contributes flow, either directly or through another water to a water identified in paragraphs (a)(1) through (4),” those traditional navigable waters, interstate waters, territorial seas and impoundments of these same waters identified in those sections. Wetlands, lakes, and ponds are all tributaries, even without a bed and bank or ordinary high water mark, if they deliver flow directly or through another water identified in (a)(1) through (a)(3). Neither “bank” nor “flow” is defined in the rule, raising questions as to whether or not magnitude or duration or seasonality of the flow matters in these circumstances. (p. 4)

Agency Response: See summary response for section 8.1. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries. See summary response for section 8.2 below.

Citizens Campaign for the Environment (Doc. #14967)

8.154 This rule will allow the EPA to once again protect critical streams and wetlands while restoring the vital water protection measures originally promised in the Clean Water Act. The latest peer-reviewed science supports the assertion that wetlands and streams are essential to supporting the larger lakes, rivers, and estuaries, which are currently under federal protections. These waters are hydrologically connected and dependent upon each

¹³⁰ Overzealous application of the aggregation concept is prevented by the rule’s requirement that the case-specific scientific analysis of aggregations be “more than speculative or insubstantial,” as Justice Kennedy suggested. Furthermore, delineations of streams with significant nexuses are fairly reliable in areas with healthy bank vegetation, which helps channel locations to not naturally move over time; this is especially true in mountainous areas which contain many headwaters with winter permafrost that hardens banks and slows stream flow (Crawford and Stanley 2014).

other, and failing to protect streams and wetlands puts local waterways and recreational economies at risk. CCE supports providing clear and predictable protections for streams, wetlands, and other waters that are currently vulnerable. It does this in part by providing a clearer, scientifically supported definition of tributaries than in the past, stating that streams must have a defined bed, bank, and ordinary high water mark and flow to water already covered by the Act. (p. 2)

Agency Response: The agencies agree that those features meeting the definition of “tributary” in the final rule have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries. See summary response for section 8.2 below. These waters may still be considered “waters of the United States” under other provisions of the final rule.

Neuse Riverkeeper Foundation (Doc. #15095)

8.155 The EPA should ensure that the new rule:

...

2. FULLY PROTECTS JURISDICTIONAL COVERAGE OF ALL TRIBUTARIES:

The definition should not require the presence of an Ordinary High Water Mark, should not categorically exclude ditches that meet the definition of a tributary, and should protect tributaries to all WOTUS (not just TNWs, Interstate Waters, Territorial Seas and Impoundments). Additionally, the agencies should maintain all jurisdictional bases for categorically protecting tributaries.

... (p. 2)

Agency Response: See Summary response to Section 8.1. The agencies’ interpretive task in this rule – determining which waters have a “significant nexus” – requires the integration of the science with policy judgment and legal interpretation. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States.

Competitive Enterprise Institute et al. (Doc. #15127)

8.156 According to the proposed rule, a “tributary” will be “a water physically characterized by the presence of a bed and banks and ordinary high water mark, . . . which contributes flow, either directly or through another water,” to waters over which the Agencies have proper jurisdiction. 79 Fed. Reg. at 22,272. Breaks in that flow, natural or man-made, do not cause a water to “lose its status as a tributary . . . so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.” Id. The term

“ordinary high water mark,” which is crucial to determining “tributary” under the proposed rule, is not itself clearly defined.¹³¹

At first glance, the proposed definition appears to be little more than the recitation of the physical characteristics of a body of water—bed, banks, high water mark. Yet a closer look reveals that the proposed definition expands the concept of “tributaries” to include dry land over which water occasionally flows. As the explanatory notes accompanying the proposed rule make explicit, “[a] bed and banks and ordinary high water mark . . . can be created by ephemeral, intermittent, and perennial flows.” Id. at 22,202. And such ephemeral and intermittent waters need not contribute flow directly to navigable waters, so long as some circuitous route can be traced through a series of other waters. Thus, if the Agencies can show, for example, that the runoff in an ordinarily dry drainage ditch at the side of the road leads, at times of extreme weather, to other ditches that themselves eventually feed into navigable waters, the Agencies can claim that that ditch is a “water of the United States.” (p. 5-6)

Agency Response: See summary response for Section 8.1. The term “ordinary high water mark” has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions.

The River Alliance of Wisconsin (Doc. #16344)

8.157 RECOMMENDATION: River Alliance recommends that the definition of tributary in (u)(5) be broadened to incorporate a more scientific understanding of what constitutes a tributary.

When read in conjunction with the definition of tributaries in (u)(5), we are concerned that this is an overly narrow definition of a tributary. There are many waters that would be excluded from CWA protection if they had to be characterized as having a bed, bank and ordinary high water mark. And yet these “non-conforming” tributaries still transport pollutants from the land and have a significant impact on quality and quantity of downstream waters is indisputable. SAB reviewers made suggestions including modifying the definition to read “having a bed, bank and sometimes an ordinary high water mark” to capture groundwater-fed stream. Other reviewers commented that the definition needs to capture the important intermittent flows that exert a strong influence on downstream systems. (p. 2)

¹³¹ To the extent that the Agencies intend to elucidate the meaning of “ordinary high water mark,” or other central terms, outside of this rulemaking, that would only confirm that the proposed rule is incomplete. Attempts to define such terms through guidance, blog posts, etc., would be an improper attempt to circumvent the requirements of the Administrative Procedures Act.

Agency Response: The agencies' interpretive task in this rule – determining which waters have a “significant nexus” – requires the integration of the science with policy judgment and legal interpretation. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

Wyoming Outdoor Council (Doc. #16528)

- 8.158 Under the proposed regulations "tributaries of waters" that are identified in paragraphs (a)(1)-(4) (or (i)-(iv)) of the various regulatory modifications would be defined by rule as "waters of the United States." This would include tributaries to traditional navigable waters, interstate waters, the territorial seas, and impoundments. Tributaries would be defined as waters with a bed and banks and an ordinary high water mark, or wetlands, lakes, or ponds that contribute flow directly or indirectly to an (a)(1)-(4) water. Man-made or natural breaks would not cause a tributary to lose its status. Tributaries, including wetlands, could be natural, man-altered, or man-made. In addition, impoundments would not cause a loss of tributary status, and the definition of tributary would apply to perennial, intermittent, and ephemeral waters.

We encourage the EPA and the Corps to maintain these provisions in the final rule. We believe they are well justified. (p. 2)

Agency Response: The agencies agree that those features meeting the definition of “tributary” in the final rule have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries. See summary response for section 8.2 below. These waters may still be considered “waters of the United States” under other provisions of the final rule.

Tennessee Clean Water Network et al. (Doc. #16537)

- 8.159 We support the science-based determination that all tributaries, including "ephemeral" and "intermittent" streams, are categorically waters of the United States because they are physically, chemically and biologically connected to traditionally navigable waters. The proposed rule clarifies which small streams and headwaters are covered by the Act. Paragraph (s)(5) recognizes "tributaries" as waters of the United States, and defines "tributary" as "a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 C.F.R. § 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (s)(1) through

(4) of [the proposed Rule]."¹³² Tributaries are further defined to include wetlands, lakes, ponds, and-notably-headwater streams.¹³³ (p. 2)

Agency Response: The agencies agree that those features meeting the definition of “tributary” in the final rule have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. In response to public comments and in order to increase clarity, the final rule does not include wetlands, lakes and ponds as tributaries. These waters may still be considered “waters of the United States” under other provisions of the final rule. See summary response for section 8.2 below.

Kentucky Waterways Alliance (Doc. #16581)

8.160 EPA and the Corps propose to define the term “waters of the United States” as including all tributaries of traditionally navigable waters, interstate waters, the territorial seas, and impoundments of those same waters, thereby categorically extending legal protections to all tributaries. This approach is fully consistent with the “significant nexus” test. The agencies have proposed a definition of “tributary” that ensures that the term includes all tributaries that reliably have a “significant nexus” to downstream waters. The core standards for a tributary under this proposed definition are that it (1) is “physically characterized by the presence of a bed and banks and ordinary high water mark,”[14] and that it (2) “contributes flow, either directly or through another water,” to a traditionally jurisdictional water. This definition builds upon the currently applicable one, which does not require the presence of a bed and banks.

The scientific justification for categorically protecting tributaries meeting this definition is extremely robust. The definition is supported by EPA’s Connectivity Report, a review and synthesis of more than 1,000 publications from the peer-reviewed scientific literature.¹³⁴ In that report, EPA concluded that tributaries, under the proposed definition, as a class, have an undeniable impact on downstream navigable waters, stating:

The scientific literature demonstrates that streams, individually or cumulatively, exert a strong influence on the character and functioning of downstream waters. All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported. Headwater streams (headwaters) are the most abundant stream type in most river networks and supply most of the water in rivers. In addition to water, streams transport sediment, wood, organic matter, nutrients, chemical contaminants, and many of the

¹³² Definition of “Waters of the United States” Under the Clean Water Act, 79 Fed. Reg. 22,188, 22,269 (proposed Apr. 21, 2014)(tobecodifiedat40C.F.R.pts.110, 112, 116, 117, 122, 230, 232, 300, 302 & 401).

¹³³ *Id.*

¹³⁴ U.S. EPA, Office of Research & Development, Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence – External Review Draft (Sept. 2013) (hereinafter “Connectivity Report”).

organisms found in rivers. Streams are biologically connected to downstream waters by the dispersal and migration of aquatic and semi-aquatic organisms, including fish, amphibians, plants, microorganisms, and invertebrates, that use both up- and downstream habitats during one or more stages of their life cycles, or provide food resources to downstream communities. Physical, chemical, and biological connections between streams and downstream waters interact via processes such as nutrient spiraling, in which stream communities assimilate and chemically transform large quantities of nitrogen (N) and other nutrients that would otherwise increase nutrient loading downstream.¹³⁵

These conclusions apply equally to very small and infrequently flowing tributary streams. According to the Connectivity Report, “Even infrequent flows through ephemeral or intermittent channels influence fundamental biogeochemical processes...”¹³⁶ And headwater streams, which are the smallest channels where stream flows begin, are the source of approximately 60% of the total mean annual flow to all northeastern U.S. streams and rivers, making their impact on the chemical, physical, and biological integrity of our waters indisputable.¹³⁷

Categorical protection of all tributaries, including headwaters is essential, because tributaries connect the river network and provide vital ecosystem functions. The importance of headwater streams and wetlands to the health of larger, navigable rivers in Kentucky, like the Ohio, Green, Tennessee, Cumberland, Kentucky, Mississippi, Big Sandy, and Licking Rivers.

In fact, in Kentucky, of the 92,000 stream miles, EPA estimates that at a minimum, 55% of streams have no upstream tributary, and at least 29% of streams are intermittent or ephemeral.¹³⁸ Recent efforts by EPA to map the waters of the U.S., including ephemeral and intermittent streams, show this number could be even higher, with up to 51,960 stream miles being intermittent or ephemeral – or 65% of the state’s stream network.¹³⁹

Intermittent, ephemeral, or headwater streams in Kentucky are critically important for a number of reasons. First and foremost, for human use, these streams make up a considerable amount of stream miles in drinking water source protection areas (SPA).

- 3,282,980 = total population served by public drinking water systems relying on I/E/H
- 15,064.8 = total stream miles in SPA
- 8,184.7 = miles of I/E/H in SPAs

¹³⁵ *Id.* at 1-3.

¹³⁶ *Id.* at 1-7.

¹³⁷ *Id.*

¹³⁸ Natural Resources Defense Council, Missing Protection: Polluting the Mississippi River Basin’s Small Streams and Wetlands. NRDC Issue Paper, p. 21 (2008).

¹³⁹ U.S. Environmental Protection Agency: Streams and Waterbodies Maps, the National Hydrography Dataset, High

Resolution (October, 2013). Prepared by INDUS Corporation under contract with U.S. EPA, Office of Water, and published on the House Committee on Science, Space, and Technology webpage: <http://science.house.gov/epa-maps-state-2013>

- 54% = % of streams in SPAs that are I/E/H¹⁴⁰

These streams are likewise critical resources for ecosystems in Kentucky. In Appalachia, headwater streams have been the recipient of the catastrophic impacts of surface coal mining operations. As a result of these operations, thousands of miles of headwaters streams have been altogether removed from the Appalachian Mountain landscape. The impacts, however, do not halt at the mining site. These sites, and the waterways that formerly occupied the sites, are connected to downstream waterways. The result of impacts upstream, and the filling of streams with toxic waste from surface mining processes, has caused downstream biological and fish communities to decrease.^{141 142}

The connectivity of headwater tributaries to downstream impacts is not only illustrated in Appalachia of Kentucky, but in Kentucky's other bioregions as well. Many areas of Kentucky have limestone geology that is rich in phosphorus. As a result, much of Kentucky's soils are equally rich in phosphorus. Often, in the Bluegrass Region and down into the Pennyriple region, farmers' lands host ephemeral and intermittent waters, as well as perennial waters. Farming operations that do not utilize responsible nutrient management practices can lead to the transport of sediment laden with high phosphorus into downstream waters. In fact, Kentucky is the 5th leading source of phosphorus to the Gulf of Mexico Dead Zone, even though we have significantly less farming acreage than other Midwestern states.¹⁴³

Headwater streams are clearly connected to downstream waterways and biological communities, and these waters must be equally as protected as perennially-flowing and navigable waters. (p. 6-8)

Agency Response: The agencies agree that those features meeting the definition of “tributary” in the final rule have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States.

Lemon Bay Conservancy, Inc. (Doc. #18908.1)

8.161 Your rule proposals explicitly include tributaries and adjacent waters in your jurisdiction and we strongly support this inclusion. Even individually small tributaries or adjacent wetlands may cumulatively have impacts on total flow.

The discussion accompanying your proposal recognizes this impact to some extent, but it tends to talk in terms of pollutants contributed, or blocked, by tributaries or adjacent

¹⁴⁰ *Id.*

¹⁴¹ Pond et al. Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools. J. N. Am. Benthol. Soc., 2008, 27(3):717–737. http://www.epa.gov/owow/wetlands/pdf/Pond_2008.pdf

¹⁴² Nathaniel P. Hitt and Douglas B. Chambers. Temporal changes in taxonomic and functional diversity of fish assemblages downstream from mountaintop mining Freshwater Science, Vol. 33, No. 3 (September 2014), pp. 915-926. Published by: The University of Chicago Press on behalf of Society for Freshwater Science <http://www.usgs.gov/newsroom/article.asp?ID=3927#.VGYkhvNF98H>

¹⁴³ http://water.usgs.gov/nawqa/sparrow/gulf_findings/ES&T_states.pdf

waters. See e.g. 76 F.R. 22194. We urge you to recognize more explicitly the impacts of dilution and the mixing of different water sources in changing the downstream environment and the desirability of regulating the upstream tributaries and adjacent waters to maintain the function of downstream waters. (p. 1)

Agency Response: Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion in regards to tributaries. In addition, the Science Report (aka Connectivity Report) discusses tributaries and their chemical, physical and biological effects on downstream waters in detail.

Water Environment Federation (Doc. #16584)

- 8.162 This overly broad definition of tributary could potentially increase the number of man-made conveyances, ditches and conveyance facilities, including those utilized by wastewater entities, under federal jurisdiction, and the lack of certainty surrounding the rule’s definition of a tributary could lead to regulation of previously unregulated waters. This broad classification of “tributaries” would be considered jurisdictional regardless of perennial, intermittent or ephemeral flow. Even dry washes could be considered jurisdictional under the proposed rule. This is significant for a variety of reasons.

One example of the potential impacts of defining what constitutes a “tributary” too broadly is the potential discharge from sanitary sewer systems to dry creeks/sloughs/washes when no pollutants ever actually reach water. It is entirely unclear whether this constitutes a discharge of pollutants to a water of the U.S. Under the broad definition of tributary in the proposed rule, it is possible that spills to dry creeks, sloughs, or washes would be considered a “discharge” even if there are no real or potential impacts to surface waters of any kind. Similarly, there are circumstances where sewer spills occur in a street that drains to a roadside ditch or local creek bed that has no flow and is unconnected to a water of the U.S. The responsible party may fully remediate the spill and address all real and potential water quality impacts before the spill ever reaches a water source. It is difficult to understand how can this kind of circumstance could be envisioned as a discharge to “waters of the United States” when there is no actual water in a dry creek or ditch nor an adverse impact to the environment. (p. 5-6)

Agency Response: See summary response for Section 8.1. By grounding the definition of “tributary” in the final rule to specific physical indicators of flow, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.” The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments. In addition, paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and stormwater control features created in dry land.

Congress of the United States, Senate Committee on Environment and Public Works et al. (Doc. #16564)

8.163 The proposed "waters of the United States" rule designates "tributaries" as jurisdictional *per se*.¹⁴⁴ "Tributary," however, does not mean "a stream feeding a larger stream or a lake," as one would understand this term in normal parlance.¹⁴⁵ Instead, EPA and the Corps have proposed a sweeping definition for "tributary"¹⁴⁶:

- Under the proposed rule, "tributary" means "a water physically characterized by the presence of a bed and banks and ordinary high water mark [(OHWM)] ... which contributes flow, either directly or through another water" to a traditionally navigable water (TNW), an interstate water, territorial sea, or impoundment. On its face, this definition reaches water features far removed from TNW's and other truly national waters. The term's emphasis on mere flow from one water feature to a downstream water will bring countless perennial, intermittent, and ephemeral streams within the definition of "waters of the United States," and the agencies concede as much." (p. 3)

Agency Response: See summary response for section 8.1.

8.1.1. *Relevance of Flow Regime*

Agency Summary Response

An extensive number of comments addressed the inclusion of intermittent and ephemeral waters in the definition of "tributary." The proposed rule defined "tributary" as a water physically characterized by the presence of a bed and banks and an ordinary high water mark, which contributes flow either directly or through another water to a traditional navigable water, and its preamble indicates that the scientific literature supports a conclusion that waters meeting the definition of "tributary," either individually or in combination have a significant nexus or thus are jurisdictional *per se*. A variety of commenter issues associated with flow regime are discussed below.

Issue: Jurisdiction over Intermittent and Ephemeral Waters

Many commenters indicated that the proposed definition of "tributary" is ambiguous and will result in jurisdiction asserted over many additional waters that were not previously jurisdictional, particularly intermittent and ephemeral waters.

The agencies disagree with the assertion that intermittent and ephemeral waters have not been jurisdictional previously. CWA jurisdiction historically has been asserted over intermittent and ephemeral waters. The longstanding regulatory definition of "waters of the United States"

¹⁴⁴ Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22 188, 22262-22263 (proposed April 21, 20 14) (hereinafter, " Proposed Rule") .

¹⁴⁵ See Webster's New Collegiate Dictionary 1238 (Merriam-Webster 1979).

¹⁴⁶ See Proposed Rule, 79 Fed. Reg. at 22263.

included “tributaries” without any limitations regarding volume or duration of flow. The December 2008 Guidance on post-*Rapanos* implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water, and that intermittent or seasonal streams were jurisdictional without the need for a case-specific showing of significant nexus. Regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow but may not declare an ephemeral stream non-jurisdictional altogether. *See, e.g.*, 40 CFR § 131.10(g)(2). Several states and tribes expressly cover intermittent and ephemeral waters in their water quality standards submitted to EPA for review under the CWA, including Arizona, Delaware, New Mexico, South Carolina, and the Ute Mountain Ute Tribe, among others. Federal court decisions, some of which are decades old, have supported assertions that intermittent and ephemeral waters are jurisdictional. For example, the U.S. District court in Arizona held in 1975 that the definition of waters of the United States includes any waterway: “... a legal definition of ‘navigable waters’ or ‘waters of the United States’ within the scope of the Act includes any waterway within the United States also including normally dry arroyos through which water may flow, whether such water will ultimately end up in public waters such as a river or stream, tributary to a river or stream, lake, reservoir, bay, gulf, sea or ocean either within or adjacent to the United States.” *United States v. Phelps Dodge Corp.*, 391 F.Supp 1181, 1187 (1975). Practice after *Rapanos* has considered ephemeral waters as jurisdictional under the CWA where they have a significant nexus to a traditional navigable water. For example, EPA and the Army Corps of Engineers issued a joint memorandum in 2007 asserting jurisdiction over a first-order ephemeral stream in Riverside County, California, based on its significant nexus to a traditional navigable water. “Assertion of Jurisdiction for Jurisdictional Determination SPL-2007-261-FBV” (Dec. 6, 2007), available at: <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/RelatedResources/CWAGuidance.aspx>.

A number of commenters urged the agencies to categorically exclude ephemeral waters, while others suggest intermittent and ephemeral waters should not be considered jurisdictional *per se* but instead only if a case-by-case analysis indicates a water has a significant nexus. Those calling for a categorical exclusion for ephemeral waters noted that ephemeral channels only carry surface water immediately after a major rainfall event, and that chemical, physical, and biological processes are limited to the short time water is flowing in the channel so there can be no significant nexus to downstream waters. Commenters suggesting intermittent and ephemeral waters should be subject to a case-by-case significant nexus analysis emphasized that characteristics of these waters vary significantly based on adjacent land uses and historic activities.

Several commenters stressed that intermittent and ephemeral streams should be protected as water of the United States. Several commenters indicated these waters provide habitat for a variety of fauna and are important to the watershed even though only flowing during parts of the year. Others emphasized that non-perennial streams are more vulnerable to degradation and loss because of their size and location, responding quickly to small changes in hydrology and adverse water quality impacts. To exclude intermittent and ephemeral tributaries, some commenters argued, would greatly narrow the CWA’s jurisdiction and allow serious pollution to accumulate during the dry season to legally enter and pollute clean waters during the wet season.

The agencies disagree with some commenters' conclusion that intermittent and ephemeral waters cannot have a significant nexus to traditional navigable waters, interstate waters, or territorial seas and thus should be excluded *per se* from jurisdictional consideration. The agencies agree with other commenters' characterization of intermittent and ephemeral waters as having significant effects on and, therefore, a significant nexus to the chemical, physical and biological integrity of downstream traditional navigable waters provided they meet the rule's definition of "tributary." For the reasons discussed below, the final rule does not require that a case-by-case determination be made regarding whether an ephemeral or tributary stream has a significant nexus to navigable waters. Instead, the case-by-case inquiry is whether or not the water under consideration meets the rule's definition of "tributary" and is not excluded by paragraph (b).

The rule's definition of tributary requires two physical indicators of flow: there must be a bed and banks, and an additional indicator of ordinary high water mark. These physical indicators of water flow are only created by sufficient and regular intervals of flow. Because the rule's definition of tributary requires these physical indicators, the agencies are not defining "waters of the United States" to include all streams that might be considered "tributaries" in the general scientific literature. The agencies determined based on their scientific and technical expertise that waters meeting the definition of "tributary" in a watershed are similarly situated and have a significant nexus alone or in combination with other tributaries, because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. As such, it is appropriate to conclude that intermittent and ephemeral waters that meet the definition of tributaries, as defined by the rule, as a category are "waters of the United States." Scientific literature also supports some commenters' observation that size and location of non-perennial streams cause such waters to respond quickly to small changes in hydrology and adverse water quality impacts.

The rule's conclusion that waters meeting the definition of "tributary" have a significant nexus is informed by EPA's Office of Research and Development (ORD) Science Report, a peer-reviewed compilation and analysis of published peer-reviewed scientific literature summarizing the current scientific understanding of the connectivity of and mechanisms by which streams and wetlands, singly or in combination, affect the chemical, physical, and biological integrity of downstream waters. As summarized in the Science Report, scientific literature unequivocally demonstrates that tributary streams, individually or cumulatively, exert a strong influence on the chemical, physical, and biological integrity of downstream waters. All tributary streams, including perennial, intermittent, and ephemeral streams, are chemically, physically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported. Streams are the dominant source of water in most rivers, and the majority of tributaries are perennial, intermittent, or ephemeral headwater streams. Headwater streams also convey water into local storage compartments such as ponds, shallow aquifers, and floodplains, and into regional and alluvial aquifers; these local storage compartments are important sources of water for maintaining baseflow in rivers. In addition to water, streams transport sediment, wood, organic matter, nutrients, chemical contaminants, and many of the organisms found in rivers. The scientific literature provides robust evidence that streams are biologically connected to downstream waters by the dispersal and migration of aquatic and semiaquatic organisms,

including fish, amphibians, plants, microorganisms, and invertebrates, that use both upstream and downstream habitats during one or more stages of their life cycles, or provide food resources to downstream communities. In addition to material transport and biological connectivity, ephemeral, intermittent, and perennial flows influence fundamental biogeochemical processes by connecting channels and shallow groundwater with other landscape elements. Chemical, physical, and biological connections between streams and downstream waters interact via integrative processes such as nutrient spiraling. This occurs when stream communities assimilate and chemically transform large quantities of nitrogen and other nutrients that, in the absence of the above referenced transformations, would be transported directly downstream, thereby increasing nutrient loads and associated impairments due to excess nutrients in downstream waters. The final Science Report is available at <http://cfpub.epa.gov/ncea/cfm/recordisplay.cfm?deid=296414>. See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

The independent EPA Science Advisory Board (SAB) peer reviewed the draft ORD Science Report, which was revised and finalized in response to SAB comments. In addition to its peer review of the draft ORD Science Report, in a separate effort the SAB also reviewed the adequacy of the scientific and technical basis of the proposed rule and provided its advice and comments on the proposal in September 2014. The SAB found that the available science provides an adequate scientific basis for the key components of the proposed rule. In particular, the SAB expressed support for the proposed rule’s inclusion of tributaries as categorical waters of the United States. The SAB found “[t]here is strong scientific evidence to support the EPA’s proposal to include all tributaries within the jurisdiction of the Clean Water Act. Tributaries, as a group, exert strong influence on the physical, chemical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of physical, chemical, and biological process.” The Board advised the agencies to reconsider the definition of tributaries because not all tributaries have ordinary high water marks (OHWMs). Examples of tributaries the SAB suggested might lack OHWMs but have significant effects downstream include ephemeral streams with arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an OHWM. The SAB also advised the agencies to consider changing the wording in the definition to “bed, bank, and other evidence of flow.” SAB 2014a at 2. In addition, the SAB suggested that the agencies reconsider whether flow-through lentic systems should be included as adjacent waters and wetlands, rather than as tributaries. (The SAB’s final letter to the EPA Administrator can be found on the SAB website and in the docket for this rule; 2014. SAB Consideration of the Adequacy of the Scientific and Technical Basis of the EPA’s Proposed Rule titled “Definition of Waters of the United States under the Clean Water Act.” EPA-SAB-14-007, U.S. Environmental Protection Agency, Washington, DC). See also Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

The agencies analyzed the Science Report, SAB comments, and other scientific literature to determine which tributaries to traditional navigable waters, interstate waters, or the territorial seas have a significant nexus to constitute “waters of the United States” under the Act such that it is reasonable to assert CWA jurisdiction over them by rule. As discussed above, the rule’s definition of “tributary” requires bed and banks and OHWM as physical indicators of flow, which as a result does not include all waters considered tributary in the scientific literature. The

agencies conclude tributaries as defined have a significant impact on the chemical, physical, and biological integrity of waters into which they eventually flow— for CWA purposes, traditional navigable waters, interstate waters, and the territorial seas. The great majority of covered tributaries are headwater streams, and whether they are perennial, intermittent, or ephemeral, they play an important role in the transport of water, sediments, organic matter, nutrients, and organisms to downstream waters. Covered tributaries serve to store water, thereby reducing flooding; provide biogeochemical functions that help maintain water quality; trap and transport sediments; transport, store and modify pollutants; provide habitat for plants and animals; and sustain the biological productivity of downstream rivers, lakes, and estuaries. Such waters have these significant effects whether they are natural, modified, or constructed, as discussed below. For further discussion, see Final Rule Preamble and the Technical Support Document. See also the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

The rule’s definition of “tributary” retains many elements from the proposed rule, but reflects public comments in several important ways. In particular, the final rule emphasizes the importance of flow. The rule definition of “tributary” requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an OHWM. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. To further emphasize this point, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not “waters of the United States.” The rule includes ephemeral streams that meet the definition of tributary as “waters of the United States” because the agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Issue: Legality of Asserting Jurisdiction over Ephemeral Waters

A number of commenters questioned the agencies’ legal ability to assert jurisdiction over ephemeral waters. Some observed that Congress did not intend the Clean Water Act (CWA) to regulate ephemeral streams, instead limiting the CWA’s jurisdiction to waters and not landscape features which can transmit waters such as dry washes, arroyos, and ephemeral streams. Several commenters noted that Justice Kennedy’s opinion in *Rapanos* called for the agencies to identify categories of jurisdictional tributaries and the volume of flow and other factors taken into consideration. They asserted that considering ephemeral waters as “tributaries” relies on a mere hydrologic connection and not the presence of the significant nexus that Justice Kennedy indicated was the basis for jurisdiction. Other commenters believed that omission of the “relatively permanent” requirement from Justice Scalia’s opinion in *Rapanos* substantially broadens the universe of jurisdictional tributaries, and call for the agencies to incorporate the approach in the 2008 *Rapanos* Guidance, which indicates tributaries that flow after rainfall are subject to a case-specific significant nexus analysis. Some commenters asserted that Supreme Court precedent requires both the Kennedy and Scalia standards to be met, and only relatively permanent waters with a significant impact are protected.

The final rule concludes that all waters meeting the definition of “tributary” have a significant

nexus, regardless of their flow regime, and thus are considered as per se waters of the United States. CWA jurisdiction has historically been asserted over intermittent and ephemeral waters. The longstanding regulatory definition of “waters of the United States” included “tributaries” without any limitations regarding volume or duration of flow. The December 2008 Guidance on post-Rapanos implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water, and that intermittent or seasonal streams were jurisdictional without the need for a case-specific showing of significant nexus. Federal court decisions, some of which are decades old, have supported assertions that intermittent and ephemeral waters are jurisdictional. See the summary response 8.1 above and 8.1.2 below for further discussion about CWA protection of ephemeral tributaries. The discussion above summarizes the scientific basis for the rule’s conclusion that tributaries, as defined, have a significant nexus and thus are “waters of the United States,” including tributaries with ephemeral flow. See the Technical Support document for a complete discussion of the legal basis for asserting jurisdiction over ephemeral tributaries, section VII including VII.B.vi, and the appropriateness of applying Justice Kennedy’s significant nexus standard to tributaries. See also the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

Issue: Requirement of “Contribute Flow”

Several commenters raised concerns regarding the element of the “tributary” definition that requires that the water “contributes flow, either directly or through another water” to a traditional navigable water, interstate water, or the territorial seas. Some recommend the phrase “through another water” be struck entirely, while others believe the phrase should be qualified to clarify that the flow contribution cannot be through a non-jurisdictional feature. Some expressed concern that “another water” was undefined, suggesting the vague term would allow the contribution to be through cloud vapor or rain or through groundwater over sixty years. Many commenters recommended that a water should be required to contribute flow on a regular basis, with a significant flow volume and significant flow duration. Several also expressed concern that the proposal does not describe methods to quantify contributions of flow as well as transmission losses. Some commenters thought that no OHWM is necessary for a water to be considered tributary so long as it contributes flow, while others understood that a water can be a tributary even if it does not contribute flow so long as it has an OHWM.

The definition of “tributary” in the final rule retains the phrase “contributes flow, either directly or through another water.” This reflects scientific literature about the connectivity among waters, discussed earlier. Chapter 2.2 of the ORD Science Report, “An Introduction to River Systems” discusses drainage systems that make up a river system and its associated watershed. Essentially, in a given watershed, there are many smaller contributing streams (analogous to the twigs of a tree), which then are joined together as tributaries and flow into the watershed’s larger streams and rivers (the branches and the trunk of the tree). If jurisdictional streams were only those streams that themselves flow directly into a traditional navigable water, interstate water, or territorial sea, the dendritic nature of the tributary system would make it virtually impossible to protect the integrity of downstream waters. The final rule does not require that the flow be contributed either directly or through waters that are themselves jurisdictional. Nutrients, organic matter, pollutants and biotic drift does not stop at the threshold of a pipe, culvert, ditch,

or swale, and the effect of headwaters on downstream waters is not eliminated by connecting through a non-jurisdictional water feature either. Water contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters. For example, a protected tributary with a bed and banks and OHWM may flow into a non-wetland swale excluded under paragraph (b) before the flow reaches downstream waters. The mere fact that the water flows through the non-jurisdictional swale does not sever the significant connection between the upstream protected tributary and the downstream water or eliminate the water's impact downstream; swales can quickly move water downstream, transporting sediment, nutrients, and other materials downstream. Note that a non-jurisdictional feature contributing a tributary's flow does not itself become jurisdictional as a result. The preamble to the final rule, as did the proposed rule, includes language clarifying the terms water and waterbody as they are used in the rule. Groundwater and atmospheric moisture are not waters. For discussion of the term "through another water" also see the Technical Support Document Section VII.

The final rule definition makes clear that a water is considered tributary if (1) it contributes flow, either directly or through another water, to a traditional navigable water, interstate water, or the territorial seas, and (2) the water has the physical indicators of a bed and banks and an ordinary high water mark (OHWM). Where the water flows through another water, that other water need not itself be jurisdictional. The physical indicators of bed, banks, and an OHWM demonstrate there is sufficient volume, frequency and duration of flow to significantly affect downstream waters and thus to qualify as a tributary. This definition should clarify commenters' misunderstandings that only OHWM or only flow are sufficient for a water to be considered a tributary under the final rule. It also clarifies that any flow sufficient to create these physical indicators has enough flow to be considered a tributary.

Determinations of whether a water "contributes flow" are expected to be done in a manner similar to what has been practiced in the field for decades. While precise measurements of flow volume and duration are not required, tools such as aerial photographs, topographic maps, flow gauges, and the like will be helpful in determining contribution of flow. The final rule preamble discusses this process in greater length in Section IV(F).

Issue: Regulation of Man-Altered Streams

Some commenters objected to the proposed definition of "tributary" including manmade features, arguing protection is wasteful for such features. They think that asserting jurisdiction over constructed and modified canals, ditches, culverts, and similar waters is an expansion of jurisdiction to waters that were not previously regulated. Several commenters suggested that the rule expressly exclude all constructed waters from the definition of "waters of the United States."

While the rule does exclude several types of constructed waters from jurisdiction, it continues existing practices which consider constructed tributaries as jurisdictional unless expressly excluded in paragraph (b) for the reasons described in the final rule preamble, and in the Technical Support Document. The agencies also note that current practice regulates many modified and constructed features as waters of the United States, and therefore disagree with some commenters' assertions that asserting jurisdiction over constructed or modified water features is an expansion of CWA regulation. For example, under the 2008 *Rapanos* Guidance

ditches have been considered jurisdictional where they contribute flow to the tributary system and have at least seasonal flow or are not excavated in uplands.

The final rule does not distinguish among natural, modified, and constructed features in the definition of “tributary.” If a water meets the definition of “tributary” and is not excluded under paragraph (b), the water is considered jurisdictional. The rationale for this approach is based on the fact that modified and constructed tributaries perform many of the same functions as natural tributaries, especially the conveyance of water that carries nutrients, pollutants, and other constituents, both good and bad, to traditional navigable waters, interstate waters, and the territorial seas. The scientific literature recognizes that features that convey water, whether they are natural, modified, or constructed, provide substantial connectivity between streams and downstream waters. For example, scientific studies have documented how ditches quickly move water downstream due to their often straightened and channelized nature, transporting downstream sediment, nutrients, and other materials. Studies have explored how ditches used to drain agricultural fields to stream networks serve as conveyances for nutrients, sediment, and contaminants. Similarly, data from the Baltimore Ecosystem Study Long-Term Ecological Research site suggest that increased hydrologic connectivity from urban infrastructure (e.g., pipes, storm drains, ditches) in headwaters increases the frequencies of occurrence and transport rates of nutrients, carbon, and metals to downstream surface waters. Modified and constructed tributaries also provide corridors for movement of organisms between headwaters and traditional navigable waters, interstate waters, and the territorial seas. The important effect – and thus the significant nexus – between a tributary and a traditional navigable water, interstate water, and the territorial sea is not broken where the tributary flows through a culvert or other structure. The effects of altered streams and man-made features is discussed further in the ORD Science Report, particularly in Section 2.4.4. See also the TSD section VII and the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

Issue: Definitions and Clarity

Numerous commenters asked that the final rule define terms related to the definition of “tributary,” to increase clarity and make implementation easier. In response, the final rule preamble includes definitions of bed and banks, perennial, intermittent, and ephemeral, adapted largely from longstanding agencies’ practice as well as public comments. Several commenters suggested that the rule should add a definition of “ordinary high water mark.” The rule adds the Corps’ existing regulatory OHWM definition to EPA’s regulations, and the preamble notes that several Corps technical manuals are available to help identify OHWM. For a discussion of the agencies’ response to comments regarding clarity for definitions, see Compendium 14.3 and associated summary essay and individual responses.

Specific Comments:

Tennessee Valley Association (Doc. #17470)

8.164 b. Develop a More Focused Definition of Tributaries

TVA supports development of a bright line definition of tributaries that includes perennial and intermittent streams as jurisdictional. It is our opinion that such streams should receive a higher level of protection than ephemeral streams and wet weather conveyances. A focused definition of tributaries should be based on the frequency and

duration of flow as well as a defined proximity to traditional navigable waters. It should also categorically exclude as jurisdictional ephemeral streams, wet weather conveyances, and ditches. (p. 8)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters.

8.165 c. Provide Alternative Protection for Minor Watercourses

In order to provide an adequate level of protection for minor watercourses, EPA could develop a defined hydrologic determination process for those watercourses that flow only in direct response to precipitation runoff in their immediate locality, whose channels are at all times above the ground water table, that are not suitable for drinking water supplies, and in which due to naturally occurring ephemeral or low flow there is not sufficient water to support fish, or multiple populations of obligate lotic aquatic organisms whose life cycle includes an aquatic phase of at least two months. These can be covered with a more streamlined and efficient general permit process such as that currently employed by the Tennessee Department of Environment and Conservation (TDEC). TVA believes that the current TDEC Aquatic Resource Alteration rule and associated permitting process is appropriately protective of aquatic resources and has proven efficient and effective over the last several years. See <http://www.tn.gov/sos/rules/0400/0400-40/0400-40-07.20131216.pdf> for details. (p. 8)

Agency Response: EPA appreciates the commenter’s suggestion about providing alternative protection levels for “minor watercourses.” We are not sure what the commenter means by “a defined hydrologic determination process.” For an explanation of the agencies definition of “tributary,” see preamble, TSD and summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters. The agencies note that the CWA authorizes general permits under sections 402 and 404 for discharges that have only minimal impacts individually and cumulatively, and that such general permits are helpful to streamline administrative processes. However, permit requirements apply only to discharges into waters of the U.S.

Pueblo of Sandia (Doc. #2729)

8.166 The Pueblo supports the defining of all tributaries as “waters of the US”. As you are aware headwater streams provide most of the flow to downstream waters and are a major supply of public drinking water systems. These clean water supplies are crucial to local areas, especially Albuquerque, New Mexico which uses surface water from the San Juan-Chama Rivers in Northern New Mexico. Intermittent and ephemeral streams are equally important. Although they may flow only during parts of the year they provide habitat for a variety of fauna and are important to the watershed. (p. 2)

Agency Response: See summary response for 8.1 and “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters.

Rebekah Warren, Michigan State Senator, 18th District (Doc. #4769)

- 8.167 As you know, wetlands and small streams, including those that flow only seasonally, have a direct impact on the health and quality of larger streams and rivers downstream. Not only are these resources critical drinking water sources, they also protect communities from flooding and filter pollutants. (p. 1)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters.

Pennsylvania Fish and Boat Commission (Doc. #4826)

- 8.168 Within the tributary language section in the proposed rule, the agencies introduced the term "distant headwaters". In Part II: Additional Scientific Support, the agencies provide evidence for the importance of tributaries and indicate that, "distant headwaters with stronger connections to groundwater or consistently higher precipitation levels than downstream reaches contribute more water to downstream rivers". The proposed rule also indicates that, "to understand the health, behavior and sustainability of downstream waters, the effects of small waterbodies in a watershed need to be considered in aggregate". In Pennsylvania, the Ridge and Valley Ecoregion supports small first order tributaries with their genesis on a ridge with continued stream flow toward the valley floor. Many of these streams flow into a sinkhole or other opening in the landscape and, not having a distinguishable significant nexus to a traditional navigable water, interstate water or territorial sea, enter the groundwater and arise as springs in the downstream watershed. Geological formations, (e.g., sandstone ridges and limestone/dolomitic valleys) are often the landscape features that create this flow pattern. In the Ridge and Valley Ecoregion, these flow patterns are common and provide significant biological, physical and chemical benefits to the watershed. The PFBC strongly recommends that the agencies consider these "distant headwaters" or tributary waters as jurisdictional within the CWA definition of "waters of the United States." (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and on requirement of “contribute flow.” See also summary 8.3 on breaks in OHWM.

New York State Attorney General Office et al. (Doc. #6020.1)

- 8.169 First, the proposed rule is grounded in peer-reviewed scientific studies that confirm fundamental hydrologic principles. Water flows downhill, and connected waters, singly and in the aggregate, transport physical, chemical and biological pollution that affects the function and condition of downstream waters, as demonstrated by the many studies on which EPA and the Corps rely. The health and integrity of watersheds, with their networks of tributaries and wetlands that feed downstream waters, depend upon protecting the quality of upstream headwaters and adjacent wetlands. Comprehensive coverage under the CWA of these ecologically connected waters is essential to achieve the water quality protection purpose of the act. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and on requirement of “contribute flow.”

Quapaw Tribe of Oklahoma (the O-Gah-Pah) (Doc. #7980)

- 8.170 3. Seasonal Tributaries. Existing regulations require establishment of a significant nexus for tributaries that flow less than seasonally (typ. 90 continuous days in a year). In practice, the USACE has regularly determined that many remote ephemeral drainages are not Waters of the U.S. The proposed rule will bring most, if not all, of these tributaries into the scope of jurisdictional Waters of the U.S. This would eliminate the USACE's flexibility in making individual determinations based on site-specific conditions. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above. The commenter is correct that the December 2008 guidance calls for a significant nexus evaluation for tributaries that are not relatively permanent, i.e., flow less than seasonally. Existing regulations do not require a significant nexus evaluation for any waters; one of the reasons for this rulemaking is to ensure current regulations reflect the 2006 *Rapanos* decision and 2001 SWANCC decision. In *Rapanos*, Justice Kennedy noted that the agencies could through regulations or adjudication identify categories of waters that have a significant nexus either individually or in combination, which would support an assertion of jurisdiction over the categories without the need for a case-specific significant nexus determination. See *Rapanos* at 781. The agencies are making such a categorical determination for waters that meet the rule’s definition of “tributary.”

Navajo Nation Environmental Protection Agency (Doc. #10117)

- 8.171 The Navajo Nation EPA Water Quality Program agrees with and supports the proposed definition of "tributary" because, as explained in the proposal, it recognizes that "the flow in the tributary may be ephemeral, intermittent or perennial, but the tributary must drain, or be part of a network of tributaries that drain, into an (a)(1) through (a)(4) water under today 's proposed rule." 79 Fed. Reg. at 22202. This definition recognizes that when surface flow in ephemeral waters ceases, subsurface flow still may exist and may transport pollutants into downstream water bodies. Subsurface transport of pollutants in ephemeral water bodies into downstream receiving water bodies is a predominant condition in the arid southwest, including in the Navajo Nation. (p. 2-3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and on requirement of “contribute flow.” While shallow subsurface pollutant transport can have an important impact on the integrity of downstream traditional navigable waters, interstate waters, and the territorial seas, the agencies note that shallow subsurface water itself is not a water of the U.S. Paragraph (b) of the rule provides that groundwater is excluded from the definition of waters of the U.S. because numerous courts have held that the CWA is a surface water statute. See also summary response 8.3 below on breaks in OHWM.

Washington State Senate (Doc. #10871)

- 8.172 ...[W]e support the agencies' proposal to include tributary streams and wetlands that are seasonal, intermittent, or ephemeral where they have a "significant nexus" to traditional navigable water, interstate water, or the territorial seas. We understand that in most cases involving such streams, the determination of whether the nexus is "significant" will turn

on a case-by-case determination of whether the stream or wetland significantly affects the chemical, physical, or biological integrity of navigable water. (p. 1)

Agency Response: See summary response for “Relevance of Flow Regime” above. **The proposed and final rules categorically assert jurisdiction over waters meeting the rule’s definition of “tributary.” As a result, the commenter’s understanding is incorrect to the extent it thinks that the rule requires a case-by-case determination on whether a tributary stream has a significant nexus. Instead, the case-by-case question is whether or not the water under consideration meets the rule’s definition of tributary and is not excluded by paragraph (b).**

- 8.173 Your agencies will likely receive negative comments from some other Washington State legislators about the proposed "continuously flowing" standard, arguing that it would exacerbate the Act's enforcement problems by exposing routine acts such as land preparation for residential development or farming to enforcement under the Act, which they might contend has no apparent connection to water pollution. They are likely to contend that the "significant nexus" standard is not clear and will be applied inconsistently by the agencies.

We strongly disagree with these arguments. We believe the proposed rule does an excellent job of providing clear standards for determining the jurisdictional application of the Act to seasonal, intermittent and ephemeral streams and wetlands. The rule properly requires a significant connection to downstream traditional navigable waters, a connection that significantly affects the downstream water's chemical, physical or biological integrity. To exclude these tributary streams because they are not "continuously flowing" would greatly narrow the Act's jurisdiction, which we believe is the principal goal of those advocating for such a standard, rather than achieving a clearer standard for enforcement purposes.

It would allow serious pollution accumulating during the dry season to legally enter and pollute clean waters during the wet season. For example, much of the state of Washington receives relatively little precipitation during several months of the year, with seasonal streams becoming dry streambeds and swales. At the same time we are experiencing unprecedented shipments of petroleum by rail crossing dozens of these "dry" streambeds, with any leaks or larger releases from these shipments into these areas inevitably destined to be washed down-gradient into our state's navigable waters. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters.

District Department of the Environment, Government of the District of Columbia (Doc. #12716.1)

- 8.174 ...the District requests clarification of the proposed rule's definition of the term "tributary" to ensure that the proposed rule does not have unintended consequences for urban jurisdictions. Specifically, was EPA's intent to include piped sections of streams in its definition of "tributary," and therefore consider those sections "waters of the United States"? The District suggests amending the proposed rule to clarify that while a tributary may have piped or buried sections incorporated into a storm sewer system, the

designation of "waters of the United States" should extend only to the day-lit sections of the tributary. (p. 1)

Agency Response: Streams with a break in OHWM can be WOUS under current practice (2008 Rapanos Guidance, including the currently used Approved Jurisdictional Determination Form, which states, “A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody’s flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break,” (footnote 6 page 3). The final rule states: “A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.” However, the final rule also includes an exclusion at paragraph (b) for stormwater control features constructed in dry land.

Virginia Department of Transportation (Doc. #12756)

8.175 VDOT is concerned that the Proposed Rule goes too far with respect to claiming jurisdiction over tributaries.... The current definitions of 'Tributary' ... provided in the proposed rule could be interpreted by federal staff to allow more ambiguity and result in agencies claiming jurisdiction over many additional waters that were not previously jurisdictional. For example, the definition of 'Tributary' implies that nearly every channel will now be jurisdictional up to the headwaters. We agree that this measure would save time in that fewer significant nexus determinations would need to be completed by applicants and agencies could reduce review time in preparing jurisdictional determinations. However, such rulings would needlessly result in more jurisdictional surface water features identified in project study areas, more project impacts, more mitigation required and possibly more complicated permitting strategies that will result in more time, effort and money spent to authorize project impacts in those areas. This level of effort is wasteful for a manmade feature that truly should not be considered jurisdictional. (p. 5)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and on requirement of “contribute flow.” The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Texas Department of Transportation (Doc. #12757)

- 8.176 ...the 2008 Guidance deemed tributaries as jurisdictional by rule- that it, without the need for a significant-nexus determination- only when the tributaries "are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)." That guidance also specifically noted that "relatively permanent" waters "do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally.

The omission of the "relatively permanent" requirement would substantially broaden the universe of tributaries deemed jurisdictional by rule. In effect, a tributary would be deemed jurisdictional by rule without any consideration of the flow regime in that tributary. A stream with intermittent or even ephemeral flow could be found jurisdictional by rule, simply because it has an indirect, infrequent downstream connection to a jurisdictional water. We believe this approach is inconsistent with the intent of the proposed to clarify, not expand, the scope of jurisdiction under the Clean Water Act.

Recommendation: We recommend revising modifying the proposal rule to ensure that tributaries are evaluated under the same criteria used in the 2008 Guidance: tributaries should be deemed jurisdictional by rule only if they have a "relatively permanent flow" (or an equivalent requirement, such as "perennial flow"), meaning that they "typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)." (p. 3)

Agency Response: See summary response for "Relevance of Flow Regime" above, particularly subsections on jurisdiction over intermittent and ephemeral waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of "tributary" and that are not excluded in paragraph (b). Compared to the historic scope of the existing rule, the final rule is narrower; compared to agency practice in light of guidance issued after SWANCC and Rapanos, the final rule is generally broader, but not broader than the prior regulatory definition. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

New Mexico Department of Agriculture (Doc. #13024)

- 8.177 Previously, paragraph (s)(5) states that EPA will assert jurisdiction over "tributaries of waters identified in paragraphs (s)(1) through (4)." However, this paragraph depicts a much broader jurisdictional reach because of the definition of the term *tributary* in (u)(5).

Due to the qualifier "or through another water," NMDA notes that waters may pass through nonjurisdictional waters and still be classified as *tributaries*. This is because the term *another water* is not defined hence may refer to non jurisdictional water. This is true especially when *another water* is contrasted with a "water that contributes flow directly" to a jurisdictional water.

We recommend striking the qualifier "or through another water," and leaving the wording, "The term *tributary* means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 eFR 328.3 (e), which contributes flow directly to a water identified in paragraphs (s)(1) through (4) of this section. " (p. 13)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on the requirement of “contribute flow.” The final rule does not require that the flow be contributed either directly or through waters that are themselves jurisdictional. Waters contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters. The agencies maintain that some waters may pass through non-jurisdictional waters, such as excluded ditches, but will still be classified as tributaries both upstream and downstream of the non-jurisdictional feature.

8.178 Tributary (u) (5) (page 11 -12)

Due to the qualifier "or through another water," NMDA notes that waters may pass through nonjurisdictional waters and still be classified as tributaries. This qualifier should be removed from the definition. (p. 27)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on the requirement of “contribute flow.” The final rule does not require that the flow be contributed either directly or through waters that are themselves jurisdictional. Waters contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters. The agencies maintain that some waters may pass through non-jurisdictional waters, such as excluded ditches, but will still be classified as tributaries both upstream and downstream of the non-jurisdictional feature.

State of Wyoming (Doc. #14584)

8.179 The Agencies' proposed definition of tributaries is flawed. It includes any geomorphic feature capable of carrying water (if it can physically be characterized as having a bed, banks and ordinary high water marks) that contributes flow either directly or through another water. It is overbroad, ambiguous and greatly expands federal jurisdiction beyond the scope of the Act. It incorporates dry washes, arroyos, seasonal water bodies, and ephemeral streams (that rarely have sufficient flow and volume to significantly affect more permanent water bodies). Congress clearly intended to limit the Act's jurisdiction to waters- not to landscape features which can transmit waters or lands which can affect waters.

The Agencies have ignored the Supreme Court's plurality decision on the need for relatively permanent, standing, or continually flowing bodies of water. The proposed definition of a tributary and the intent to federally regulate tributaries must be reconsidered. Only waters with significant and measureable flows and relatively permanent, continual hydrologic connections to navigable or interstate waters should be included. This would be consistent with Justice Kennedy's assessment that there must be

"some measure of the significance of the connection for downstream water quality." 547 U.S. at 784-785. (p. 4)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document further discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

- 8.180 Justice Kennedy stated that the Agencies could, through rulemaking, "identify categories of tributaries" that were jurisdictional. 547 U.S. at 781. He specifically identified "volume of flow," "proximity" and "other relevant considerations" as factors on which to base and limit the categories. *Id.* The Agencies have disregarded both the plurality and Justice Kennedy in their attempt to expand the definition of tributary to include everything. (p. 5)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document further discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

- 8.181 The Agencies should establish not if there is a connection but rather at what level waters become relatively permanent or continually flowing bodies that contribute significantly to interstate or navigable streams. They should then develop appropriate categories leaving significant room for the states. Given the science, the Agencies are derelict in failing to propose alternative, quantifiable, and objective measures. The Agencies should withdraw the current proposal and work instead on a quantifiable, standards-based approach, like that suggested by Justice Kennedy. (p. 5)

Agency Response: Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ conclusions that certain categories of waters are jurisdictional are not based on an “any connection” theory; instead they are based on careful examinations of the science and the law to conclude that particular categories of waters significantly affect the chemical, physical, and biological integrity of a traditional navigable water, interstate water, or the territorial seas. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

North Carolina Department of Agriculture and Consumer Services (Doc. #14747)

- 8.182 The new definition of "tributary" does not exclude ephemeral water bodies (features which contain water only after a precipitation event). Therefore, ephemeral streams or water bodies that contain a bed and bank and an ordinary high water mark will be subject to jurisdiction.

NCDA&CS opposes the language of the proposed rule that makes ephemeral streams and water bodies subject to jurisdiction. This was clearly not the intent of Congress or the Supreme Court. CWA jurisdiction should be limited to water bodies that are permanent or relatively permanent. Ephemeral streams clearly do not meet this standard. One particular concern of NCDA&CS is grassed waterways. Under no circumstances should grassed waterways, which are a widely recognized conservation practice, be considered jurisdictional. (p. 3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Grassed waterways are excluded under paragraph (b)(4) of the final rule and are therefore not considered waters of the United States.

Office of the Governor, State of Kansas (Doc. #14794)

- 8.183 Kansas acknowledges that some ephemeral streams may actually be significant contributors affecting the conditions of downstream waters. Therefore, we believe such streams should not be dealt as tributaries as outlined in the proposed rule but viewed by the Federal agencies as "other waters". That approach requires case-by-case determinations, which is an appropriate evaluation for ephemeral streams. This analysis does add to the work burden of Federal staff, but correct jurisdictional determinations demand such an investment. Under the proposed rule, Federal expenditure of resources and energy will be forthcoming as necessary in rebutting appeals of the automatic inclusion of all tributaries as jurisdictional. Kansas believes the citizens of the State are better served when determinations are done upfront in light of all available data pertinent to the issue at hand. State agency personnel have the knowledge, background and experience in assisting the Federal agencies in jurisdictional determinations with these specific "other waters". The interaction of Federal and State personnel better advances cooperative Federalism than the blanket application of the Clean Water Act envisioned under the proposed rule. As a backstop, many of the waters found not to be jurisdictional are protected, where warranted, by State authorities applied to waters of the State. As stated previously, the watershed orientation of programs, such as the Kansas TMDL program, applies corrective actions to any contributing sources within that watershed, regardless if they lie on classified or unclassified waters. (p. 6)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

San Carlos Apache Tribe (Doc. #15067)

8.184 Existing regulations require establishment of a significant nexus for tributaries that flow less than seasonally. In practice, the EPA has regularly determined that remote ephemeral drainages are not waters of the U.S. The proposed rule will bring most, if not all, of these drainages into the scope of the jurisdictional waters of the U.S. This would eliminate the flexibility in making individual determinations based on site-specific conditions.

... The proposed rule is overly broad, subjective and, frankly, illogical. The proposed rule makes no mention of objective, measurable features such as flow volume, seasonality, duration of flow, or distance to a navigable water. Instead, all that seems to be required for even the slightest and most occasional ephemeral drainage feature to be a covered “tributary” is a discernible high water mark and either a bed or a bank. Despite the contention that the rule promotes “transparency, predictability, and consistency” (77 F.R. at 22190), it will not. (p. 5)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Georgia Environmental Protection Division (Doc. #16348)

8.185 The term "tributary" does not just include streams. The proposed definition of tributaries includes the presence of a bank, a bed, and an ordinary high water mark but has no reference to flow. All intermittent and some ephemeral tributaries would therefore be jurisdictional and not subject to case-by-case analysis. (p. 1)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Attorney General, State of Michigan (Doc. #16469)

8.186 Under the proposed rule, all tributaries are categorically determined to have a significant nexus to core waters, and are "Water of the United States" subject to federal jurisdiction. But it is far from clear that there is a legal or scientific justification for categorical federal regulation of an area as a tributary when it does not have any visible evidence that water remains in the area for any period of time. Further, it is unclear what it means for an area to "contribute flow" to a core water. If any amount of water flows over an area, and some of that water ultimately reaches a core water, does that "contribute flow"? Is that sufficient to create a per se significant nexus with core waters? And how is a farmer or other landowner to know that they have an area that "contributes flow" to a core water when it has no physical indicators of that water? I concur with Michigan Farm Bureau that none of these questions have been adequately answered. (p. 5)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of “contribute flow.” Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. No feature that lacks the physical indicators of bed and bank and an OHWM will be jurisdictional as tributaries.

Tennessee Department of Transportation (Doc. #16470)

8.187 The proposed rule defines tributaries of certain other waters as jurisdictional by rule and includes a new definition of "tributary." TDOT agrees with the concept of defining certain tributaries as jurisdictional by rule. TDOT also agrees that it is appropriate and useful to include a definition of the term "tributary" in the regulations. However, TDOT is concerned that the proposed rule would, in effect, substantially broaden the universe of tributaries that are deemed jurisdictional by rule. In as much, TDOT recommends revising the rule to be more consistent with the treatment of tributaries in the 2008 Guidance.

A. "Reasonably permanent flow"

The proposed rule defines "tributary" without any reference to the frequency or extent of flow. Tributaries are defined to include any water that is "physically characterized by the presence of a bed and banks and ordinary high water mark" and that "contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section." (79 Fed. Reg. 22263). If a water meets these criteria, it is jurisdictional by rule.

By contrast, the 2008 Guidance (p. 6) deemed tributaries as jurisdictional by rule - that it, without the need for a significant-nexus determination - only when the tributaries "are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e .g., typically three months) ." That guidance also specifically

noted that "relatively permanent" waters "do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year- round or have continuous flow at least seasonally.

The omission of the "relatively permanent" requirement would substantially broaden the universe of tributaries deemed jurisdictional by rule. In effect, a tributary would be deemed jurisdictional by rule without any consideration of the flow regime in that tributary. A stream with intermittent or even ephemeral flow could be found jurisdictional by rule, simply because it has an indirect, infrequent downstream connection to a jurisdictional water. TDOT believes this approach would expand, not clarify, the scope of the federal jurisdiction under the Clean Water Act.

TDOT recommends modifying the proposal rule to ensure that tributaries are evaluated under the same criteria used in the 2008 Guidance: tributaries should be deemed jurisdictional by rule only if they have a "relatively permanent flow" (or an equivalent requirement, such as "perennial flow"), meaning that they "typically flow year-round or have continuous flow at least seasonally (e .g., typically three months)." If relatively permanent flow is not found, the tributary still could be evaluated under the significant nexus test , as was the case under the 2008 Guidance.

B. "Do not contribute flow, either directly or through another water"

As discussed above in the context of the ditch exclusions, TDOT is concerned that the phrase "contributes flow, either directly or through another water" could be interpreted very broadly, so that it encompasses waters that have a highly remote or tenuous downstream connection to other jurisdictional waters.

As noted above, TDOT recommends clarifying that a tributary does not "contribute flow "to another water if its only connection to that water is "insubstantial or remote." TDOT recommends making this change regardless of whether the definition is modified to include a requirement for "relatively permanent" flow. (p. 4-5)

Agency Response: Compared to the historic scope of the existing rule, the final rule is narrower; compared to agency practice in light of guidance issued after SWANCC and Rapanos, the final rule is generally broader, but not broader than the prior regulatory definition. See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the requirement of “contribute flow.” The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Department of Health and Environmental Control, State of South Carolina (Doc. #16491)

- 8.188 It is immediately clear that this definition is broader, than the Agencies' current practice in accordance with the post-*Rapanos* guidance which calls for relatively permanent tributaries to be categorically jurisdictional, but requires a case by case analysis for tributaries that are not relatively permanent. ,

In the Proposed Rule, the Agencies explain that their assessment of hundreds of peer-reviewed scientific studies have led to the conclusion that all tributaries have a significant nexus to downstream navigable waters. Hence, for the new definition, flow permanence does not matter. Instead any flow is enough to make a tributary jurisdictional provided it conforms to the other features.

SCDHEC is concerned that this represents a departure from current practices and is another means by which the Agencies are asserting jurisdiction more broadly. (p. 3)

Agency Response: Compared to the historic scope of the existing rule, the final rule is narrower; compared to agency practice in light of guidance issued after SWANCC and *Rapanos*, the final rule is generally broader, but not broader than the prior regulatory definition. See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

New Mexico Environment Department (Doc. #16552)

- 8.189 Although the Department recognizes the interrelatedness of all water, to make a determination that a water is a "water of the U.S.," there must be, taking the plurality's position in *Rapanos*, both a permanence to the adjacent water or wetland and an observable surface connection to the jurisdictional water; or taking Justice Kennedy's concurring opinion, if not directly "adjacent" to jurisdictional water (which implies a rationale and reasonable connection), there must be a "substantial nexus" between the in-question water(s) and jurisdictional water. *Rapanos*, 547 U.S. at 780, citing *SWANCC*, 531 U.S. at 167. In both situations, there must be at least some "adjacency" of the water or wetland and some permanent or seasonal intermittent flows from the tributary or adjacent water and the jurisdictional water or waters. *Rapanos*, 547 U.S. at 732, n. 5 ("relatively permanent" water does not necessarily exclude streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought, or seasonal rivers, which contain continuous flow during some months of the year but no flow during dry months.).

...

It is disconcerting how the Agencies can claim, in light of *Rapanos*, *SWANCC*, and *Riverside Bayview*, that all waters that simply touch or connect through a tributary system to jurisdictional waters, no matter the lack of permanence, visible hydrologic connection, distance, or finding of a "substantial nexus," can be found a federal jurisdictional water. The Department agrees with Michael Campbell's assessment that the *Rapanos* decision would reject "that the CWA protects every discernible water that contributes flow, directly or indirectly, to a traditionally navigable water, no matter how remote or insignificant the contribution—such as an ephemeral stream that might be 100 miles or

more upstream of a traditionally navigable water. Michael Campbell, *Waters Protected by the Clean Water Act: Cutting Through the Rhetoric on the Proposed Rule*, 44 *Envtl. L. Rep. News & Analysis* 10559, 10561 (2014) (emphasis added); citing *Rapanos*, 547 U.S. at 781 (Kennedy, J., concurring). (p. 13, 14)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Nebraska Department of Roads (Doc. #16896)

- 8.190 Tributaries are defined in rule for the first time, and the definition could be broadly interpreted because tributaries “contribute flow” to other waters. NDOR does not support a broad definition of tributaries. This definition could include streams that do not typically have water or flow, similar to some found in higher topographical regions of eastern Nebraska, or in the more arid areas found in western Nebraska. It would be appropriate to clearly state that tributaries should have perennial or relatively permanent flow in order to be considered jurisdictional, to avoid the potential expansion of jurisdiction possible with such a broad definition. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of “contribute flow.” Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

State of Alaska (Doc. #19465)

- 8.191 **D. Tributaries – The proposed rule would apply the significant nexus test to tributaries and isolated waters, when Justice Kennedy held it was only applicable to wetlands.**

All tributaries of jurisdictional waters would become jurisdictional by rule. Under the 2008 guidance, ephemeral (or non-relatively permanent) tributaries to traditional navigable waters required a significant nexus to establish jurisdiction. Under the Proposed Rule, the agencies determined that all tributaries of traditional navigable waters, including ephemeral tributaries, have a significant nexus with traditional navigable waters and are therefore proposed to be jurisdictional by rule. The significant

nexus finding is based on the conclusions of the draft Connectivity Report (EPA 2013), which has not been completed, nor does it address Alaska’s unique circumstances. (p. 25)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Allen Boone Humphries Robinson LLP (Doc. #19614)

- 8.192 Moreover, the agencies’ conclude that all tributaries have a significant nexus to jurisdictional waters without any case-specific review to identify factors of significance. Thus both the proposed assertion of jurisdiction over all tributaries without any analysis, as well as the definition of the term “tributary,” are excessively broad. The definition could encompass impermanent waters that lack consistent flow, clearly deviating from the standard articulated by Justice Scalia in the *Rapanos* plurality opinion¹⁴⁷ and, at the least, raising questions under the “significant nexus” test. (p. 7-8)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Lincoln County Conservation District, Washington (Doc. #4236)

- 8.193 The proposed Waters of the United States Rule does not do a very good job of explaining the differing opinions of the Supreme Court in the *Rapanos* case in a concise and readily understandable manner, and it does not do a good job either of explaining how tributaries are already treated differently in the existing 2008 Guidance based on whether or not the tributaries are perennial or have “relatively permanent” (significant intermittent) flow on a seasonal basis, or if the tributaries do not even have “relatively permanent” flow. Instead, the proposed rule lumps ephemeral, intermittent and perennial streams into the definition of tributaries, as long they “**contribute flow**” to a traditional navigable water, interstate water, or territorial sea, and have a bed, bank and OHWM (ordinary high water mark). This lumping of ephemeral, intermittent and perennial streams together is based upon EPA’s “Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence,” which is used to conclude that it is reasonable

¹⁴⁷ 547 U.S. at 739 (Finding that the agencies’ authority should extend only to “relatively permanent, standing or continuously flowing bodies of water” connected to traditional navigable waters.).

to establish categories of water which have a significant nexus to traditional navigable waters, interstate waters, or to territorial seas, and that categorically defining nearly all tributaries in the country as a significant nexus is justified because it will reduce or eliminate case specific jurisdictional determinations and “...improve clarity for regulators, stakeholders and the regulated public by defining certain categories of waters as ‘Waters of the United States...’”.

The proposed rule really fails to define tributaries when it uses the term “**contribute flow**,” but then makes no attempt to define what “**contribute flow**” is supposed to mean. The 2008 Guidance mentions that flow volume, flow duration and flow frequency are to be considered in any determinations of significant nexus for tributaries. Why aren’t these factors mentioned in an easily found location in the proposed rule? Categorically defining nearly every tributary as a significant nexus, regardless of whether or not it contributes flow on a regular basis with significant flow volume and significant flow duration, does not appear to be the intent of any majority of the Supreme Court in the *Rapanos* case decision or the 2008 Guidance either.

The Lincoln County Conservation District does not agree with the term “**contribute flow**” in the proposed rule, without any definition of what “**contribute flow**” means. In the absence of any definition of “**contribute flow**” in the proposed Rule, the District proposes and requests that for any tributary within the county to be considered as “Waters of the United States,” it would be required to contribute flow to a larger traditional navigable water, interstate water or territorial sea **on a regular basis, with significant flow volume and significant flow duration**. To keep this definition to a reasonable and simple basis, contributing flow on a regular basis would involve the contribution of significant flow volume for at least 50% or more of the time on a yearly basis for a minimum 10 year period or more. A significant flow volume would require at least a flow of 1 cfs (cubic foot per second) or more for a significant duration. Since both the plurality opinion and the dissenting opinion in the *Rapanos* case already came to the conclusion that the duration of flow for “relatively permanent” or significant intermittent water would typically involve at least 3 months of continuous flow, significant flow duration would include at least 3 months continuous flow in a given year at 1 cfs or higher. **Without contributing flow on a regular basis, with significant flow volume and significant flow duration, the District does not believe that a tributary has a significant effect on the chemical, physical and biological integrity of any traditional navigable water, interstate water, or territorial sea downstream, and any such tributary should not be categorically classified as “Waters of the United States.”** (p. 2-3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of “contribute flow.” Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The final rule does not require an evaluation of flow volume, flow duration and flow frequency for tributaries, which was referenced in the 2008 Guidance, because the agencies have determined that existing science supports the

conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses this conclusion in detail.

- 8.194 The proposed rule includes a very broad definition for tributaries that covers any type of stream reach, including ephemeral and intermittent reaches within a watershed, and that ultimately makes it easier for federal and state regulatory agencies to classify just about all parts of defined tributary systems as tributaries under the proposed rule, regardless of whether or not they contribute flow on a regular basis, with significant flow volume and with significant flow duration to a traditional navigable water. The proposed rule also intends to lump all reaches of a stream with the same stream order (size, flow) together into one stream reach, including both perennial and intermittent reaches, which ultimately leads again to increased ease of classification and regulation. The District has serious concerns with regulatory agencies lumping perennial stream reaches in with intermittent stream reaches when evaluating tributaries... (p. 5)

Agency Response: See summary response for section 8.1.1. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Various public, private or institutional parties may use or develop many different stream classification systems for many different purposes. The final rule does not address stream classification in any way. Under the final rule, the agencies or any other interested party will still be able to distinguish tributary flow regimes (perennial, intermittent, ephemeral).

North Cass Water Resource District (Doc. #5491)

- 8.195 ...the proposed definition of "tributary" is alarmingly expansive. The proposed rules define "tributary" to include any "water" with stream-like physical characteristics, including "a bed, banks, and ordinary high water mark" that "contributes flow" directly or through "another water" to navigable, interstate, or territorial waters, or an impoundment of any of those. The new definition could conceivably include even manmade channels that may "contribute flow" at some point to any downstream jurisdictional water. For example, consider a manmade pond that overflows during a high water event, then flows overland and discharges into a downstream manmade pond; then the downstream manmade pond also overflows, flows overland during a high water event, and discharges into a manmade ditch; then the manmade ditch discharges into another downstream ditch that ultimately discharges into a tributary of a tributary of a navigable/jurisdictional water, the new rule suggests the original manmade upstream pond is jurisdictional under the definition of "tributary." This seemingly ridiculous example of the breadth of the proposed rules may not be the intent of the rules, but would be a consequence of the rules. Despite EPA's suggestions otherwise, the new language in the rules that defines "tributary" is extremely expansive and does, in fact, greatly extend the jurisdiction of EPA and the Corps under the CWA. (p. 2)

Agency Response: See summary response for “Definition” above.

Alameda Corridor East Construction Authority et al. (Doc. #8534.1)

- 8.196 2. We request that the rule specifically state that delineated tributaries on a site do not require documentation of the extent of the upstream tributary. This process should be left for situations where an applicant is attempting to show that a drainage is not a tributary. We are concerned that in practice, we may be asked to document the upstream limits of all tributaries on all project sites, which would be very time consuming and costly. (p. 2)

Agency Response: The agencies do not currently require the regulated public to delineate waters upstream from the segment of tributary in question. The final rule does not deviate from the current practice.

Pasco County, Florida (Doc. #9697)

- 8.197 Previous guidance deemed tributaries as jurisdictional by rule without the need for a significant nexus determination only when the tributaries "are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)." That guidance also specifically noted that "relatively permanent" waters "do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally." However, CWA jurisdiction over these waters will be evaluated under the significant nexus standard. The omission of the "relatively permanent" requirement would substantially expand the number of tributaries that could be deemed jurisdictional by rule. In effect, a tributary would be deemed jurisdictional by rule without any consideration of the flow regime in that tributary. A stream with intermittent or even ephemeral flow could be found jurisdictional by rule, simply because it has an indirect, infrequent downstream connection to a jurisdictional water. The phrase "contributes flow, either directly or through another water" could be interpreted very broadly, so that it encompasses waters that have a highly remote or tenuous downstream connection to other jurisdictional waters.

Recommendation: the Final Rule should be modified to say that tributaries are jurisdictional by rule only if they have a "relatively permanent flow" (or an equivalent requirement, such as "perennial flow"), meaning that they "typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)." If relatively permanent flow is not found, the tributary still could be evaluated under the significant nexus test. This would be consistent with the 2008 Guidance Document. Also, it should be clarified in the Final Rule that a tributary does not "contribute flow" to another water if its only connection to that water is "insubstantial or remote." (p. 2-3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the requirement of “contribute flow.” The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters,

and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

Pikes Peak Area Council of Governments (Doc. #9732)

- 8.198 Ephemeral and intermittent streams, including normally dry arroyos and washes, which are extremely common in Colorado due to the arid conditions, would be considered tributary waters under the proposed guidance and therefore subject to federal regulations...Many such tributaries are not physically connected to waters of the US through other than extremely infrequent surface flow, and it should not be assumed that such ephemeral or intermittent streams/waterways are "per se" jurisdictional. This language needs to be modified. (p. 1)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Clark County Regional Flood Control District (Doc. #11726)

- 8.199 Under the proposed rule, ephemeral washes that have a bed and bank and ordinary high water mark would by rule be jurisdictional waters. However, a ditch that 1) is excavated wholly in uplands; 2) drains only uplands; and 3) has less than perennial flow would be exempt from the definition of "waters of the United States" and not subject to regulation under the Clean Water Act. *Ephemeral washes in the desert southwest, excavated by infrequent flow in response to highly localized and very intense rainfall, largely meet the definition of the excluded ditches.* (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Brown County, Kansas (Doc. #13603)

- 8.200 We object to the definition of a tributary as it extends definition of waters of the US upstream to erosion features, and stretches of a channel that are merely short term conduits for surface water that have no significant nexus to downstream water quality. These ephemeral channels only carry surface water immediately after a major rainfall event. Physical, chemical and biological processes are limited due to the short time

period water is flowing in the channel so there can be no significant nexus to downstream water quality. For this reason we believe that that first stream order ephemeral channels in waters of the US until there is science to show where along the channel significant processes occur in the channel that have a significant affect downstream, and that regulations that protect waters of the US will have a significant effect on downstream water quality. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

North Dakota Association of Soil Conservation Districts (Doc. #15168)

8.201 1. Tributaries

The proposed rule’s definition of tributaries as perennial, intermittent and ephemeral can be interpreted to include a vast group of waters never intended to be regulated under CWA. Rulemaking should be clear and concise. **NDASCD requests the term “ephemeral” not be used.**

We are concerned the proposed rule may potentially allow regulation of on-farm ditches, ponds and isolated wetlands which may have a hydrologic connection to navigable waters, which flies in the face of the SWANCC ruling. Farm ditches, waterways, holding ponds and other structures are often constructed to improve water quality and water usage. We urge you to limit your jurisdiction to traditionally navigable waters. In areas of discrepancy, we encourage you to consult with local agencies such as soil conservation districts, water resource boards and others to develop local parameters, criteria and standards. (p. 1-2)

Agency Response: The final rule includes specific exclusions for many ditches, as well as artificial lakes and ponds created in dry land and used primarily for stock watering, irrigation, settling basins, etc. (see paragraph (b) of the final rule). Excluded features are not jurisdictional waters of the United States. In addition, all existing statutory exemptions, including those at CWA section 404(f) for normal farming, silviculture and ranching activities and for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule.

Los Angeles Department of Water and Power (Doc. #15238)

8.202 Tributaries can be perennial, intermittent, and ephemeral. The Agencies propose to regulate tributaries using jurisdiction by rule. In the proposed rule, the Agencies define a tributary as a water physically characterized by a bed and banks and ordinary high water

mark; which contributes flow to another water, regardless of whether the waterbody has man-made or natural breaks in flow.¹⁴⁸

The Agencies' approach is over-inclusive. LADWP believes that there will be circumstances where tributaries are jurisdictional, however as written in the proposed rule, most or any tributary could become jurisdictional. Under this scenario, the permitting process could interfere with the reliability of LADWP's system in cases due to circumstances beyond LADWP's control or because a natural disaster has occurred and requires immediate attention. The plurality in *Rapanos vs. the United States* held that to be regulated under the CWA, a non-navigable tributary must have permanent water flowing and it must have significant impacts to the downstream navigable water. In his concurring opinion, Justice Kennedy disputed that permanent flow was required, but echoed the requirement that non-navigable tributaries must affect downstream navigable water quality to be regulated under the CWA.¹⁴⁹ Therefore, in order for a non-navigable tributary to be jurisdictional by the CWA, it must have permanent water flowing and significant impacts to the downstream navigable water. (p. 3)

...

LADWP suggests that the Agencies clarify the language as follows:

- Waters in different watersheds should not be deemed tributaries to each other and that any "connection" between them cannot constitute a significant nexus;

... (p. 3, 4)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of “contribute flow.” Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Washington County Commission, Utah (Doc. #15448)

8.203 ...the Agencies' proposed rule would greatly expand the Agencies' jurisdiction beyond what is permissible under the law. Dry washes do not have a "significant nexus" to traditional jurisdictional waters such as navigable waterways. Flow from any WOUS, eliminating the need for case-specific dry wash rarely, if ever, contributes to jurisdictional water. When the flow does reach jurisdictional water, it only does so for a time period lasting mere hours to a day or two. A rule that establishes all dry washes as jurisdictional clearly is not supported by the CWA or U.S. Supreme Court case law. (p. 3)

¹⁴⁸ 79 Federal Register, 22263

¹⁴⁹ *Rapanos*, 547 U.S. at 781-82

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

Colorado Springs Utilities (Doc. #16351.1)

- 8.204 The proposal would establish ephemeral and intermittent waterbodies as jurisdictional by rule regardless of how tenuous their connection to a TNW. Such drainages are common in the arid West, flowing only periodically in response to infrequent precipitation events or snowmelt run-off. However, infrastructure must oftentimes cross such features, creating new permitting/NEPA hurdles. On a similar note, dry arroyos, washes and similar erosion features may now, without further clarification, be treated as jurisdictional. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

South Kansas Groundwater Management District No. 3, Garden City, Kansas (Doc. #16465)

- 8.205 The proposed rule will unnecessarily expanding the CWA's jurisdiction and increasing confusion about how it will be implemented will make it more difficult to meet water needs. In order to meet water supply and wastewater treatment needs, as well as stormwater control requirements, water suppliers like irrigation districts and municipal utilities must make substantial infrastructure investments. These investments will include new or expanded storage reservoirs; reuse facilities; desalinization plants; water collection, delivery and distribution canals, ditches and pipelines; pump-back projects; groundwater recharge facilities; and reverse osmosis water treatment plants. Many of these facilities will, of necessity, be in somewhat close proximity to the types of "waters" discussed in the current proposal. It is essential that these critical activities, many of which may be undertaken in direct response to emergency conditions related to drought, fire, or post-fire damage, do not unnecessarily trigger a federal nexus and its lengthy and costly permitting procedures...

To address the issues identified in this letter the Federal Agencies should:

...

- Clarify that jurisdictional "tributaries" are limited to waters that determinations where waters contribute direct flow to a traditional navigable water via a continuous surface connection;

... (p. 3)

Agency Response: The final rule will clarify and simplify implementation of the CWA through clearer definitions and increased use of bright-line rules. The final rule includes specific exclusions for many ditches, as well as artificial lakes and ponds created in dry land and used primarily for stock watering, irrigation, settling basins, etc. (see paragraph (b) of the final rule). There are additional exclusions for waste treatment systems designed to meet the requirements of the CWA, stormwater control features created in dry land, and wastewater recycling structures constructed in dry land. None of these excluded features will be jurisdictional waters of the United States. In addition, all existing statutory exemptions, including those at CWA section 404(f) for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule. See the preamble of the final rule for additional information on the rule's exclusions. Also Topic 6 of this RTC addresses ditches and the ditch exclusions, and Topic 7 covers exclusions other than ditches.

Snowmass Water and Sanitation District, Snowmass Village, Colorado (Doc. #16529)

8.206 2. Tributaries.

The proposed definition of a jurisdictional "tributary" would significantly expand the scope of CWA jurisdiction. "Tributary" would be defined as any water that is physically characterized by the presence of a bed and bank and ordinary high water mark and which contributes flow (flow, directly or indirectly) to other waters that eventually flow into a traditional navigable water or interstate water. We have the following concerns with this approach: to a TNW.

A. The treatment of all "tributaries" as jurisdictional-by-rule would inappropriately lump together large rivers and perennial streams with minor, often dry ephemeral and intermittent drainages. Under the proposed rule, there would be no minimum frequency, duration or volume of flow required-perennial, intermittent, and ephemeral streams would all automatically qualify as jurisdictional tributaries.¹⁵⁰ This fails to recognize that there are differences among various types of drainages and even within individual drainages in terms of their associated resources and potential for affecting the chemical, physical or biological integrity of downstream waters. This is especially true for drainage areas that are dry during all or part of most years. It is important to preserve a process for individually determining the jurisdictional status of ephemeral and intermittent drainages that can consider and accommodate the variability between drainage types and how they differ regionally.

...

C. This proposal would change the jurisdictional status of many ephemeral and intermittent drainages in the arid West that have long been regarded as non-jurisdictional. The vast majority of drainages in Colorado fit in this category. The expansion of jurisdiction under the regulatory changes proposed may have serious unintended consequences, including the risks inherent in a regulatory approach that will consume and

¹⁵⁰ Definition of "Waters of the United States" under the Clean Water Act, 79 Fed. Reg. at 22202.

dilute scarce federal and non-federal agency resources as the result of the extension of jurisdictional status to virtually the entire universe of drainages.

Accordingly, if the agencies proceed to establish a jurisdictional-by-rule category for "tributaries," that category should be restricted to features that contribute flow to a traditional navigable water on a relatively permanent basis, consistent with the plurality opinion in Rapanos. The agencies should evaluate intermittent and ephemeral water bodies on a case-by-case basis to determine whether to treat a given water as jurisdictional, consistent with current practice. These case-by-case evaluations could be facilitated through further guidance on factors (such as frequency, duration and volume of flow) indicative of the varying strengths of connections between features and the jurisdictional waters into which they convey flow. Other factors could include the strength (or lack) of the ordinary high water mark and bed/bank indicators, the presence and length of breaks in jurisdictional features, flow loss from infiltration and evaporation, and distance to a traditional navigable water. This type of approach would be consistent with Justice Kennedy's concurring opinion, which suggested the need for "more specific" criteria defining jurisdictional tributaries. (p.3, 4-5)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

Water Managers, Kaweah and Tule Watersheds, San Joaquin Valley, California (Doc. #16544)

- 8.207 The use of the term “contributes flows” alone, without more limiting conditions or elements, will bring into play countless streams, creeks, rivulets, washes, and other features (roads, gutters, etc.) where water does, will, or could run to (eventually) navigable waters. The Agencies themselves profess to not anticipate this outcome. Their explanation for the rule, as described in the rule making notice, asserts that tributaries are appropriate for jurisdiction because they “exert a strong influence on the character and functioning of downstream traditional navigable waters, interstate waters, and the territorial seas, either individually or cumulatively.” (Federal Register, Vol. 79 No. 76, April 21, 2014, p. 22197.) Yet the rule itself does not require this characteristic; rather, a water body may be considered tributary if it merely “contributes flow”. The Kaweah and Tule Commenters suggest that the Agencies’ own phrase, quoted earlier, should appear in the rule itself. In other words, a water body may be considered tributary, and therefore “jurisdictional”, only if it features a defined bed and banks with a mean high water mark AND contributes flow that “exerts a strong influence on the character and functioning of downstream traditional navigable waters.”

Further, the Kaweah and Tule Commenters have experienced attempts by the Agencies to assert jurisdiction over water bodies that receive water from navigable water bodies; in

other words, the reverse of tributary. Present rules and the current proposal both appear to adequately define tributary as “contributing to downstream waters”, and not “receiving from upstream waters.” However, given the history of attempts by the agencies to apply a “reverse tributary” rule, the Kaweah and Tule Commenters request that an express exclusion for water bodies that merely receive water from upstream navigable waters be stated in the rule’s definition of “tributary”. (p. 3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the requirement of “contribute flow.” The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. The commenter did not provide enough information in his scenario describing “jurisdiction over water bodies that receive water from navigable water bodies,” and we cannot provide an accurate response.

County Commissioners, Hot Springs County, Wyoming (Doc. #16676)

8.208 As noted by the Congressional Research Service, the rule defines tributary for the first time and does so “broadly.”¹⁵¹ The Hot Springs County Commission objects to this expansive definition that automatically declares a tributary a water of the U.S. even if it only sometimes contributes flow to another water that only sometimes contributes flow to still another water, and on and on until *eventually* the flow drains into a currently jurisdictional water. At best, when combined with the terms “adjacent,” “neighboring,” and excluded “ditches,” the definition provides no certainty to Wyoming’s counties or constituents about what is considered jurisdictional waters, even when they flow for only very brief periods. At worst, when taken in the context of the recently released and aforementioned U.S. Geological Survey (USGS) maps, the definition could be construed to wrest jurisdictional control of all of Wyoming’s approximately 270,000 miles of streams, over 80% of which are intermittent or ephemeral.

In response to requests from the House Committee on Science, Space and Technology, the EPA insists that the USGS maps have not been used for regulatory purposes, and further, that the “EPA is not aware of maps prepared by any agency, including the EPA, of waters that are currently jurisdictional under the CWA or that would be jurisdictional under the proposed rule.”¹⁵²

The EPA’s response poses two related problems. First, given the domino effect of the tributary definition, the USGS maps illustrate the potential reach of the proposed rule

¹⁵¹ *EPA and the Army Corps’ Proposed Rule to Define “Waters of the United States.”* Copeland, Claudia. Congressional Research Service. June 24, 2014.

¹⁵² Letter from Nancy Stoner, Acting Assistant Administrator, to U.S. Representative Lamar Smith. July 28, 2014. Available at

http://science.house.gov/sites/republicans.science.house.gov/files/documents/epareleases_maps_letter.pdf

regardless of the EPA's use of the maps to date. As a headwaters county, Hot Springs County is particularly sensitive to the discussion of headwaters in the proposed rule. The EPA repeatedly argues that headwaters are particularly important to regulate because of their effects on downstream, jurisdictional waters, even if the headwaters are intermittent, ephemeral, or are a "substantial distance from the nearest [jurisdictional water]."¹⁵³ The EPA claims that no case-specific analysis is necessary on these often dry creek beds because "tributaries, including headwaters, intermittent, and ephemeral streams, and *especially when all tributaries in a watershed are considered in combination*, have a significant nexus to traditional navigable waters."¹⁵⁴ (emphasis added) Despite the EPA's claims of a limiting rule, it is difficult for a reasoned observer to not view these statements in plain writing as a dramatic, in fact unprecedented, grab for federal authority.

The second problem posed by the EPA's response to the House Committee on Science, Space, and Technology is that if the USGS maps have not been used as EPA claims, and if no such maps exist in any agency, then clarity as to what is a tributary and what is not simply cannot be offered by the EPA, USACE or any other agency. No baseline data exists, and no map exists to show potential impacts.

Further, the EPA has not defined what aerial photography, "reliable" remote sensing data, or "other appropriate information" will be allowed. The Hot Springs County Commission and its member counties have significant experience (both positive and negative) with the United States Department of Interior regarding the development (or lack thereof) of accurate, on-the-ground information used to develop federal policy. We strongly believe that any determination of land or water must first be vetted and proven by the local government as co-regulators. (p. 5-6)

Agency Response: Cooperative federalism is a hallmark of the CWA, and this rule does nothing to change current practice. The agencies do not have maps illustrating the extent of jurisdictional waters of the United States. Determining the jurisdictional status of a water feature often requires site specific knowledge. Although the final rule provides increased clarity and "bright line" distinctions to help differentiate waters of the United States from non-jurisdictional features, it will not eliminate the need for consideration of site specific knowledge. The agencies generally only conduct jurisdictional determinations at the request of individual landowners, thus we do not have maps depicting the geographic scope of the CWA. Such maps do not exist and the costs associated with a national effort to develop them are cost prohibitive and would require access to private property across the country. The U.S. Geological Survey and the U.S. Fish and Wildlife Service collect information on the extent and location of water resources across the country and use this information for many non-regulatory purposes, including characterizing the national status and trends of wetlands losses. This data is publicly available and the agencies have relied on USGS and USFWS information to characterize qualitatively the location and types of national water resources. This information is depicted on

¹⁵³ 79 Fed. Reg. at 22,206.

¹⁵⁴ *Id.*

maps but not for purposes of quantifying the extent of waters covered under CWA regulatory programs

City of St. Petersburg, Florida (Doc. #18897)

- 8.209 ...The definition fails to characterize the type of contribution of flow necessary to trigger inclusion as a water of the U.S. A definition that fails to define the connectivity based on flow duration (e.g., perennial, seasonal, intermittent, ephemeral) fails to address the "significant nexus" issue raised by Justice Kennedy's opinion in Rapanos. Allowing for the indirect contribution of flow is also concerning and similarly seems to disregard the need for a *significant* nexus. The City further disagrees with any definition of *tributary* that includes lacustrine or wetland features, and supports only a traditional interpretation of the term as a stream or river that contributes flow to a larger water body downstream or as part of a dendritic river system. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The definition of “tributary” in the final rule was modified based on comments received on the proposed rule, and now does not include either lacustrine or wetland features in the definition.

Massachusetts Department of Environmental Protection (Doc. #19133)

- 8.210 Massachusetts supports the proposed definition of "tributary" and the confirmation that tributary waters have a significant nexus to traditional navigable waters, interstate waters (including interstate wetlands), territorial seas and impoundments of these waters" and thus, are waters of the United States. We also strongly support the specification that tributaries are those waters that contribute flow either directly or through another water to the abovementioned waters including wetlands lakes and ponds (even if they lack bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to the abovementioned waters. This rule will provide protection to headwater streams, which have been substantially degraded across the nation. Headwater streams and their associated wetlands are small, often intermittent or ephemeral, and less visible systems than rivers, lakes and other large wetlands but they are more vulnerable to degradation and loss because of their size and location. Headwater streams and adjacent wetlands that do not have a permanent surface water connection (e.g. intermittent and ephemeral streams) are particularly vulnerable since they respond quickly to small changes in hydrology and adverse water quality impacts from increased impervious surfaces and impacts of stormwater. They are also frequently crossed by roadways and driveways resulting in fragmentation of aquatic and terrestrial habitats. Massachusetts has been working for many years to protect headwater streams since in combination they

form a crucial network that serves to keep the waters of the US clean and healthy. Thus we support these protective changes to the rule. (p. 2-3)

Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. In making the determination of which waters have a “significant nexus,” the agencies must rely, not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate. The definition of “tributary” in the final rule was modified based on comments received on the proposed rule, and now does not include either wetlands, lakes or ponds in the definition.

Mississippi Valley Flood Control Association (Doc. #19488)

8.211 The jurisdiction by rule over tributaries and the definition of “tributary” are too broad.

The Proposed Rule classifies tributaries as jurisdictional by rule and, for the first time, defines the term. The agencies’ conclusion that all tributaries have a significant nexus to jurisdictional waters without any case-specific review to identify factors of significance exceeds the intended limits of *Rapanos*. Thus both the proposed assertion of jurisdiction over all tributaries without any analysis, as well as the definition of the term “tributary,” are excessively broad.

“Tributary” is defined in the Proposed Rule as “a water physically characterized by the presence of a bed and banks and ordinary high water mark . . . which contributes flow, either directly or through another [jurisdictional water],” and, additionally, “wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow.”¹⁵⁵ The definition contains no reference to the volume or frequency of such flow, creating uncertainty and the potential for jurisdictional over-reaching. The definition could encompass impermanent waters that lack consistent flow, clearly deviating from the standard articulated by Justice Scalia in the *Rapanos* plurality opinion¹⁵⁶ and, at the least, raising questions under the “significant nexus” test. (p. 9)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial

¹⁵⁵ 79 Fed. Reg. at 22,263.

¹⁵⁶ 547 U.S. at 739 (Finding that the agencies’ authority should extend only to “relatively permanent, standing or continuously flowing bodies of water” connected to traditional navigable waters.).

seas. The definition of “tributary” in the final rule was modified based on comments received on the proposed rule, and now does not include either lacustrine or wetland features in the definition.

California State Association of Counties (Doc. # 9692)

- 8.212 Tributary: CSAC agrees that this definition should consider bed, bank, and ordinary high-water mark. However, the frequency and amount of flows, infiltration, evaporation, and transpiration should also be considered before determining that a feature is a tributary. The current definition would not properly account for the dry weather conditions in southeastern California. For example, because desert rainfall events are so infrequent in these areas (Palm Springs 5 inches/year, Blythe 4 inches/year), the existing bed and banks may have been formed during very infrequent events. CSAC believes that defining these features as a jurisdictional tributary is not a proper exercise of the agencies' authority.

The CR states that all tributaries, including perennial, intermittent and ephemeral streams are connected to downstream rivers via channels and associated *alluvial deposits*. Alluvial deposits should not be used as a basis for connectivity because groundwater is not regulated by the CWA. (p. 2-3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule specifically excludes groundwater in paragraph (b), thus ensuring that groundwater will not be considered a water of the United States.

National Association of Conservation Districts (Doc. #12349)

- 8.213 Defining tributaries as perennial, intermittent and ephemeral carries the potential to capture a great number of areas unintended by the CWA. EPA is proposing that these three categories (perennial, intermittent and ephemeral) are per se jurisdictional without the need for a site-specific “significant nexus” test. The term “ephemeral” has different meanings throughout the country, and those differences are creating a great deal of confusion. Substantially, any use of the term “ephemeral” could fall under the definition of “intermittent.” Therefore, NACD requests that this term not be used. (p. 4)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not

excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The agencies believe that there is a difference in the terms ephemeral and intermittent, and the Corps has defined these terms previously (March 9, 2000 Nationwide Permit regulations).

Colorado Stormwater Council (Doc. #12981)

- 8.214 Definition of Tributary. Existing regulations do not define this term. In practice the USACE has regularly determined that many remote ephemeral drainages are not WOTUS. The Proposed Rule will bring most, if not all, of these tributaries into the scope of jurisdictional WOTUS. This would eliminate the USACE's flexibility in making individual determinations based on site-specific conditions. Features that would otherwise meet the definition of tributary do not lose that status if, for any length, there are natural or manmade breaks, provided that there is an ordinary high water mark upstream of the break. The Proposed Rule's definition of tributaries would increase the number of hydraulically connected features that are considered tributaries, notwithstanding exclusions such as ditches, to traditional navigable waters. (p. 3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

California Building Industry Association et al. (Doc. #14523)

- 8.215 ...this new definition of tributary and the Proposed Rule’s categorical effect of blanketing jurisdiction in all instances in this vague universe of features raises multiple concerns. Among them are the fact that ephemeral features that rarely if ever contain an appreciable flow are included; many features in MS4 storm sewer systems regulated under CWA Section 402 will now be automatically designated waters of the United States rendering their intended and permitted operation under one CWA regime illegal; and the perpetuation and heightened importance of terms proven problematic in the field such as “ordinary high water mark.” (p. 14)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The agencies’ longstanding practice is to view stormwater water control measures that are not built in “waters of the United States” as non-jurisdictional.

Conversely, the agencies view some waters, such as channelized or piped streams, as jurisdictional currently even where used as part of a stormwater management system. Nothing in the proposed rule was intended to change that practice, and the final rule is consistent with that intent. The term “ordinary high water mark” has been defined in the Corps’ regulations since 1986. The final rule does not change that definition, but simply incorporates it into EPA’s regulations for consistency and clarity.

North Carolina Soil and Water Conservation Commission (Doc. #14790)

8.216 **Jurisdiction of Ephemeral Streams**

The new definition of “tributary” does not exclude ephemeral water bodies (features which contain water only after a precipitation event). Therefore, ephemeral streams or water bodies that contain a bed and bank and an ordinary high water mark will be subject to jurisdiction.

The SWCC opposes the language of the proposed rule that makes ephemeral streams and water bodies subject to jurisdiction. One particular concern of the SWCC is grassed waterways. Under no circumstances should grassed waterways, which are a widely recognized conservation practice, be considered jurisdictional. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Grassed waterways are excluded under paragraph (b)(4) of the final rule and are therefore not considered waters of the United States.

Western Urban Water Coalition (Doc. #15178.1)

8.217 2.2 Proposed Rule

The proposed rule makes a presumption connectivity report supports the final rule’s definition that all tributaries, including ephemeral and intermittent drainages, are jurisdictional by rule. This approach lumps together large rivers and perennial streams with minor, often dry, ephemeral and intermittent drainages. In doing so, the geographic scope of the proposed rule substantially expands the current scope of CWA jurisdiction. This is particularly true in the arid West where substantial portions of the landscape are comprised of ephemeral and intermittent drainages that are often dry for all or most of the year. Some of these western ephemeral and intermittent drainages are supplied seasonally by irrigation water surface runoff and or ground water discharges that exist due to infiltration of irrigation water to the ground water table.

2.3 Problems with the Proposed Rule

The proposed rule presumes that all ephemeral and intermittent drainages that have the presence of a bed and banks and a OHWM and that contribute flow, either directly or through another water, to a WUS are jurisdictional. The proposed rule does not recognize that there are differences among not only types of drainages, but individual drainages and their potential for affecting the chemical, physical, or biological integrity of a WUS. The proposed presumption of jurisdiction by rule for ephemeral and intermittent drainages runs counter to the guidance and process established by the *SWANCC* and *Rapanos* opinions. These problems with the proposed rule are discussed further below. (p. 6)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. As described in the Response to Comments from Compendium 6, “Ditches,” the agencies believe that perennial flow caused by agricultural irrigation is none the less perennial flow. Irrigation water that infiltrates the soil surface, percolates through the upper soil horizons and is eventually expressed as flow in an adjacent ditch or tributary allows that ditch or tributary to effectively function in a similar manner as perennial ditches or tributaries whose flow is supported by sources other than agricultural irrigation.

- 8.218 Compared with rivers and perennial streams, the ecological resources associated with ephemeral and intermittent drainages are typically less well developed. The ecological resources associated with ephemeral and intermittent drainages can differ substantially due to the differences in hydrology (e.g., compare the ephemeral drainages in Photos 1 through 8 with the intermittent drainages in Photos 9 and 10, Appendix A). The aggregation of all tributaries as “jurisdictional by rule” does not consider the continuum of resources and functions provided, or not provided, by the wide variety of drainage types. (p. 21)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

- 8.219 ...Based on the *Rapanos* opinions, when determining the jurisdiction of tributaries, the Corps currently considers a relatively permanent water (RPW) (i.e., a tributary that is not a TNW and that typically flows year-round or has a continuous flow at least “seasonally”) that is tributary to a TNW to be jurisdictional. This presumption is not extended to non-RPWs like ephemeral and intermittent drainages. The non- RPWs are subject to a significant nexus analysis (SNA) to determine if the water and/or wetland in question have more than a speculative or insubstantial effect on the chemical, physical, and/or biological integrity of a TNW.

The current approach recognizes the wide range of types of non-RPWs and the broad continuum of potential effects the non-RPWs could have, or might not have, on the chemical, physical, and/or biological integrity of a TNW and, therefore, are WOUS, eliminating the need to evaluate non-RPWs individually based on specific facts associated with each non-RPW. As discussed below, the arid West provides excellent examples of just how varied drainages can be and how this wide variation in drainages translates to a broad continuum of potential connections and effects the drainages may or may not have on the chemical, physical, and/or biological integrity of a WUS. The continuum of potential connections and potential effects on the chemical, physical, and/or biological integrity of a WUS are driven by the magnitude, duration, frequency, predictability, and location in the watershed of flows in ephemeral and intermittent drainages.

Comments from the Science Advisory Board Panel (EPA SAB Panel) for the Review of EPA Water Body Connectivity Report expressed a similar concept of a gradient of connectivity and stated “... that the concept of a connectivity gradient applies to all waters, including tributaries and adjacent waters and wetlands, though most panelists agreed that certain types of water bodies typically fall at the higher end of the connectivity gradient” (EPA SAB Panel 2014). In commenting on significant nexus, the EPA SAB Panel states that “the relative strength of downstream effects should inform the conclusions about the significance of those effects for purposes of interpreting the Clean Water Act” (EPA SAB Panel 2014, Page 6).

Currently, the Corps considers various factors to determine if a drainage or wetland has a significant nexus to a TNW. Consideration of these factors is specific to the water and wetland and include: the strength (or lack thereof) of OHWM and bed and bank indicators, length of breaks in jurisdictional features and channel deformation, sporadic flow, flow loss from infiltration and evapotranspiration, distance to a TNW, impoundments, and potential to affect the chemical, physical, and/or biological integrity of a TNW.

The proposed rule takes a “one size fits all” approach to a very wide range of drainage types (except for the narrow range of drainages that qualify as exempt). Assuming that all tributaries, including ephemeral and intermittent drainages, are jurisdictional by rule is an oversimplification. While this approach may be expedient from the agencies’ perspective, it is not supported by the literature (discussed below in Sections 2.4.1 and 2.4.2), intuitively does not make sense, is contrary to the *Rapanos* opinions, and does not provide the regulated community an opportunity to demonstrate that an ephemeral or intermittent drainage lacks a significant nexus to a jurisdictional water.

The proposed presumption that all waters that meet the definition of tributary are jurisdictional by rule is only accurate over a portion of the spectrum of potential tributary types. The presumption is applicable at the wet end of the spectrum (e.g., rivers and perennial streams) and becomes increasingly less applicable as one moves toward the drier end of the tributary spectrum, particularly with smaller drainages in the arid West. At the drier portion of the tributary spectrum, the presumption of jurisdictional by rule is no longer accurate and becomes arbitrary.

2.4 Description of Ephemeral and Intermittent Drainages in the Arid West

The following description of ephemeral and intermittent drainages in the arid West is provided to demonstrate the physical, hydrological and ecological differences in these types of drainages in the arid West compared to more moist regions of the U.S. The discussion of current considerations provides context for the how the Corps has considered differences in the arid West in developing guidance for its Section 404 program.

2.4.1 Current Considerations

When considering how ephemeral and intermittent drainages in the arid West differ from drainages in other parts of the U.S., it is important to consider how they are currently addressed in implementing the CWA. The Corps, through implementation of the Section 404 program, has provided substantial information on ephemeral and intermittent drainages and wetlands in the arid West. The Corps describes “arid West” for its Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) as encompassing a wide variety of landforms and ecosystems, but is differentiated from the surrounding areas by its predominately dry climate and long summer dry season. Annual average precipitation is mostly less than 15 inches and evapotranspiration exceeds precipitation across most of the region. Drainage basins often lack outlets and the water table is often perched. The episodic precipitation patterns often lead to a lack of base flow (unless ground water influences are present) and, as a result, decreased incision of arid West channel forms (Corps 2008).

For the purposes of these comments, the arid West is defined as the arid and semi-arid portions of the western United States that extend from south-central Texas west to southeastern California and north along the east side of the Sierra Nevada and Cascade Ranges to the Canadian Border in eastern Washington. The eastern boundary of this region extends from central North Dakota south through central South Dakota, Nebraska, western Kansas, and Oklahoma to south-central Texas. The arid and semi-arid areas of this region, which incorporates portions of 17 western states, is characterized generally by annual precipitation of less than 10 and 20 inches, respectively (Arid West Water Quality Research Project

<http://cdm16658.contentdm.oclc.org/cdm/ref/collection/p267501ccp2/id/1699>). 1

The Corps has observed that ephemeral and intermittent channel forms dominate the arid West (Lichvar and McColley 2008). When considering the jurisdictional status of ephemeral and intermittent drainages and how they fit within the broad spectrum of tributary types, it is important to first consider how ephemeral and intermittent drainages are treated nationally under Section 404 of the CWA. The Corps currently recognizes the differences between an ephemeral stream and an intermittent stream. The Corps defines “ephemeral stream” as having “flowing water only during and for a short duration after, precipitation events in a typical year. Ephemeral streambeds are located above the water table year-round. Ground water is not a source of water for the stream. Runoff from rainfall is the primary source of water for stream flow.” The Corps defines “intermittent stream” as having “flowing water during certain times of the year, when groundwater provides water for stream flow. During dry periods, intermittent streams may not have flowing water. Runoff from rainfall is a supplemental source of water for stream flow” (77 Fed. Reg. 10288-10289 (February 21, 2012)). Presently, some intermittent drainages

with seasonal flows may be considered a RPW and thus jurisdictional (unlike ephemeral drainages).

Using the Corps' definitions, it is clear that ephemeral and intermittent drainages have different characteristics that can influence how they could potentially affect the chemical, physical, and/or biological integrity of a WUS. These differences can be readily seen by comparing Photos 1 through 8 with Photos 9 and 10 (Appendix A).

The proposed rule does not distinguish between ephemeral and intermittent drainages, which further underscores how the rule considers all tributaries to be the same and inappropriately biases dry intermittent and ephemeral drainages toward jurisdiction as "jurisdictional by rule." These differences are accentuated in the arid West where precipitation is limited and seasonal, and year-to-year ground water levels can vary considerably. It is also clear that the hydrology of ephemeral and intermittent drainages is very different from rivers and perennial streams. The Corps currently recognizes these differences in the Nationwide Permit (NWP) regulations. For example, for NWPs 29 Residential Development, 39 Commercial and Institutional Developments, and 42 Recreational Facilities, the Corps distinguishes between the impact threshold for loss of streambed for perennial streams and ephemeral or intermittent streams. For ephemeral or intermittent streambeds, the district engineer can waive the 300-linear-foot impact threshold. If the Corps believed that the resources of all tributaries were equal, the NWP-specific impact thresholds would not distinguish between perennial streams and ephemeral or intermittent streams.

Again, similar to what was previously described for the approved JD process, the Corps' NWP impact thresholds currently recognize the variability in drainage types and the variability in resources associated with the drainage types. As described below, ephemeral and intermittent drainages can differ significantly from each other physically, hydrologically, and ecologically. Because of this variability, it is important to have a process for determining the jurisdictional status of ephemeral and intermittent drainages that recognizes the variability between these drainage types, how they vary regionally, and how different they are from rivers and perennial streams... (p. 13-16)

Agency Response: The longstanding regulatory definition of "waters of the United States" included "tributaries" without any limitations regarding volume or duration of flow. The December 2008 Guidance on post-Rapanos implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water. Regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow but may not declare an ephemeral stream non-jurisdictional altogether. See, e.g., 40 CFR § 131.10(g)(2). See summary response for "Relevance of Flow Regime" above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion that all waters that meet the definition of "tributary" and that are not excluded in paragraph (b), have a significant nexus either individually or in the

aggregate with traditional navigable waters, interstate waters, and the territorial seas. The exclusions outlined in paragraph (b) are broad and include most ditches that are not actually relocated tributaries or excavated in tributaries. As summarized in the Science Report, scientific literature unequivocally demonstrates that streams, individually or cumulatively, exert a strong influence on the chemical, physical, and biological integrity of downstream water, and the Science Advisory Board expressed support for the proposed rule's inclusion of tributaries as categorical waters of the United States. The agencies further note that the final rule is solely a definitional rule, and specific implementation of permitting programs, including the CWA 404 Nationwide Permit program, are beyond the scope of the rule.

John Deere & Company (Doc. #14136.1)

8.220 The Proposed Definition For Tributary Sets Forth Poorly Defined and Optional Criteria Creating Confusion and Uncertainty

...under the proposed tributary definition, no ordinary high water mark is deemed necessary if it is a water that “contributes flow” to certain other jurisdictional waters. Specific scientific criteria for identification such as flow duration, volume, and degree are not provided. Perhaps the closest the agencies come to defining the term “contributes flow” can be found in the rule’s preamble in which they offer that “tributaries do not need to flow perennially to have a significant nexus to downstream waters” and that “episodic events can be very important for transmitting a substantial amount of material into downstream rivers.”¹⁵ Apparently, any flow, at any time, over all land features functioning as a drainage way leading to waters of the United States would be considered within the definition of a tributary and, therefore, subject to regulation. Further adding to the confusion is the agencies’ proposal to make all tributaries “jurisdictional by rule” meaning that a for case-specific determination will not be conducted. This could mean that any water that determinations where waters contribute flow, directly or indirectly “contributes flow” to a jurisdictional water, is now considered a jurisdictional water. Moreover, under the proposed tributary definition, no ordinary high water mark is deemed necessary if it is a water that “contributes flow” to certain other jurisdictional waters. Specific scientific criteria for identification such as flow duration, volume, and degree are not provided. Perhaps the closest the agencies come to defining the term “contributes flow” can be found in the rule’s preamble in which they offer that “tributaries do not need to flow perennially to have a significant nexus to downstream waters” and that “episodic events can be very important for transmitting a substantial amount of material into downstream rivers.”¹⁵ Apparently, any flow, at any time, over all land features functioning as a drainage way leading to waters of the United States would be considered within the definition of a tributary and, therefore, subject to regulation to a TNW.

Further adding to the confusion is the agencies’ proposal to make all tributaries “jurisdictional by rule” meaning that a case-specific determination will not be conducted. This could mean that any water that directly or indirectly “contributes flow” to a jurisdictional water, is now considered a jurisdictional water. (p. 8)

Agency Response: The definition of “tributary” in the final rule specifically requires physical indicators of bed and bank and an ordinary high water mark in order for a feature to be considered a tributary. The simple fact that a feature might “contribute flow” to a jurisdictional water does not automatically make that feature a tributary. Furthermore, the exclusions outlined in paragraph (b) of the final rule are broad and include most ditches that are not actually relocated tributaries or excavated in tributaries. See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of “contribute flow.” Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

Corporate Environmental Enforcement Council, Inc. (Doc. #14608)

- 8.221 ...how will contribution be measured? Will it be based on volume alone or instead on some combination of volume, duration, frequency, magnitude, predictability and impact? The proposed definition also says that a tributary will still be jurisdictional even in the face of man-made breaks such as bridges, culverts, pipes or dams. But how will this be interpreted in the field? How far back in time will the Agencies go to establish jurisdiction? CEEC notes that many of the Nation’s iconic city-scapes, including Washington, D.C. and New York City have been built on, over or adjacent to natural rivers, streams and wetlands. Over time, most of these natural features have been bridged, culverted, piped and dammed to provide space for structures, roads and other urban infrastructure. Are these century-old and now heavily engineered natural features jurisdictional? (p. 7)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the requirement of “contribute flow” and regulation of man-altered streams. Determinations of whether a water “contributes flow” are expected to be done in a manner similar to what has been practiced in the field for decades. While precise measurements of flow volume and duration are not required, tools such as aerial photographs, topographic maps, flow gauges, and the like will be helpful in determining contribution of flow. The final rule preamble discusses this process in greater length in Section IV.F.1. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII also specifically discusses man-made or man-altered tributaries and their effect on the physical, chemical and biological integrity of traditional navigable waters, interstate waters and the territorial seas. Man-made and man-altered tributaries, despite human manipulation, usually continue to have chemical, physical, or biological connections

downstream and to serve important functions downstream. Tributary ditches and other man-made or man-altered waters that meet the definition of “tributary” have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas due to their impact, either individually or with other tributaries, on the chemical, physical, or biological integrity of those downstream waters. .

Arizona Chamber of Commerce and Industry (Doc. #14639)

- 8.222 The proposed rule also improperly attempts to extend federal jurisdiction to all tributaries to traditional navigable waters, including all ephemeral tributaries (i.e., tributaries that flow only in response to storm events). The proposed expansion of federal jurisdiction to all ephemeral features in Arizona’s desert lands is not supported by science and clearly exceeds the EPA and Corps’ authority under the Clean Water Act.

The science underlying this proposal was developed in Eastern states that receive far more rain and is simply not applicable to the arid West, where hydrologic drainage conditions are very different. The proposal to extend jurisdiction to all ephemeral tributaries no matter how small or remote from traditional navigable waters would have a disproportionate impact on states such as Arizona that have vast areas of desert lands characterized by sparse vegetation, highly erodible soils, and infrequent, but high intensity, rain events. These conditions result in numerous erosional features, such as small dry desert washes and arroyos that crisscross the desert landscape. Although these erosional features would seldom if ever contribute flow to a traditional navigable water, the proposed rule appears to suggest that the mere presence of bed and banks and ordinary high water mark is sufficient evidence of flow to extend jurisdiction to even ephemeral drainage features in arid landscapes. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of “contribute flow.” Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

Greater Houston Partnership (Doc. #14726)

- 8.223 GHP is also concerned that the approach used in current guidance to assert jurisdiction over tributaries has been abandoned in the proposed rule. Under current guidance the agencies have indicated that they would only assert jurisdiction over *non-navigable tributaries of traditional navigable water that are relatively permanent where tributaries typically flow year round or have continuous flow at least seasonally (at least three months per year)*. GHP suggests that this current guidance approach be incorporated into the rulemaking and continued. (p. 2)

Agency Response: The longstanding regulatory definition of “waters of the United States” included “tributaries” without any limitations regarding volume or duration

of flow. The December 2008 Guidance on post-Rapanos implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water. Regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow but may not declare an ephemeral stream non-jurisdictional altogether. See, e.g., 40 CFR § 131.10(g)(2). See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters.

Indiana Cast Metals Association (Doc. #14895.1)

- 8.224 The proposed rule would assert jurisdictional authority over countless dry creeks, ditches, swales and low spots that are wet only occasionally because it rains. Even worse, the proposed rule attempts to claim authority over remote “wetlands” and other drainage features solely because they are near an ephemeral drainage feature or ditch that are now defined as a water of the U.S. subject to CWA jurisdiction. Such unnecessary expansion of CWA jurisdiction significantly burdens metalcasting operations without providing any meaningful human health or environmental benefits. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule outlines numerous exclusions for features that will not be waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries, water-filled depressions created in dry land incidental to mining or construction activity and erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of “tributary.”

Landmark Legal Foundation (Doc. #15364)

- 8.225 The nearly boundless new authority the Agencies seek is demonstrated by the examination of EPA-created maps displaying what it considers wetlands and waterways. The maps were provided to the US. House of Representative's Committee on Science, Space and Technology ("Committee") and are publically available via the Committee's website. (<http://science.house.gov/epa-maps-state-2013#overlay-context>). These maps display what EPA labels "perennial, intermittent and ephemeral streams"

Looking at EPA's maps of Missouri, for example, would lead one to think that the entire state is a waterway of some sort or other. (It is not.) (Exhibit I, "Streams and Waterbodies in Missouri," and Exhibit 2, "EPA Region 7 National Wetlands Inventory.") As presented in these maps, "waterbodies" cover the entirety of the states -including non-navigable, and non-adjacent waters. EPA's maps demonstrate EPA's and the Corps' intent to expand their regulatory and permitting powers under the Clean Water Act to all water-navigable or non, permanent or fleeting. (p. 10-11)

Agency Response: The agencies do not have maps illustrating the extent of jurisdictional waters of the United States. Determining the jurisdictional status of a water feature often requires site specific knowledge. Although the final rule provides increased clarity and “bright line” distinctions to help differentiate waters of the United States from non-jurisdictional features, it will not eliminate the need for consideration of site specific knowledge. The agencies generally only conduct jurisdictional determinations at the request of individual landowners, thus we do not have maps depicting the geographic scope of the CWA. Such maps do not exist and the costs associated with a national effort to develop them are cost prohibitive and would require access to private property across the country. The U.S. Geological Survey and the U.S. Fish and Wildlife Service collect information on the extent and location of water resources across the country and use this information for many non-regulatory purposes, including characterizing the national status and trends of wetlands losses. This data is publicly available and the agencies have relied on USGS and USFWS information to characterize qualitatively the location and types of national water resources. This information is depicted on maps but not for purposes of quantifying the extent of waters covered under CWA regulatory programs.

Idaho Association of Commerce & Industry (Doc. #15461)

- 8.226 IACI objects to the Agencies' proposal to categorically regulate all "tributaries." a term that includes intermittent and ephemeral streams and most ditches...Accordingly, the Agencies should revise their jurisdictional-by-rule proposal to clarify that jurisdictional "tributaries" are limited to waters that contribute direct flow to a traditional navigable water via a continuous surface connection... (p. 3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule outlines numerous exclusions for features that will not be waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries.

American Council of Engineering Companies (Doc. #15534)

- 8.227 In the past, ephemeral streams, ephemeral ditches, and other waters with less than intermittent flow or flow only in direct response to rainfall have commonly been determined to be non-jurisdictional features with no regulatory or permitting requirement. Including ephemeral streams as jurisdictional waters constitutes a significant expansion of the definition as they are now explicitly regulated by Section 404 of the CWA.

...

The discussion in the proposed rule regarding ephemeral streams lacks sufficient clarity to enable the regulated community and professional practitioners to consistently differentiate between natural ephemeral streams and erosional features that occur in

different ecoregions of the U.S. Erosional features can be the result of past land use practices employed between the mid-20th century and the present day. These erosional features may have adverse influence on the conditions downstream which may be improved using modern design criteria for vegetated swales and channels. Therefore, clarification is needed to assist field practitioners in differentiating between ephemeral streams that would be considered tributaries under the proposed revisions. There should be very clear guidance in the rule as to what constitutes an ephemeral stream as contrasted with erosional features, particularly in light of the significant nexus requirements of the *Rapanos* guidance jointly issued by the USACE and EPA in response to the Supreme Court's plurality decision in *Rapanos v. USACE*.

The specific inclusion of ephemeral streams and the specific exclusion of upland ditches, gullies, rills, and non-wetland swales create confusion and potential risk for our clients as the interpretation in delineating these features can overlap. The intent of the new rule is to provide clarity and predictability to determinations of jurisdiction, yet this proposed definition of waters of the U.S. still remains uncertain. These proposed changes could create significant additional review and revision of delineations, design, planning, and permitting scenarios. (p. 3-4)

Agency Response: The longstanding regulatory definition of “waters of the United States” included “tributaries” without any limitations regarding volume or duration of flow. The December 2008 Guidance on post-*Rapanos* implementation noted that tributaries that flow only in direct response to rainfall are subject to the CWA if they have a significant nexus to a downstream traditional navigable water. Regulations addressing water quality standards for waters of the United States provide that states may modify standards for streams with natural ephemeral flow but may not declare an ephemeral stream non-jurisdictional altogether. See, e.g., 40 CFR § 131.10(g)(2). See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters and the territorial seas.

GBMC & Associates (Doc. #15770)

- 8.228 ...The scientific literature reviewed and synthesized by the ORD included numerous papers addressing connectivity of intermittent and ephemeral streams to traditionally navigable waters. While the research provided support that intermittent and ephemeral streams can have "some measure of significance for connection to downstream water quality" as proposed by Justice Kennedy, it is hard to see that it provided justification that all ephemeral streams contain a significant nexus to downstream waters. Much of the literature lumps intermittent and ephemeral streams into a single category such as small streams or headwater streams and do not differentiate the specific functions of ephemeral streams. Thomas C. Winter, in his article titled *The Role of Tround Water in Generating Streamflow in Headwater Areas and in Maintaining Base Flow*, states that "nearly all streams need to have some contribution from ground water in order to provide reliable

habitat for aquatic organisms". Lack of a ground water connection to many ephemeral streams would not provide reliable habitat for aquatic organisms based on this statement. The literature often references the function of small/headwater wetted streams in providing habitat for aquatic invertebrates and nutrient transformations/spiraling. In the paper *Ecological Linkages Between Headwaters and Downstream Ecosystems: Transport of Organic Matter, Invertebrates, and Wood Down Headwater Channels* by Whipfli et.al., headwaters and headwater streams are defined as "small (usually <1m wide) wetted channels, and typically containing no fish, usually because of the lack of suitable habitat or the presence of fish migration barriers, but are fluvially connected to downstream water bodies that do". The upper reaches of many ephemeral streams only contain water for a few hours to a few days following a rain event and likely do not serve the function of providing suitable habitat, nor do they provide sufficient retention time for nutrient transformations or significant retention. (p. 2-3)

Agency Response: Providing habitat for aquatic organisms and conditions amenable for nutrient spiraling are only two of many potential functions of ephemeral and intermittent streams. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion that ephemeral and intermittent tributaries significantly affect the chemical, physical or biological integrity of traditional navigable waters, interstate waters and the territorial seas. Thus, the agencies conclude that all waters that meet the definition of "tributary" and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with these downstream waters.

- 8.229 4. The proposed rule makes several statements indicating that Intermittent streams and ephemeral streams will be treated the same, as they share similar functions in relation to a finding of significant nexus (Sec.II.C.2 and Sec.III.F.) This is far from the truth in many watersheds. Intermittent¹⁵⁷ streams have flow at least seasonally and generally have sustained perennial pools during a normal climatic year. Ephemeral¹⁵⁸ streams only have flow for a few days (at most) following a rainfall run-off event and do not have sustained perennial pools. This major difference precludes the development of significant aquatic habitat and aquatic communities in ephemeral streams. This reality also precludes significant chemical exchange from occurring in the channel, that is cited so frequently in the proposed rule as affecting the "chemical integrity" of waters listed in (a)(1) Through (a)(3). In many ephemeral streams, and particularly in those in moderate to high slope land surfaces, the travel time is too great for any substantial chemical exchange to occur. Ephemeral streams primary functions are water and sediment transport, not aquatic life or chemical exchange. These primary functions are easily replaced by whatever drainage pathways the stream might find should a headwater ephemeral stream be omitted from the landscape. For example, in a common development project (which the 404 program is designed to regulate) where an ephemeral stream channel is filled, the water volume on the site is still present, and will still need to be controlled through site drainage features

¹⁵⁷ North Carolina Department of Environmental and Natural Resources.

http://portal.ncdenr.org/web/wq/swp/ws/401/waterresources/faqs#What_is_a_stream_

¹⁵⁸ Ephemeral Stream." Merriam-Webstercom. Merriam-Webster, n.d. Web. 10 Oct. 2014.

[http://www.merriamwebster.com/dictionary/ephemeral stream>.](http://www.merriamwebster.com/dictionary/ephemeral%20stream)

that might include naturally allowing the water to find its way to the next closest stream channel, creation of man-made drainage ditches to reroute the water flow or other relevant storm water best management practices. Any of these drainage controls, and others not mentioned, easily replaces the uses (water and sediment transport) lost by elimination of the ephemeral stream. We request that the agencies differentiate between intermittent and ephemeral streams, that ephemeral streams be more clearly defined and that they be treated differently in the significant nexus determination. Many ephemeral streams, if not all, should be excluded from Section 404 jurisdiction by definition; as they do not have functions that would be lost should the stream channel be eliminated. Redefining ephemeral streams in this way will provide the clarity and improved program efficiency that the agencies desire and would not be expected to cause a significant adverse impact to TNWs. (p. 3-4)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

Federal Water Quality Coalition (Doc. #15822.1)

8.230 **3. Evolution of the expansion of “tributary” jurisdiction.**

The agencies did not originally assert jurisdiction under the CWA over ephemeral water features. In fact, their assertion of authority over ephemeral water is relatively recent. In 1975, the preamble to the Corps’ interim final regulations specified that the upstream limit of jurisdiction is the headwaters, or point where average annual stream flow is five cubic feet per second.¹⁵⁹ In 1977, the preamble to the final Corps regulations specified that jurisdiction extends to the entire surface tributary system.¹⁶⁰ In 1994, the Corps Baltimore District issued a guidance letter specifying that ephemeral waters act as rain gutters, conveying water for a brief period of time following rain events. As such, they do not ordinarily develop an ordinary high water mark that would indicate they are part of a tributary system. Consequently, they were not regulated.¹⁶¹ However, in 2000, the Corps Nationwide Permits preamble specified that federal jurisdiction extends to ephemeral streams, provided they have an ordinary high water mark, overturning the Baltimore District’s presumption that ephemeral streams would not have an ordinary high water

¹⁵⁹ 40 Fed. Reg. 31,320, 31,321 (July 25, 1975).

¹⁶⁰ 42 Fed. Reg. at 37,129.

¹⁶¹ Branch Guidance Letter, COE, Baltimore District, CENAB-OP-R, No.95-01, Oct. 17, 1994 (“Project Managers are frequently required to determine the upstream limits of regulatory jurisdiction, including differentiating between intermittent streams, which are regulated (33 CFR § 328.3(a)(3)), and ephemeral streams, which are not regulated.”) (attached). This has been relied upon by numerous entities. See attached Montgomery County, MD guidance.

mark.¹⁶² This assertion of jurisdiction led to abuses.¹⁶³ Moreover, even though the Corps took this position in 2000, as discussed below, both the plurality and Justice Kennedy were not persuaded that an ordinary high water mark is a basis for jurisdiction.

The agencies also did not assert authority over ditches until relatively recently. In fact, the 1977 Corps definition of waters of the U.S. expressly excluded “manmade nontidal drainage and irrigation ditches excavated on dry land” from the definition of tributaries, stating that they “are not considered waters of the United States under this definition.” 33 C.F.R. § 323.2(a)(3)(1977).¹⁶⁴

In addition, the agencies have not traditionally asserted jurisdiction over water based on subsurface connections that are not diversions of former surface streams and have never done so categorically.¹⁶⁵ For example, a 2001 policy issued by the Galveston District of the Corps of Engineers states that it does not use groundwater connections to establish jurisdiction.¹⁶⁶ Moreover, directly contradicting the position in the proposed rule, in litigation, EPA has taken the position that identification of a connection to surface water via groundwater must be made on a site-specific basis.¹⁶⁷

Yet the agencies now claim that all waters proposed to be defined as “tributaries,” including ephemeral waters, ditches, and waters with subsurface connections, have a “significant nexus” to navigable or interstate waters or the territorial sea and therefore are per se jurisdictional. This is an expansion of jurisdiction.

This proposed expansion of the definition of tributary has created tremendous uncertainty regarding the status of land that exhibits erosion features from wind or water even if dry for many years, the status of water conveyance systems, the status of water drainage systems, the status of ephemeral streams, and the status of features that have no continuous surface connection to navigable water. (p. 12-13)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and

¹⁶² 65 Fed. Reg. 12,818, 12,823 (Mar. 9, 2000).

¹⁶³ For example, in a March 30, 2004, hearing of the Water Resources and Environment Subcommittee of the House Committee on Transportation and Infrastructure on “Inconsistent Regulation of Wetlands and Other Water,” one witness testified that a Corps official used a 25-year old skidder rut to connect a wetland to a ditch to a stream. House Doc. No. 108-58 at 81-82 (attached). Under the proposed rule, Corps officials would remain free to conclude that a skidder rut has an OHWM and therefore is part of the tributary system.

¹⁶⁴ “We have adopted the suggestion of many commenters that we incorporate into our definition (and not in the Preamble as we did in 1975) the statement that nontidal drainage and irrigation ditches that feed into navigable waters will not be considered ‘waters of the United States’ under this definition. To the extent that these activities cause water quality problems, they will be handled under other programs of the FWPCA, including Sections 208 and 402.” 42 Fed. Reg. at 37127. Even though the preamble stated that the regulations were merely reorganized, the 1986 definition of waters of the U.S. moved this clarification from rule language to preamble language and reserved the right to regulate ditches on a case by case basis. 51 Fed. Reg. at 41217.

¹⁶⁵ Waters and Wetlands, Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction (GAO-04-297), at 24 (discussing using connections through subsurface closed conveyances to establish jurisdiction only if the pipe replaced a historic stream) (attached). No such limitation appears in the proposed rule.

¹⁶⁶ Adjacent/Isolated Criteria, Galveston District Policy Number 01-001 (attached).

¹⁶⁷ *Conservation Law Foundation et al. v U.S. EPA, et. al.*, Case No. 1:10-cv-11455-MLW, Memorandum in Support of Defendants’ Motion for Summary Judgment, at 20-21 (noting that a hydrological connection to surface water via groundwater is a site-specific determination) (attached).

the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule outlines numerous exclusions for features that will not be waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries.

- 8.231 Under the *Rapanos* case, a showing that regulation of a tributary is necessary to protect navigable water must be based whether the flow in the tributary is “relatively permanent” and whether that flow could affect water quality. The plurality decision determined that flow must be relatively permanent to have any impact on downstream navigable water. Justice Kennedy added a requirement that not just any impact was sufficient; it must be a significant impact. As discussed above, Supreme Court precedent requires that both tests be met for a non-navigable water to be jurisdictional under the CWA.

Applying that test to “tributaries,” tributaries would be defined as waters of the U.S. based on whether a natural channel of water that maintains flow even when it is not raining such that it is “relatively permanent.” In addition, the tributary must be capable of transporting pollution to a navigable water such that it could have a significant impact on the navigable water. This legal basis for this recommendation is the fact that the purpose of the CWA is to protect navigable waters from pollution. The technical basis would be an evaluation of the permanence of the flow and whether that flow could carry pollutants to a navigable water in a particular geographic area.¹⁶⁸ This definition would not extend to water that goes underground, so the agencies would not need to make arbitrary decisions about the distance groundwater can travel, or how many years can elapse before groundwater is recharged to surface water, and remain a “tributary.” The CWA does not apply to groundwater, shallow or not. Water that becomes groundwater loses its status as a water of the U.S. Thus, non-navigable water that flows on the surface before it becomes groundwater cannot be considered a water of the U.S. These distinctions will do much to increase the clarity of a proposed rule.

Under this definition, identification of a tributary would not be based on U.S. Geological Survey maps, aerial photography, or remote sensing information, as proposed by the agencies. Instead, it would be based on quantitative information about flows, adding

¹⁶⁸ The agencies’ subjective determination that an OHWM can be discerned is not an appropriate surrogate. In 2003, Robert Pierce reviewed the reliability of the use of the term “OHWM” and other terms that the Corps uses to determine the limits of its jurisdiction in inland landscapes and identified technically-based alternative concepts that would be more appropriate and defensible. He concluded that: “The COE needs to assess what a reasonable level of flow is necessary to have an effect on a navigable waterbody before it concludes that any particular landscape feature that exhibits an OHWM is jurisdictional.” See Pierce, *supra* n. 126, at 22.

certainty and clarity and greatly reducing arbitrary differences among jurisdictional determination[.] (p. 64-65)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and “Requirement of Contribute Flow.”

8.232 **B. Focus on Water Bodies, Not Overland Flow, Point Source Conveyances, or Water Used for Municipal, Industrial, or Commercial Purposes.**

The agencies claim the authority to identify what waters are “the focus of the CWA.” 79 Fed. Reg. at 22218. However, they do not explain what that focus is. We urge the agencies to recognize that the CWA is focused on the protection of the quality of navigable waters and is not focused on the use of land or water. Further, not all water is a water of the United States even if it can convey pollutants to navigable water. To facilitate future decision-making and promote certainty regarding when the CWA does and does not apply, the agencies should articulate the legal and policy rationales for identifying water that is not a “water of the U.S.”

1. Overland flow.

First, the agencies should clearly explain that the CWA does not regulate the overland flow of rain and snow melt. All overland runoff may eventually flow to a channel, but this water is considered a nonpoint source.¹⁶⁹ It would not become part of the waters of the U.S. until it flows into a water of the U.S.

Applying this clarification, water that flows only in response to rain or snow melt would not be a water of the U.S. Thus, a reproposal would not need to define gullies and rills or distinguish them from an “ephemeral stream.” None of these features would be subject to federal jurisdiction.

... (p. 66-67)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an OHWM. The rule includes ephemeral streams that meet the definition of tributary as waters of the United States, because the agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. See also the summary response for Section 8.4. “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swales.” Section VII of the Technical Support Document also discusses the

¹⁶⁹ *Trustees for Alaska v. EPA*, 749 F.2d 549, 558 (9th Cir.1984) (“[P]oint and nonpoint sources are not distinguished by the kind of pollution they create or by the activity causing the pollution, but rather by whether the pollution reaches the water through a confined, discrete conveyance.”).

differences between rills and other non-jurisdictional erosional features and ephemeral tributaries that are waters of the United States.

Action United et al. (Doc. #18859)

8.233 We support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 59% of Pennsylvania's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 25% of Pennsylvania's stream miles. These streams are also critical habitat for fish and other aquatic species.

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 8 million residents in Pennsylvania. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 10,720 miles of streams in Pennsylvania that 63% of our residents depend on for drinking water. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an OHWM. The rule includes ephemeral streams that meet the definition of tributary as waters of the United States, because the agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Southern Nevada Home Builders Association (Doc. #3251)

8.234 The EPA's proposed rule change also contains several assumptions and definitional changes that will inarguably result in an expansion of jurisdiction. For example, the proposed rule assumes that all "tributaries" have a significant nexus to TNWs and/or other interstate waters and, therefore, constitute de facto "jurisdictional waters" subject to regulation under the CWA. The proposed rule change appears to make this assumption solely on the basis of the Connectivity Study and without any further site-specific analysis or consideration of the size, flow or location of these areas classified as "tributaries". In addition, the term "tributaries" is so broadly defined that it nearly includes anything that carries any periodic water flows, including "man-altered and man-made" canals, ditches and other similar man-made waterways, all of which were previously not regulated under the CWA. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such

characteristics, it is not considered “tributary” under this rule. Section VII of the Technical Support Document further discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. For these reasons, the final rule does not require that a case-by-case determination be made regarding whether an ephemeral or tributary stream has a significant nexus to navigable waters. Instead, the case-by-case inquiry is whether or not the water under consideration meets the rule’s definition of “tributary” and is not excluded by paragraph (b). Section VII also specifically discusses man-made or man-altered tributaries and their effect on the physical, chemical and biological integrity of traditional navigable waters, interstate waters and the territorial seas. Man-made and man-altered tributaries, despite human manipulation, usually continue to have chemical, physical, or biological connections downstream and to serve important functions downstream. The rule’s conclusion that waters meeting the definition of “tributary” have a significant nexus is informed by EPA’s Office of Research and Development (ORD) Science Report (a peer-reviewed compilation and analysis of published peer-reviewed scientific literature summarizing the current scientific understanding of the connectivity of and mechanisms by which streams and wetlands, singly or in combination, affect the chemical, physical, and biological integrity of downstream waters). The agencies also must rely on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

The Elm Group, Inc. (Doc. #9688)

- 8.235 The proposed rule considers all tributaries "waters of the United States" based on their ability to affect the biological, chemical, and/or physical quality of the downstream receiving waterbody regardless of their position in the watershed and flow characteristics (ephemeral versus perennial). However, the biological, chemical, and physical characteristics of the streams located in a shared watershed can differ significantly based on adjacent land uses and historic activities/use, and are not always a reflection of the upstream areas. As such, the new definition should allow for the exemption of some tributaries (i.e., ephemeral, small intermittent) based on a lack of similar biological, chemical, and physical characteristics and the absence of a significant connection (potential affect) to the downstream regulated waterbody. (p. 1)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. Section VII of the Technical Support Document further discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that

are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

- 8.236 As currently defined in the new rule, a tributary that has defined bed/bank and a high water mark but no longer conveys water due to adjacent land use changes would be considered an ephemeral, regulated waterbody. Considering the ongoing changes in numerous watersheds and water resource management practices, the new rule should further clarify when and how frequently a stream/tributary needs to "contribute flow" to a downstream waterbody in order to have a significant impact on the receiving streams' chemical, biological, and physical quality. More specifically, ELM suggests a stream should be required to contribute flow for a period at least twice as long as the annual number of days of flow that is directly associated precipitation-driven surface water runoff events. Otherwise, the contributed flow during storm events will be dominated by surface runoff with little contribution of the biogeochemical processes in the area of runoff. (p. 1-2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and “Requirement of ‘Contribute Flow’”. The definition of “tributary” in the final rule, like the proposed rule, requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow, it is likely that these characteristics will not be maintained. The agencies recognize that land use changes can influence the amount of flow associated with receiving streams. These changes can be taken into account by field personnel when making jurisdictional determinations. Determinations of whether a water “contributes flow” are expected to be done in a manner similar to what has been practiced in the field for decades. This is why determinations of jurisdiction are done on a case by case basis based on the best information available and they are only valid for five years, to allow for changes in environmental conditions to shape the outcome over time. The final rule preamble discusses this process in greater length in Section IV.F.1. See also summary response 8.3 below.

National Ready Mixed Concrete Association (Doc. #13956)

- 8.237 NRMCA is extremely concerned about the inclusion of ephemeral streams as waters of the U.S. These small features run for a short time, only after rain events, and their inclusion is an enormous expansion of jurisdiction. In Kansas, it would increase the amount of jurisdictional stream miles more than 400%, from 32,000 miles to 134,000 miles while having a negligible impact on environmental quality.¹⁷⁰ Because the agencies use the term “water” and “waters” in the proposed rule not just to “refer solely to the water contained in these aquatic systems, but to the system as a whole including

¹⁷⁰ Letter to Nancy Stoner, Acting Assistant Administrator for Water, U.S. Environmental Protection Agency from Sam Brownback, Governor of Kansas (July 14, 2011).

associated chemical, physical, and biological features, ”¹⁷¹ including ephemeral streams will inevitably result in regulating land use as they are dry most of the time. (p. 10)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Building Industry Association of Greater Louisville (Doc. #16449)

8.238 The proposed rule redefines and expands the reach of the Clean Water Act (CWA) jurisdiction in that the rule:

- More broadly reaches inclusion of ephemeral waterways that may flow only intermittently and indirectly over a long distance to reach a navigable water;

... (p. 1)

Agency Response: See summary response for section 8.1.1. Also, Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

National Association of Home Builders (Doc. #19540)

8.239 This overbroad streams is an expansion of jurisdiction. The definition of tributaries will sweep in waters and features well beyond the reach of the Agencies’ CWA authority and any commonsense definition of the word.

1. Asserting Categorical Jurisdiction over all Tributaries is Legally Indefensible.

The Agencies’ categorical assertion of jurisdiction over all tributaries is inconsistent with the *Rapanos* Court and inappropriately reverts back to regulating any mere hydrologic connection.

a. The Tributary Definition Contravenes the Supreme Court in *Rapanos*.

Both the *Rapanos* plurality and Justice Kennedy raised concerns about far-reaching jurisdiction over features distant from navigable waters and carrying insignificant volumes of flow. The plurality even went so far as to chastise the Corps for extending

¹⁷¹ Footnote 3 – 79 FR 22191.

jurisdiction to "'ephemeral streams,' 'wet meadows,' storm sewers and culverts, 'directional sheet flow during storm events,' drain tiles, man-made drainage ditches, and dry arroyos in the middle of the desert,"¹⁷² and in doing so, stated, "the Corps has stretched the term 'waters of the United States' beyond parody."¹⁷³ Justice Kennedy similarly criticized the Agencies' "existing standard" for tributaries which "deems a water a tributary if it feeds into a traditional navigable water (or tributary thereof) and possesses and ordinary high water mark" because this definition "leave[s] wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor volumes toward it."¹⁷⁴ Indeed, Justice Kennedy noted, "the dissent would permit federal regulation whenever wetlands lie alongside a ditch or drain, however remote or insubstantial, that eventually may flow into traditional navigable waters. The deference owed the Corps' interpretation of the statute does not extend so far."¹⁷⁵

Despite these clear statements and contrary to the limits of CWA jurisdiction recognized by the *Rapanos* plurality and Justice Kennedy's concurrence, the proposed definition of tributary allows for per se jurisdiction over features with remote proximity and tenuous connections to traditional navigable waters, including ephemeral drainages. Indeed, just like the Agencies' previous standard that the Supreme Court considered too far-reaching, the Agencies' new definition allows for categorical regulation of conveyances, drains, ditches, and ephemeral streams that have little or no relationship to traditional navigable waters. Clearly, the proposed rule's definition of tributary is over broad and ignores the limits of the CWA recognized by the Supreme Court. In the words of Justice Scalia, "[t]he plain language of the statute simply does not authorize this 'Land is Waters' approach to federal jurisdiction." Yet with the over broad definition of tributary, the Agencies are again attempting to stretch the definition of "waters of the United States" beyond parody. (p. 55-56)

Agency Response: Compared to the historic scope of the existing rule, the final rule is narrower; compared to agency practice in light of guidance issued after SWANCC and *Rapanos*, the final rule is generally broader, but not broader than the existing rule. See summary response for "Relevance of Flow Regime" above, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

- 8.240 **b. Basing the Tributary Definition on the Contribution of Flow Inappropriately Reverts Back to Regulating any Mere Hydrologic Connection - a Theory Rejected by both the *Rapanos* Plurality and Justice Kennedy.**

¹⁷² *Rapanos*, 547 U.S. at 734

¹⁷³ See *id* at 734.

¹⁷⁴ See *id* at 781.

¹⁷⁵ *Id.* at 778, 779.

The proposed rule designates any water a tributary and per se jurisdictional if it "contributes flow, either directly or through another water," to a traditional navigable water, interstate water territorial sea, or impoundment of any of those three. By defining any water as jurisdictional by rule if it has a bed, bank, and an ordinary high water mark (OHWM) and contributes flow to such a jurisdictional water, the Agencies have disregarded the Supreme Court ruling in *Rapanos* in which five Justices rejected the notion that CWA jurisdiction applies to any water if it possesses a hydrologic connection to a traditional navigable water. Justice Kennedy opined, "... mere hydrologic connection should not suffice in all cases; the connection may be too insubstantial far the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood."¹⁷⁶ He continued, "...a...ditch could...be located many miles from any navigable-in-fact water and carry only insubstantial flow towards it. A more specific inquiry, based on the significant nexus standard, is therefore necessary."¹⁷⁷ The *Rapanos* plurality note "relatively continuous flow is a necessary condition for qualification as a 'water,' not an *adequate* condition."¹⁷⁸ The concurring Justices may not have all agreed on the test required to determine jurisdiction, but they did agree that jurisdiction should not be based on the presence a hydrologic connection in and of itself. The Agencies must honor this commonality in the proposed rule.

By defining tributary as a feature that "contributes flow," the Agencies ignore the tests developed by the Supreme Court in *Rapanos* and wrongfully revert back to regulating any hydrologic connection. Furthermore, the Agencies disregard Justice Kennedy's "significant nexus" test by making all connections categorically jurisdictional. Such a broad overreach is impermissible. (p. 56)

Agency Response: The definition of "tributary" in the final rule specifically requires physical indicators of bed and bank and an ordinary high water mark in order for a feature to be considered a tributary. The simple fact that a feature might "contribute flow" to a jurisdictional water does not automatically make that feature a tributary. Furthermore, the exclusions outlined in paragraph (b) of the final rule are broad and include most ditches that are not actually relocated tributaries or excavated in tributaries. See summary response for "Relevance of Flow Regime" above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of "contribute flow." Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion that all waters that meet the definition of "tributary" and that are not excluded in paragraph (b) have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

8.241 **2. Lacking Scientific Support, the Agencies Wrongly Assert that All Tributaries have a Significant Nexus to Downstream Waters.**

¹⁷⁶ *Id.* at 784,785.

¹⁷⁷ *Id.* at 786.

¹⁷⁸ *Id.* at 736 n.7 (original emphasis).

The Agencies assert that all tributaries have a significant nexus to traditional navigable waters: “With this proposed rule, the Agencies conclude, based on existing science and the law, that a significant nexus exists between tributaries . . . and the traditional navigable waters, interstate waters, and the territorial seas . . . Consequently, this rule establishes as ‘waters of the United States,’ all tributaries . . . of the traditional navigable waters, interstate waters, and the territorial seas . . . it has been determined that as a category, [tributaries] have a significant nexus and thus are ‘waters of the United States.’”¹⁷⁹ The authors of the Connectivity Report, however, recognize the decreasing impact a water has on downstream waters with increasing distance between those waters, stating, “all else being equal, materials traveling shorter distances could enter the river with less transformation or dilution [than materials traveling longer distances],”¹⁸⁰ and continuing, “[h]ydrologic connectivity between streams and rivers can be a function of the distance between the two water bodies.”¹⁸¹ Further, Justice Kennedy recommended the Corps consider the distance of a tributary to a navigable water when making a jurisdictional determination: “. . . the Corps may choose to identify categories of tributaries that . . . due to their . . . proximity to navigable waters . . . are significant enough that wetlands adjacent to them are likely . . . to perform important functions for an aquatic system incorporating navigable waters.”¹⁸²

Dr. Mark Murphy of EPA’s SAB also raised concerns about the assertion that all tributaries are per se jurisdictional, stating, “the inclusion by rule of all tributaries to traditional navigable waters is not scientifically justified by the published literature, the Connectivity report or the SAB review. Inclusion by rule violates the conclusion of the SAB review that connectivity exists as a gradient of causal phenomena that operate variably over flowpaths, and result in consequential disturbances in the watershed.”¹⁸³ In other words, Dr. Murphy recognizes that not all tributaries have the same impact on downstream waters. Rather, connectivity between tributaries and traditional navigable waters exists on a gradient from insubstantial to significant. Indeed, an ephemeral stream in Arizona that only flows as a trickle several hours a year does not have the same chemical, physical, and biological effects on the Colorado River as does the Little Colorado River, a perennial tributary contributing most of the flow to the Colorado.¹⁸⁴ (See Section VI. b. i. 4. for a more detailed discussion of the Agencies’ failure to recognize connectivity and significant nexus along a gradient).

Despite suggestions put forth by a United States Supreme Court Justice, an SAB panelist, and peer-reviewed science cited by a cadre of ecologists, the Agencies ignore the decreasing impact a water has on downstream waters with increasing distance between those waters. The proposed rule states, “[t]ributaries have vitally important effects on the physical integrity of (a)(1) through (a)(3) waters, contributing not only the majority of flow in these waters but affecting the structure of the waters. These effects occur . . . even

¹⁷⁹ 79 Fed. Reg. at 22,193.

¹⁸⁰ Draft Connectivity Report at 1-5.

¹⁸¹ *Id.* at 3-41.

¹⁸² *Rapanos*, 547 U.S. at 781 (emphasis added).

¹⁸³ 8/14/14 SAB Comments on the Proposed Rule at 63.

¹⁸⁴ Benke, A.C., and C.E. Cushing. Editors. *Rivers of North America*, Burlington, MA: Elsevier Academic Press, 2005. Print.

when the tributaries are significant distances from the (a)(1) through (a)(3) water."¹⁸⁵ The proposed rule continues, "[t]ributaries that . . . are a substantial distance from the nearest (a)(1) through (a)(3) water . . . are essential components of the tributary network and have important effects on the chemical, physical, and biological integrity of (a)(1) through (a)(3) waters . . ."¹⁸⁶ Indeed, the Agencies have ignored the science in an aggressive effort to sweep all features with a bed, a bank, and an OHWM that contribute flow - regardless of magnitude, duration, and frequency - under the jurisdiction of the CWA. This is illogical and cannot be supported. (p. 57-58)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, legality of asserting jurisdiction over ephemeral waters and requirement of “Contribute Flow.” The definition of “tributary” in the final rule emphasizes the importance of flow. Flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. Section VII of the Technical Support Document further discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. While the agencies’ conclusion is informed by the Science Report, the agencies also must rely on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

8.242 **5. The Agencies Fail to Define Key Terms and Describe Key Methods Necessary to Determine Whether or not a Water Meets the Tributary Definition, Thereby Increasing Regulatory Uncertainty.**

The Agencies claim that the proposed rule will increase clarity as to the scope of “waters of the United States” protected under the CWA. However, they have failed to define three key terms used to determine whether or not a water meets the tributary definition and if that water is jurisdictional by rule. By not defining “bank,” “flow,” and “another water” the Agencies have not increased clarity regarding the jurisdictional scope of the CWA, yet have provided more hooks with which to claim authority.

a. The Agencies Fail to Define Critical Parameters Needed to Identify the “Bank” of a Tributary.

In addition to the challenges associated with identifying the OHWM, NAHB finds it troublesome that no parameters or bright lines are identified to objectively quantify the point at which a “bank” occurs and a water exhibits one of the three geomorphic characteristics necessary to meet the definition of tributary. For instance, the proposed

¹⁸⁵ 79 Fed. Reg. at 22,205 (emphasis added).

¹⁸⁶ *Id.* at 22,206 (emphasis added).

rule explicitly excludes “non-wetland swales” from jurisdiction and differentiates non-jurisdictional non-wetland swales from jurisdictional tributaries in that non-wetland swales are “non-channelized, shallow trough-like depressions that carry water mainly during rainstorms or snowmelt” – a definition that could possibly be used to define many of the “tributaries” the Agencies seek to regulate.¹⁸⁷ According to the proposal, however, a non-channelized “swale” becomes a “tributary” at the point at which it becomes channelized; that is, when it exhibits a bank. While the Agencies claim the proposed rule provides clarity to regulated entities as to whether individual water bodies are jurisdictional, without a clearly defined threshold for bank, the point at which a non-jurisdictional swale becomes a jurisdictional tributary is left to speculation (Fig. 4). This will add unnecessary regulatory confusion, and make it difficult for home builders and others in the regulated community to know with certainty whether or not a water is under federal jurisdiction. At a minimum, the Agencies must define bank within the tributary definition in order to provide any semblance of clarity.

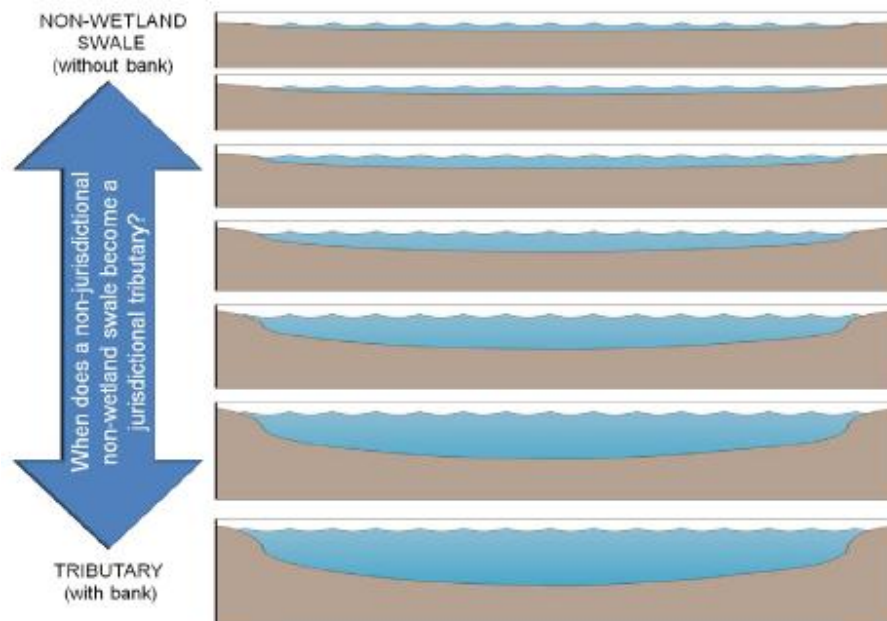


Figure 4: The Agencies assert that features with a bed, a bank, and an OHWM are tributaries and categorically jurisdictional. Non-wetland swales that lack a bank, however, are explicitly excluded from CWA jurisdiction. Without defining the point at which a geomorphic feature exhibits a bank, the Agencies have not provided clarity as to whether a feature is a jurisdictional tributary or a non-jurisdictional non-wetland swale.

(p. 63-64)

Agency Response: Agency response: The preamble of the final rule defines bed and banks to mean the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual. For a discussion of the agencies’ response to comments regarding clarity for definitions, see Compendium

¹⁸⁷ *Id.* at 22,219.

14.3 and associated summary essay and individual responses. See also the summary response for “Relevance of Flow Regime” above.

8.243 b. The Agencies Fail to Define “Flow” and Associated Ecologically Critical Parameters.

In addition to the case law inconsistencies related to the contribution of flow, the tributary definition fails to describe and define critical scientific streamflow parameters. Flow, a “master variable” defining stream structure and function¹⁸⁸ and arguably one of the most well studied parameters in lotic ecology, is undefined. In one of the most oft-cited papers in stream ecology, entitled “The Natural Flow Regime,” Dr. LeRoy Poff and colleagues state, “streamflow quantity and timing are critical components of water supply, water quality and the ecological integrity of river systems. Indeed, streamflow, which is strongly correlated with many critical physicochemical characteristics of rivers, such as water temperature, channel geomorphology, and habitat diversity, can be considered a master variable that . . . regulates the ecological integrity of flowing water systems.”¹⁸⁹ Dr. Poff et al. describe a widely accepted framework highlighting the central importance of flow magnitude, frequency, duration, timing, and rate of change on the ecological integrity of stream ecosystems (Fig. 5).

¹⁸⁸ Poff, N.L., J.D. Allan, M.B. Bain, J.R. Karr, K.L. Prestegard, B.D. Richter, R.E. Sparks, J.C. Stromberg. 1997. The Natural Flow Regime. *BioScience*, Vol. 47(11):769-784.

¹⁸⁹ *Id* at 769.

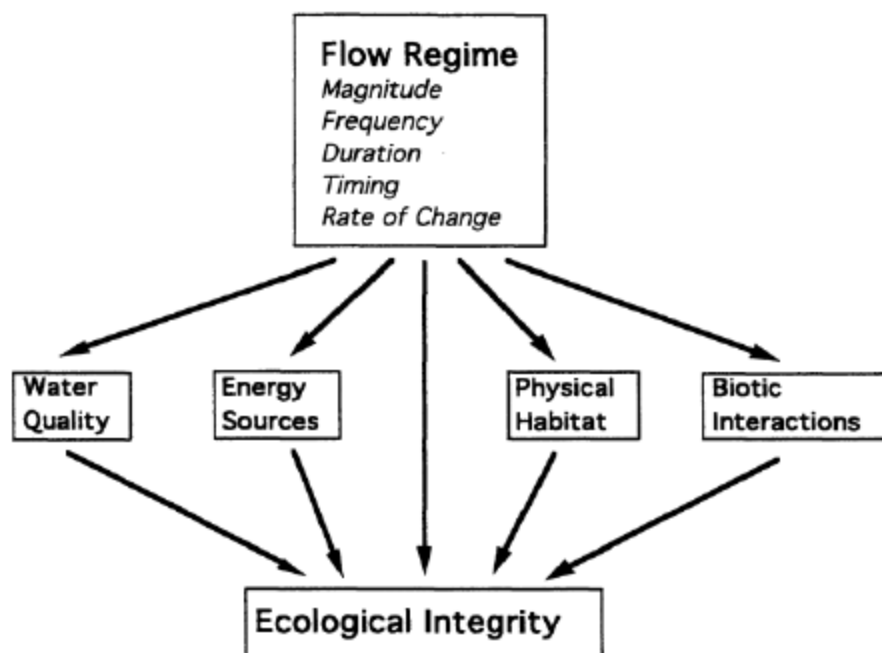


Figure 5: The "natural flow regime" framework highlighting the central importance of flow magnitude, frequency, duration, timing, and rate of change on the ecological integrity of stream ecosystems.¹⁹⁰

Streamflow is commonly described in lotic ecology according to the flow parameters Dr. Poff and his colleagues described in 1997. Yet, the proposed rule - which the Agencies purport to be based on the "best available science"¹⁹¹ - provides no descriptors to define flow. In *Rapanos*, Justice Kennedy suggested the Corps consider flow volume when determining the jurisdiction of tributaries: "... the Corps may choose to identify categories of tributaries that, due to their volume of flow ... are significant enough that wetlands adjacent to them are likely ... to perform important functions for an aquatic system incorporating navigable waters."¹⁹² Yet the Agencies have failed to heed this advice.

Flow parameters are critical toward determining the degree to which a water significantly affects the chemical, physical, and biological integrity of traditional navigable waters.¹⁹³ For example, the greater the magnitude (i.e., discharge volume) of flow, the longer the duration of flow, and the greater the frequency of flow between a water and a traditional navigable water, the greater the probability that water will significantly affect the chemical, physical, and biological integrity of a traditional navigable water. Indeed, EPA's SAB included a figure describing this phenomenon in its final review of the draft Connectivity Report (see Fig. 2 above), where it depicts the decreasing probability of a water to affect a downstream water as the magnitude, duration, and frequency of flow between those waters decreases. Yet, the draft Connectivity Report and the proposed rule

¹⁹⁰ Source: *id.* at 770.

¹⁹¹ 79 Fed. Reg. at 22,202.

¹⁹² *Rapanos*, 547 U.S. at 781 (emphasis added).

¹⁹³ Poff et al. at 770; Allan, J.D. and M. M. Castillo. *Stream Ecology*, 2nd ed. New York: Springer, 2007. Print.

both interpret hydrologic connectivity among waters as binary - that is either connected or not connected - when connectivity and subsequent chemical, physical, and biological impacts between waterbodies occur along a gradient.¹⁹⁴

By failing to define flow and associated hydrologically and ecologically critical parameters, including magnitude, duration, and frequency, the Agencies wrongfully consider all tributary flows to be equal in their ability to significantly affect the chemical, physical, and biological integrity of traditional navigable waters. In reality, hydrologic connectivity and the degree of subsequent physicochemical impacts on downstream waters exist along a gradient from insubstantial to significant. This gradient must be reflected in the approach the Agencies use to determine those waters that are "waters of the United States" and those that are not. (See Section VI. b. i. 4. for further discussion of the gradient of connectivity and, in turn, significant nexus). (p. 64-66)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The final rule relies on physical characteristics rather than a particular flow regime to identify tributaries with a significant nexus, either individually or in the aggregate, with traditional navigable waters, interstate waters, and the territorial seas. The rule’s definition of tributary requires two physical indicators of flow: there must be a bed and banks, and an additional indicator of OHWM. These physical indicators of water flow are only created by sufficient and regular intervals of flow. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See also summary response under section 8.4: Distinction between ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.

8.244 **i. The Agencies Fail to Describe Methods to Quantify Contributions of Flow to an (a)(1) through (4) Water.**

To meet the definition of tributary, and subsequently be jurisdictional by rule, a water must contribute flow, either directly or through another water to a traditional navigable water, interstate water, territorial sea, or impoundment. The Agencies, however, have proposed no methods to quantify the contribution of flow from tributaries to downstream waters. This causes particular concerns related to how the Agencies will determine if a water contributes flow in those instances where a break occurs along the length of a tributary. For example, what if flow from the tributary goes subsurface or evaporates along the length of the break? If 100% of the flow entering the break infiltrates to a deep groundwater aquifer or evaporates along the length of the break, the upstream tributary is in fact not contributing flow to a downstream (a)(1) through (4) water and thus would not meet the definition of tributary.

Similarly, both water quantity and quality change along stream reaches and tributary networks. In fact, the draft Connectivity Report recognizes that "streams and rivers are not pipes," and because of this, "water can be lost from the channel through evaporation

¹⁹⁴ Leibowitz, S.G. 2003. *Isolated wetlands and their functions: an ecological perspective*. *Wetlands*: 23(3):517-531

and bank storage and diluted through downstream inputs.”¹⁹⁵ Additionally, the draft Connectivity Report states, “if geographically isolated unidirectional wetlands have surface water outputs [which would be defined as tributaries if they possess a bed, bank, and OHWM and contribute flow to an (a)(1) through (5) water] . . . the probability that surface water will infiltrate or be lost through evapotranspiration increases with distance.”¹⁹⁶

Without methods to determine if a water actually contributes flow, the Agencies will likely rely on visual assessments alone. Clearly, the presence of a bed, a bank, and an OHWM and surface 1 flow in an Arid West ephemeral stream channel could be mistaken for a contributing flow when in fact the water flowing across the landscape does not contribute flow to a downstream traditional navigable water, interstate water, territorial sea, or impoundment. As an example, we highlight research that has been conducted by the United States Department of Agriculture at the Walnut Gulch Experimental Watershed in southeastern Arizona. The Walnut Gulch watershed is characterized by a dense network of ephemeral stream channels (Fig. 6).

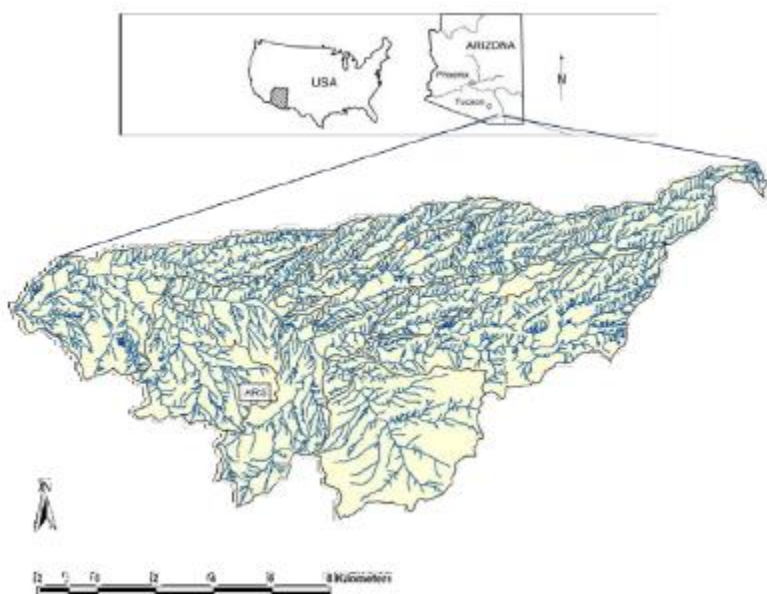


Figure 6: Ephemeral stream network in Walnut Gulch watershed (near Tucson, Arizona).¹⁹⁷

The Walnut Gulch watershed is classified as semi-arid, and receives an average of 13.8 inches of rain per year. When it does rain, both the ground and the air are very “thirsty.” As a result, an overwhelming amount of the precipitation is lost to groundwater (i.e., infiltration) or the sky (i.e., evaporation). The below figure shows the water balance for the Walnut Gulch watershed (Fig. 7).

¹⁹⁵ Draft Connectivity Report at 3-23 and 3-41.

¹⁹⁶ *Id.* at 3-42.

¹⁹⁷ Modified from Walnut Gulch Experimental Watershed Research Brochure. United States Department of Agriculture, Agricultural Research Service, and Southwest Watershed Research Center (October, 2003), at 17.

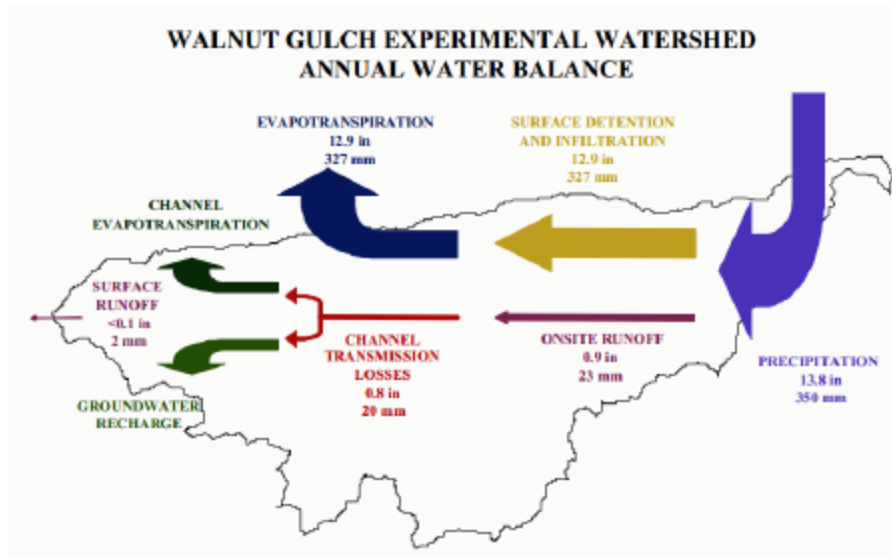


Figure 7: Walnut Gulch watershed annual water balance.¹⁹⁸

The take home from Fig. 7 is that while 13.8 inches of rain falls on the watershed annually, less than 0.1 inches travels as streamflow down the network. Of the rain that falls on the watershed – a network of hundreds of miles of ephemeral channels with beds, banks, and OHWMs – only 0.5% flows to downstream waters! Across the Walnut Gulch watershed and, indeed much of the arid Western United States, most stream flows traverse dry channels. As water flows over these “thirsty” channels, even more flow volume is lost to transmission losses, or infiltration to stream banks and groundwater (Fig. 8). The landscape is highly dissected by a dense dry channel network (Fig. 6) providing significant opportunity for transmission losses. In a recent report on non-perennial streams in the arid and semi-arid Southwestern United States, EPA and USDA scientists note, “Numerous authors have documented substantial transmission losses in ephemeral streams, frequently to such an extent that flows infiltrate completely before reaching the watershed outlet (Keppel and Renard, 1962; Aldridge, 1970).”¹⁹⁹ Without describing methods to determine the contribution of flow from these so-called “tributaries,” a bed, a bank, an OHWM, and the mere presence of flow might be wrongfully interpreted as meeting the proposed definition of tributary. It is critical that the Agencies describe methods that will be used to distinguish the presence of flow in a channel from the contribution of flow from that channel to an (a)(1) through (4) water.

¹⁹⁸ Source: *Id.* at 21.

¹⁹⁹ Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest. U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046, at 33, citing: Keppel, R.V. and K.G. Renard. 1962. Transmission losses in ephemeral stream beds. *Journal of the Hydraulics Division, ASCE*, v. 8, n. HY3, p. 59-68; Aldridge, B.N. 1970. Floods of November 1965 to January 1966 in the Gila River Basin, Arizona and New Mexico, and adjacent basins in Arizona; US Geological Survey Water-Supply Paper 1850-C, 176

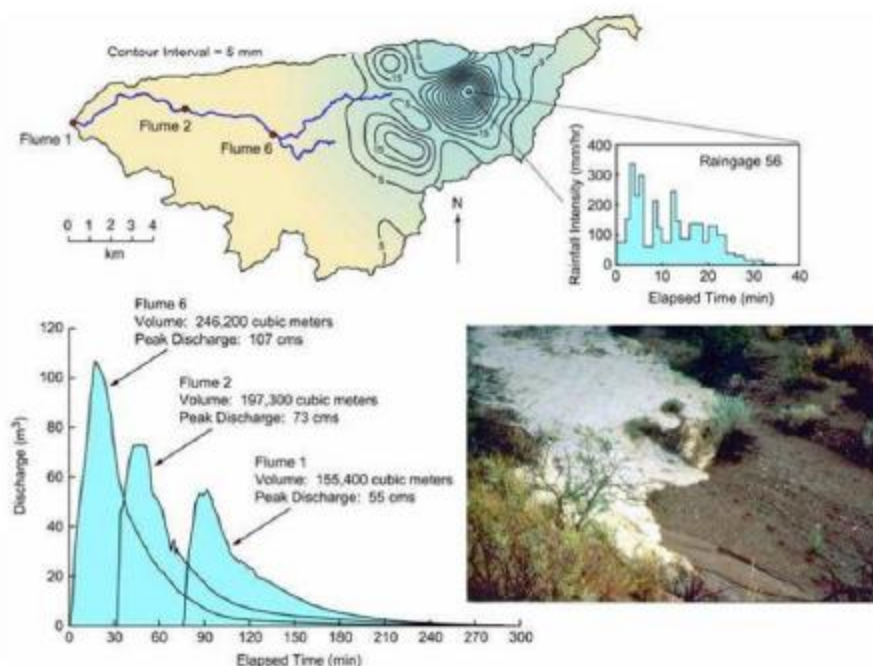


Figure 8: An example of transmission losses in Walnut Gulch watershed. The August 27, 1982 storm was isolated in the NW portion of the watershed (top panel). The runoff measured at Flume 6 (left peak) amounted to $2.46 \times 10^6 \text{ m}^3$. Runoff then traversed 4.2 km of dry streambed between Flume 6 and Flume 2, resulting in significant infiltration losses (middle peak). During the course of the 6.6 km from Flume 2 to Flume 1, the peak discharge was further reduced (right peak). The image in the bottom right depicts an advancing flow front down the dry channel.²⁰⁰

Indeed, the importance of quantifying flow is noted in the existing guidance: “For purposes of demonstrating a connection to traditional navigable waters, it is appropriate and reasonable to assess the flow characteristics of the tributary at the point at which water is in fact being contributed to a higher order tributary or to a traditional navigable water.”²⁰¹ The Agencies must propose scientific methods to quantify the contribution of flow from a water to an (a)(1) through (4) water. Determining if a water contributes flow to a downstream water should not be made based on visual identification alone, precisely because “streams and rivers are not pipes.” This particularly true in arid regions, as noted in the Walnut Gulch example (see Section VI. c. iv. 5.b. i.), and in instances where a break (s) exist between the water and the downstream water (see Section VI. c. iv. 4.) (p. 66-70)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The final rule does not require an evaluation of flow volume, flow duration and flow frequency for tributaries because the agencies have determined that existing science supports the conclusion that all waters that meet the definition of “tributary” and that are not excluded in

²⁰⁰ From *id.* at 18.

²⁰¹ 2008 Rapanos Guidance at 10.

paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. By grounding the definition of “tributary” to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. Section VII of the Technical Support Document further discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. See also summary response under section 8.4: Distinction between ephemeral water and a non-jurisdictional gully, rill or non-wetland swale. See also responses addressing significance of “breaks” in bed and bank and OHWM and discussion in TSD and elsewhere regarding consistency of rule with applicable Supreme Court cases.

8.245 c. The Agencies Fail to Define “Another Water.”

A water satisfies the definition of tributary if it has a bed, bank, and OHWM and contributes flow, either directly or through another water, to an (a)(1) through (4) water. Again, the Agencies have failed to define a critical term within the tributary definition. In this instance, they have not defined “another water.” Left undefined, “another water” is left open to limitless interpretation. For example, if 100% of the surface water in an ephemeral stream with a bed, bank, and OHWM in the Arid West evaporates to water vapor, condenses on tiny particles in the air to form a cloud, and then falls from the cloud as rain into the Colorado River, it has contributed flow to a traditional navigable water; it would meet the tributary definition. Let’s say manmade aqueducts and tanker trucks collect water from a waterbody and deliver it to a drinking water reservoir during a period of drought, those aqueducts and trucks have contributed flow. Would the water from which the drinking water was collected meet the tributary definition? As another example, a USGS study of the Delmarva Peninsula found that groundwater return times (the time required for recharge at the water table to return to a stream through groundwater) can take from years to decades.²⁰² If an ephemeral stream on the Delmarva Peninsula recharges groundwater and only returns to a downstream tributary some 60 years later, has it contributed flow and met the tributary definition?

Is “another water” synonymous with the Agencies’ overbroad definition of “water” provided in footnote 3 of the preamble? In other words, does “another water” include “chemical, physical, and biological features” associated with water bodies as traditionally understood? If so, if a muskrat associated with a tributary (which would meet the overbroad footnote definition of “water”) drinks water from that tributary, travels to a downstream (a)(1) through (4) water, and urinates therein, the muskrat has functioned as “another water” to contribute flow to an (a)(1) through (4) water.

While these hypotheticals may seem farfetched, without defining “another water,” the contribution of flow necessary to meet the tributary definition can result from any two

²⁰² Sanford, W.E., and J.P. Pope. Quantifying Groundwater's Role in Delaying Improvements to Chesapeake Bay Water Quality. Environ. Sci. Technol. 2013,47,13330-13338.

atoms of hydrogen combined with one atom of oxygen that together make their way to any downstream (a)(1) through (4) water. This is absurd. "Another water" must be defined if the Agencies intend the proposed rule to provide clarity to the "waters of the United States" definition. (p. 70)

Agency Response: The definition of “tributary” in the final rule retains the phrase “contributes flow, either directly or through another water.” This reflects scientific literature about the connectivity among waters discussed in the summary response of this section, the Technical Support Document, and the Science Report. The final rule does not require that the flow be contributed either directly or through waters that are themselves jurisdictional. Water contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters. See further discussion in summary response 8.1.1 above.

New Mexico Mining Association (Doc. #8644)

8.246 Comment 3: The final rule should not permit jurisdiction under (a)(5) or (a)(6) on the basis of surface connections or contributions of flow that are less than perennial.

In two instances, the proposed rule confusingly permits jurisdiction over waters based on the vague and undefined concepts of ephemeral and intermittent surface connections. First, the proposed rule states that a wetland, lake or pond that contributes even ephemeral or intermittent flow to a water identified in (a)(1) through (a)(3), is a tributary and jurisdictional under (a)(5). See 79 Fed. Reg. 22202 . Second, the proposed rule states that a water with an intermittent or ephemeral confined surface connection with a water identified in (a)(1) through (a)(5), can be "adjacent" and therefore jurisdictional under (a)(6). See 79 Fed. Reg. 22208 .

The rule's use of ephemeral and intermittent connections is both unclear and over-expansive. Could a surface connection or contribution of flow be *too* intermittent? For instance, especially in the arid Southwest, flooding events can lead to "fill and spill" contributions of flow through confined surface paths, but only once every 50 or more years. In this commenter's view, if such flooding events, despite their infrequency, subjected otherwise isolated and distant waters to the agencies' jurisdiction, such an expansive approach is well beyond the "significant nexus" standard.

The final rule should be amended such that only perennial flows are sufficient to establish jurisdiction. Alternatively, the final rule should more clearly define the frequency of surface connection or contribution of flow required to be considered "intermittent" for purposes of inclusion as a "tributary" or "adjacent" water. (p. 3)

Agency Response: See summary responses for sections 8.1.1, 8.3 and 8.4. Ephemeral streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary under the final rule, and are thus considered waters of the United States. The agencies concluded that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. However, the final rule expressly indicates in paragraph (b)

that ephemeral reaches that do not meet the definition of tributary are not waters of the United States. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. See also summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s excluded features.

Reclamation and Abandoned Mine Lands Divisions, Public Service Commission, North Dakota (Doc. #12857)

8.247 ... to better explain and illustrate areas to be covered by the proposed rule, we strongly recommend that EPA/COE provide specific examples of tributaries (especially ephemeral streams) and isolated water bodies in different regions of the country that would be categorically considered as jurisdictional waters under the proposed definition and those that would not be jurisdictional. More specific examples should also be provided where case-by-case jurisdictional determinations will be needed. Providing these examples and then re-opening the comment period will provide all interested parties with a better understanding of the scope of the "waters of the United States" definition. (p. 2)

Agency Response: See summary responses for Sections 8.1 and 8.4. The final rule does not require that a case-by-case determination be made regarding whether an ephemeral or tributary stream has a significant nexus to navigable waters; rather, waters that meet the definition of tributary (as defined in the rule) that are not otherwise excluded under paragraph (b) are categorically considered to be waters of the United States are tributaries. Section III(C) of the preamble and Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law. The agencies will work to provide the public technical guidance and examples of final jurisdictional determinations during rule implementation.

Enefit American Oil (Doc. #13438)

8.248 The agencies’ determination that these ephemeral features, many of which may flow for only a few hours or days following a rain event, categorically have a significant nexus to traditional navigable waters and are therefore jurisdictional is not supported by science and therefore cannot be used in any final rule.

Enefit recommends the agencies revisit the definition of a “tributary” and base that definition in sound science and legal precedent. Enefit also recommends that the *carte blanche* treatment of tributaries as WoUS be re-evaluated. While Enefit acknowledges and appreciates the agencies’ attempt at improving clarity and efficiency in WoUS jurisdictional determinations (“JDs”), the proposed rule is a dramatic expansion of Federal regulation under the CWA, particular in the arid western U.S. If evaluating the significance of a nexus by a tributary to a traditional navigable water is necessary for determining jurisdiction under the CWA, then so be it – that work must be done. To simply default to a position that the mere presence of a nexus means that it is significant

is unreasonable, arbitrary and capricious, and represents a gross expansion of Federal jurisdiction in the arid western U.S. Further, this presumption is in direct conflict with Justice Kennedy’s opinion in *Rapanos*, where the significant nexus test has its genesis. (p. 3)

Agency Response: Agency Response: The agencies disagree that tributaries cannot be categorically considered waters of the United States. See summary response for section 8.1.1. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Further, Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

Arizona Mining Association (Doc. #13951)

8.249 4. The “contribute flow” standard in the proposed definition of “tributary” needs to be defined with specificity as applied to the ephemeral systems in the arid West: The requirement to determine whether a potential water “contributes flow” to a downstream water, and is thus a regulated tributary under the proposal, can be complicated in arid systems. Small ephemeral washes distant from larger regulated waters may contribute water to those larger waters only on a very infrequent basis (e.g., in a 5, 10, 25, 50, 100 or even 500 year event). Are all of these washes treated as “contributing flow” to the downstream water? Is the mere presence of a traceable physical connection, no matter how lengthy or tenuous, sufficient to establish a tributary relationship, and thus create a presumption of jurisdiction? That certainly seems to be the intent of the proposal, but as noted above, such an approach flatly contradicts the statement in Justice Kennedy’s concurring opinion in *Rapanos* that “mere hydrologic connection should not suffice in all cases; the connection may be too remote or insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood.” See 547 U.S. at 784.

Due to infrequent flow, in combination with transmission losses and other factors, even dry desert washes located in close proximity to a TNW often will lack any ability (or possess very limited ability) to contribute flow to the TNW. Ephemeral washes in the arid West tend to be “losing systems,” meaning that much of the water that may flow in ephemeral washes in response to infrequent storm events will be lost to infiltration before it travels very far. One may be able to trace a line on a map that connects a distant headwater ephemeral wash to a downstream TNW, but in reality water from the wash may have little or no potential of reaching the downstream water in any realistic scenario. The proposed rule’s assumption that ephemeral washes always or routinely contribute flow to TNWs is factually flawed. Rather, in most instances, dry desert washes will lack any relevant physical connection much less any type of “significant nexus” to a downstream TNW. For example, at the Silver Bell Mine in Pima County, Arizona, an applicant provided information showing that even in a 100-year, 24-hour storm event, water in headwater ephemeral washes would only travel an estimated 12.9 miles from the mine. The nearest TNW in that case was over 100 miles away. In a situation such as that,

the headwater wash has no realistic chance of contributing flow to the TNW, and should not be considered a tributary that is automatically regulated. (p. 12)

Agency Response: See summary response for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The Agencies believe that grounding the definition of “tributary” in the final rule to the above referenced specific physical features will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule. Section VII of the Technical Support Document further discusses the science supporting the agencies’ conclusion and its consistency with Supreme Court case law.

Nevada Mining Association (Doc. #14930)

8.250 Many Ephemeral and Intermittent Drainages Could Be Deemed "Tributaries": It is highly questionable, to say the least, whether ephemeral and intermittent drainages in the arid and semi-arid West that flow for at most a few days or weeks every year or every few years, and where the flow may reach a TNW or a tributary thereof once every decade, have or could have any impact on a TNW located scores of miles away, let alone a significant impact. As the WAC comments show, the Agencies lack any sound scientific basis for concluding that such drainages could have any such significant adverse impact on a TNW. Nonetheless, under the Proposal, it appears that all such ephemeral and intermittent drainages would be deemed "tributaries" and therefore per se jurisdictional if they physically connect with, and contribute even one drop of surface flow to, a TNW or its major tributaries. Thus, the Proposal defines the term "tributary" to mean any "water physically characterized by the presence of bed and banks and ordinary high water mark" and "which contributes flow, either directly or through another water," to a TNW. See, e.g., paragraph (c)(5) at 79 Fed. Reg. 22263. Moreover, a "tributary" as so defined does not lose its status as a tributary if, for any length, there are one or more natural breaks (such as a stream that flows underground) so long as a bed and bank and an ordinary high water mark can be identified upstream of the break. *Id.*

In certain member companies' meetings with Corps and EPA officials, those officials stated that ephemeral and intermittent drainages are jurisdictional under the Proposal, regardless of how infrequently flow is actually observed from the drainage to a seasonal or perennial stream (even if only once every decade or several decades), so long as the drainage has a bed, banks, and ordinary high water mark, and it physically connects (without losing its channel definition) to a TNW or tributary to a TNW. EPA and Corps officials were adamant that the bed, banks, and ordinary high water mark are physical manifestations that the drainage has a high enough volume, frequency, and duration of flow that it "contributes flow" to a TNW or tributary system. *See also*, 79 Fed. Reg. 22202 (stating these features "generally are physical indicators of flow"). Thus, in the Agencies' view, regulators need not demonstrate that an ephemeral or intermittent drainage actually "contributes flow" - even one drop of water - to a TNW to be considered a jurisdictional "tributary"; rather, so long as the drainage has the physical characteristics defined by the Agencies as indicating flow, and the drainage channel connects by surface to a TNW or a tributary of a TNW, it is *per se* jurisdictional. This

approach fails to conform with the morphogenesis of certain features in the Great Basin, where some drainages are established during very rare (hundreds of years) extreme precipitation events.

The Agencies' assertion of jurisdiction over all such "tributaries" is a reversal of the position taken in the 2008 Guidance, and is directly contrary to Justice Kennedy's "significant nexus" test set forth in the *Rapanos* decision. It is also contrary to the *Rapanos* plurality's concept of a "tributary," which requires that streams flow continuously at least seasonally to be considered per se jurisdictional. In *NvMA*'s view, the Agencies' position in the 2008 Guidance that only "relatively permanent" tributaries are per se jurisdictional is reasonable, while the definition of a tributary in the Proposal is not. Drainages that rarely flow, and in particular ephemeral or intermittent drainages that flow once every decade or so, cannot rationally be said to affect in all cases, much less to significantly affect, the chemical, physical, or biological integrity of a downstream TNW, which in the arid/semi-arid West would be many, many miles away. To the extent the Agencies are relying on the U.S. EPA Draft Report: "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of Scientific Evidence," Docket No. EPA-HQ-OA-2013-0582 (November 6, 2013) to support the proposed definition of "tributary," *NvMA* notes that, as explained in the WAC comments, the science underlying this Report deals mostly with areas of the U.S. where ephemeral and intermittent drainages do experience significant flows on an annual basis, not with the arid/semi-arid West.

As such, and as we discuss more fully below, we believe that the Agencies must, at a minimum, exclude ephemeral and intermittent drainages from the category of per se jurisdictional waters and include flow volume and duration requirements when determining on a case-by-case basis the jurisdictional status of particular ephemeral and intermittent drainages. Absent such changes to the Proposal, there is a significant chance that many ephemeral and intermittent drainages on mine properties that no regulator would ever heretofore have considered as even potentially jurisdictional (because their flow is so small that they could not, under any stretch of the imagination, significantly affect a downstream TNW) , might now be regulated as "tributaries." (p. 17-19)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

Barrick Gold of North America (Doc. #16914)

- 8.251 ...a channel could be declared a tributary without any documentation that flow from the channel actually reached the jurisdictional water. And even if flow were documented, the significance of it is beside the point. By using aggregation, the agencies have made the significance of contribution by the individual channel irrelevant.

The unnamed channel at Barrick's Goldstrike/Arturo facility is not atypical. There are ephemeral drainages like this all over the West. They may conduct flow once or twice a year during precipitation or snowmelt, or may do so much less frequently. As likely as not, their bed, banks and ordinary high water marks are evidence of extraordinary flooding that happened in the distant past. In all but the most unusual circumstances, these kinds of drainages would have zero impact on remotely located traditional navigable waters. The agencies cannot justify a rule that imposes jurisdiction on all such drainages *per se*.

...the agencies could address many of Barrick's concerns with the proposed rule by taking the following actions:

...

- Clarify that in order to be considered a tributary, the agencies must establish that the channel in question actually contributes flow to a traditional navigable water, interstate water, or territorial sea, and that the flow is of a quantity and frequency that constitutes a "significant nexus."

... (p. 18, 29)

Agency Response: See summary response for sections 8.1.1 and 8.4. The final rule does not require an evaluation of flow volume, flow duration and flow frequency for tributaries because the agencies have concluded that all waters that meet the definition of "tributary" and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science that supports this conclusion in detail.

Virginia Coal and Energy Alliance and Virginia Mining Issues Group (Doc. #18016)

8.252 **II. Extending Jurisdiction to Ephemeral Streams is an Impermissible Expansion of Federal Jurisdiction**

Under the Proposal, all tributaries - perennial, intermittent **and** ephemeral - are deemed to be *per se* jurisdictional. But this is a flawed position that deviates from binding Supreme Court precedent established in *Rapanos v. United States*, 547 U.S. 715 (2006) and that rests on the unsupported scientific and legal assumption that all tributaries are important to the chemical, physical and biological integrity of traditional navigable waters, interstate waters and the territorial seas. See Proposed Rule at 22201. Historically, only ephemeral streams with an ordinary high water mark ("OHWM") have been deemed jurisdictional. See 65 Fed. Reg. 12823(2000) and GAO-04-297 Report "*Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction*"; see also EPA and USACE, *Questions and Answers for Rapanos and Carabell Decision*, June 5, 2007, at pg. 11 ("... some ephemeral tributaries and their adjacent wetlands will **not** be jurisdictional under the CWA.") (emphasis added).²⁰³ Yet now, without justification, the Agencies are seeking to abandon this past

²⁰³ Available at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/rapanos_ga_06-0507.pdf.

practice and instead assert blanket jurisdiction over all tributaries, including ephemeral streams.

As a threshold matter of statutory construction, the fact that Congress explicitly sought to limit federal jurisdiction under the CWA to only certain "navigable" "waters of the United States" underscores the fact that certain other waters necessarily fall beyond its reach. See 33U.S.C. §§ 1311(a), 1342(a) and 1362(7). Claiming *per se* jurisdiction over ephemeral streams would essentially render the word "navigable" meaningless. Surely Congress did not intend for this critical term to be read out of the Act by agency regulation.

At the same time, this move to automatically capture ephemeral streams as jurisdictional would directly contravene the "significant nexus" test that Justice Kennedy set forth in *Rapanos* ("This standard presumably provides a rough measure of the volume and regularity of flow. Assuming it is subject to reasonably consistent application ... it may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute 'navigable waters' under the Act.") (quoting J. Kennedy) (*Rapanos* at 781-782). Justice Kennedy's significant nexus test does not support a broad and unlimited assertion of jurisdiction over all tributaries without regard to their connection to downstream waters.

Ephemeral streams and drainages are a common feature across the SVC landscape. Most of these ephemeral streams are long distances from traditionally navigable waters ("TNWs") and have not been determined to be jurisdictional in the past. Under the Proposal, they would now become jurisdictional.

...

In sum, what the Agencies have proposed with respect to ephemeral streams is both legally deficient and unworkable in practice, particularly for Virginia's coal mining industry. (p. 4-5)

Agency Response: See summary responses for sections 8.1.1 and 8.4. Compared to the historic scope of the existing rule, the final rule is narrower; compared to agency practice in light of guidance issued after SWANCC and *Rapanos*, the final rule is generally broader, but not broader than the existing rule. Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

Montana Wool Growers Association (Doc. #5843.1)

- 8.253 Section (a)(5) allows the Agencies to regulate land. Section (c)(5) defines "tributary" as a "water physically characterized by the presence of a bed and banks." A "water" cannot be "characterized by . . . a bed and banks." The language instead implies the *channel* (the land feature) and not water *within* the channel is the WOTUS. If the Agencies intend to regulate water rather than land features, the Proposed Rule should not treat the two the same.

- a. The Proposed Rule should clarify that only *waters* are jurisdictional, not land features (e.g. "tributary means water within a channel that is physically characterized by the presence of a bed and banks"). (p. 7)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The Agencies believe that the physical characteristics of bed and banks and ordinary high water mark indicate there is sufficient volume, duration and frequency of flow in a water to have a significant effect on the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

- 8.254 3. Section (a)(5) is unclear. The Proposed Rule identifies a tributary "by the presence of a bed and banks and ordinary high water mark" and whether it "contributes flow, either directly or through another water, to [an (a)(1) through (a)(4) water]." In the arid west, both erosional features and ephemeral streams have all three characteristics and contribute flow to downstream waters. Further, many ephemeral waterways, like erosional features, only contribute flow to WOTUS during spring run-off and become deeply incised where reservoirs and channel straightening have disrupted natural water level and speed. Consequently, many erosional features in the arid west perform the same functions as, and are at times indistinguishable from, ephemeral waterways.

- a. The Proposed Rule should not grant the Agencies' jurisdiction over ephemeral waters. (p. 8)

Agency Response: See summary response for sections 8.1.1 and 8.4. The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The Agencies believe that grounding the definition of "tributary" in the final rule to the above referenced specific physical features will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule. Section VII of the Technical Support Document further discusses the science supporting the agencies' conclusion.

Alameda County Cattlemen (Doc. #8674)

- 8.255 **Not All Waters Under the Definition of Tributary Will Satisfy the Significant Nexus Analysis**

The agencies cannot categorically make anything with a bed, bank and OHWM that takes water somewhere downstream jurisdictional. The proposed rule is clear that the definition of 'tributary' does in fact include all ephemeral, intermittent and perennial features and that rate of flow (or any flow) is simply not a factor. (Proposed Rule at 22206; ("...the agencies conclude that tributaries, including headwaters, intermittent, and ephemeral streams, and especially when all tributaries in a watershed are considered in combination, have a significant nexus to traditional navigable waters, interstate waters, or territorial seas ...")). ACCW assert that the definition of tributary is overly broad because the agencies cannot make all tributaries per se jurisdictional without satisfying the significant nexus analysis. (p. 8)

Agency Response: The agencies disagree that tributaries cannot be categorically considered waters of the United States. See summary response for section 8.1.1. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Further, Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

- 8.256 The proposed rule states “...ditches not excluded in section (b) that, either directly or through other tributaries, convey water to...” Yet, this is in conflict with the actual definition for a tributary that states “...which contributes flow, either directly or through another water...” It is unclear whether to be a tributary the feature must contribute water through any means (i.e. “another water”) or through another tributary. Contributing flow through any type of water is clearly expansive, essentially making anything with a bed, bank and OHWM a “tributary” and subject to the CWA. It also contradicts the agencies’ statements and proposition that the proposed definition does not regulate groundwater, if groundwater can serve as the connection, and part of, a “tributary.” ACCW assert that neither Congress nor the Commerce Clause of Article I of the U.S. Constitution intended or allows such a result.²⁰⁴ The agencies’ definition of “tributary” violates the CWA and is beyond the authority of Congress to grant such unlimited authority based on the restrictions under the Commerce Clause of the U.S. Constitution. (p. 11)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The final rule does not require that the flow be contributed either directly or through waters that are themselves jurisdictional. Waters contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters. Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule outlines numerous exclusions for features that will not be waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries, groundwater and erosional features, such as gullies and rills.

Maryland Farm Bureau (Doc. #10755)

- 8.257 The proposed rule provides no basis for distinguishing between erosional features and small ephemeral feature. (p. 2)

²⁰⁴ SWANCC at 173; (“...we have reaffirmed the proposition that the grant of authority to Congress under the Commerce Clause, though broad, is not unlimited...But this [Migratory Bird Rule] is a far cry, indeed, from the ‘navigable waters’ and ‘waters of the United States’ to which the statute by its terms extends.”).

Agency Response: See summary responses for sections 8.1.1 and 8.4. Paragraph (b) of the final rule outlines numerous exclusions for features that will not be waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries, groundwater and erosional features, such as gullies and rills.

Hancock County, Indiana (Doc. #11980)

- 8.258 We are concerned that the new definition of a tributary may be used to justify the regulation of features which are not considered a "tributary" in any common sense of the word. We understand that the features must have a bed, bank and ordinary high water mark. Based upon recent apparent implementation of this definition in Indiana, it appears that features which are completely ephemeral and drain few acres are going to be considered tributaries. Those features provide no base flow and thus would not normally be considered a tributary as it is commonly understood or as it would appear to have been historically interpreted by the agencies. (p. 2)

Agency Response: See summary responses for sections 8.1.1 and 8.4. Ephemeral streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary under the final rule, and are thus considered waters of the United States. The agencies concluded that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. However, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not waters of the United States. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

Montana Farm Bureau Federation (Doc. #12715)

- 8.259 Under the proposed rule, the definition of "tributary" is extremely broad and is one of the most expansive and problematic terms in the entire rule. The online Oxford Dictionary defines "tributary" as "a stream or river that flows into a larger river or lake" and gives the example of "The Illinois River is a tributary of the Mississippi River." Therefore, we do not believe it is fitting to include tiny, ephemeral streams into the definition of "tributary." Ephemeral streams are not really streams at all, since they are dry ground most of the time. This aspect is especially problematic in states like Montana because as aforementioned, much of the land here is semi-arid and dry most of the year. Furthermore, Montana receives a great deal of moisture in the form of snow. Therefore, when it warms up in the spring, little streams form to drain the snowmelt into creeks and rivers. Those little ephemeral streams may even be defined enough to have a noticeable bed, bank and ordinary high water mark. They most likely only run water for a matter of days, or even hours at a time. Likewise, summer time in Montana is known to bring about thunderstorms which can release several inches of rain within minutes, causing small ephemeral streams to pop up for hours or even minutes. The rest of the year, this land is dry, grass covered and just a normal part of the pasture or field. It seems absolutely unnecessary and far beyond the scope of the Clean Water Act for such land features that

have water running over or standing on them for short periods of time, to be considered a "Water of the United States" since they are indeed, usually dry land.

As one may also expect in a semi-arid climate, there many creeks in Montana that only run when the snow is melting, or when it rains a significant amount. They may hold some stagnant water during wetter times of the year or if there is a natural spring depositing water into their banks, or the bed may be completely dry. Even though they are named creeks and are commonly called creeks by the farmers and ranchers, they often times drain into other creeks, which eventually lead to rivers miles and miles away and should really be considered ephemeral streams. The bed may be only a foot or two wide so there is absolutely no way these could ever be called navigable, even if there was water running in them at the time.

So called "streams" like the ones mentioned above should never be considered a "Water of the United States." Yet, the Agencies insist that "[t]ributaries that are small, flow infrequently, or are of substantial distance from the nearest (a)(1) through (a)(4) water, e.g., headwater perennial, intermittent, and ephemeral tributaries" are nevertheless part of the tributary network regulated by this proposal. 79 Fed. Reg. at 22,206. It is troubling that this rule includes numerous definitions for "tributary" and all of them are much too broad. For example, at 79 Fed. Reg. 22, 263 the Agencies state that tributaries are "a water physically characterized by a bed and banks, and ordinary high water mark ...which contributes flow, either directly or through another water to another water" that eventually reaches a traditional navigable water. They go on to state that tributaries can be natural, man-altered, or man-made. (p. 1-2)

Agency Response: See summary responses for sections 8.1.1 and 8.4. Ephemeral streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary under the final rule, and are thus considered waters of the United States. The agencies concluded that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. However, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not waters of the United States. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

Louisiana Cotton and Grain Association (Doc. #12752)

8.260 Tributaries are jurisdictional by rule, and include all features with a bed, bank and ordinary high water mark ("OHWM") that contribute flow, directly or "through another water," to a traditional navigable water ("TNW"), interstate water, territorial sea or impoundment, including ephemeral, intermittent or perennial flow? Does the undefined phrase "through another water" include nonjurisdictional drainages that "contribute flow" to a water of the U.S.? How much "flow" is required? How will the volume and duration of contributed flow be determined? (p. 2)

Agency Response: See summary responses for sections 8.1.1 and 8.3. The final rule does not require that the flow be contributed either directly or through waters

that are themselves jurisdictional. Waters contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters. The agencies maintain that some waters may pass through non-jurisdictional waters, such as excluded ditches, but will still be classified as tributaries both upstream and downstream of the non-jurisdictional feature. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

Nebraska Cattlemen (Doc. #13018)

- 8.261 EPA should withdraw the proposed rule and re-propose the rule with definition of tributary and adjacent that is in line with the CWA and Supreme Court case law. Nebraska Cattlemen comment that these definitions should be narrowed to require that there is water flow present in a tributary at least a majority of the time to trigger jurisdiction. Or, provide some test that allows for the field personnel to exclude tributaries that only rarely contribute to the water quality of the identified traditionally navigable water. Nebraska can provide many examples of tributaries that, even at their glory, do not contribute to water quality impacts of any navigable water. (p. 11)

Agency Response: Previous definitions of "waters of the United States" regulated all tributaries without qualification. Compared to the historic scope of the existing rule, the final rule is narrower; compared to agency practice in light of guidance issued after SWANCC and Rapanos, the final rule is generally broader, but not broader than the existing rule. See summary response for section 8.1.1. Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

Missouri Agribusiness Association (Doc. #13025)

- 8.262 Relatively permanent waters (RPW) needs to be defined in the new proposed rule. The plurality opinion in Rapanos stated that RPWs "do not necessarily exclude streams, rivers, or lakes that might dry up in extraordinary circumstances, such as drought, and seasonal rivers, which contain continuous flow during some months of the year but no flow during dry months." This legal description needs technical definition. For clarity and ease of use, the new proposed rule should consider utilizing the 1:100K NHD, as was done by the State of Missouri. And in Missouri, UAAs are used to delete, and to add, waters as needed providing flexibility for the State to adjust to local conditions. (p. 11)

Agency Response: See summary responses for sections 8.1.1 and 8.1.2. The final rule eliminates the need to identify a water as relatively-permanent, or conduct a significant nexus determination for each tributary. Instead, the final rule establishes categorical jurisdiction over all waters that meet the definition of "tributary" and that are not excluded in paragraph (b). Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Iowa Corn Growers Association (Doc. #13269)

8.263 ICGA believes that this expansion over intermittent and ephemeral tributaries is unlawful. EPA has historically implemented the CWA in Iowa by treating ephemeral waters as non-jurisdictional, but the proposed rule strays from that longstanding philosophy to include features that are predominantly dry. In addition, the definition contains no reference to the volume or frequency of flow, creating uncertainty as to whether waters that lack consistent flow would be included, deviating from the plurality opinion set forth in *Rapanos*. (p. 3)

Agency Response: The agencies respectfully disagree with the commenter's position that asserting jurisdiction over intermittent and ephemeral streams is unlawful. Previous definitions of "waters of the United States" regulated all tributaries without qualification. Compared to the historic scope of the existing rule, the final rule is narrower; compared to agency practice in light of guidance issued after SWANCC and *Rapanos*, the final rule is generally broader, but not broader than the existing rule. See summary response for section 8.1.1. Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

Western Growers Association (Doc. #14130)

8.264 Western Growers asks that the Corps and EPA clarify several aspects of "tributaries"...
...the proposed regulation makes it clear that to identify a tributary one must determine 'flow' from the waterbody in question into a traditional jurisdictional water.²⁰⁵ Moreover the agencies assert in preamble—but not in the regulation itself—that tributaries can include perennial, intermittent, or ephemeral streams and other waterways.²⁰⁶ Western Growers would ask the agencies to clarify with precision the following, before any rule is finalized:

1. The proposed definition does not define what amount of flow needs to be contributed to create a connection. In commenting on *Riverside Bayview Homes* as it applies to the Corps standards in place at the time, Justice Kennedy in *Rapanos* noted that the agencies in writing their regulations should discuss concepts of flow in terms of regularity and volume. Further, in *Rapanos* Kennedy indicated the Corps standards in place at the time were not specific enough to those concepts to pass jurisdictional muster—despite many pages of explanation the agencies again appear to ignore this requirement.

2. Ephemeral and intermittent streams are discussed in the preamble but are not part of the definition of tributary. The agencies must define the relevant hydrological features of ephemeral or intermittent streams that will trigger jurisdiction; e.g. what amount of "flow" needs to be present? While Justice Kennedy in *Rapanos* discusses the possibility that at least some intermittent and ephemeral waterways would be covered by

²⁰⁵ U.S. Army Corps of Engineers & U.S. EPA, *Definition of "Waters of the United States" Under the Clean Water Act; Proposed Rule*, 79 Fed. Reg. 22,188, 22,201 (April 21, 2014). Proposed "Definition of 'Waters of the United States' Under the Clean Water Act" 40 CFR 230.3(c)5

²⁰⁶ *Id.* at 22,202.

the Act that does not abrogate the agencies responsibility to delineate which types of intermittent or ephemeral waterways would qualify jurisdictionally and which would not, based on some description of hydrological conditions.

Clarification surrounding ephemeral or intermittent streams is absolutely critical in the arid West where these features are common place. While regulated entities may not fully have all the technical capabilities at their disposal that the Corps or EPA have, without more precise definition members of the regulated community are left with no way to even approximate which waters fall under the Act’s jurisdiction pursuant to the definition of tributary. Given the uncertainty in the proposed rule we ask EPA and the Corps to answer these questions and open a comment period on these clarifications. The rule cannot be finalized without further clarification. (p. 12-13)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The final rule does not require an evaluation of flow volume, flow duration and flow frequency for tributaries because the agencies have determined that existing science supports the conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses this conclusion in detail. Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

Sugar Cane Growers Cooperative of Florida (Doc. #14283)

- 8.265 Under the proposed rule, tributaries, impoundments of tributaries and waters adjacent to tributaries would all become *per se* jurisdictional. 79 Fed. Reg. at 22,262-63. This would prove overly expansive because a “tributary” would include any “water physically characterized by the presence of a bed and banks and an ordinary high water mark . . . which contributes flow, either directly or indirectly through another water.” *Id.* at 22,263. Wetlands, lakes and ponds would be tributaries regardless of whether they contribute flow, have beds and banks or a high water mark. *Id.* Waters would not lose their status as tributaries even if man-made breaks like pipes and culverts exist regardless of the length or distance of these man-made breaks. *Id.* And a tributary would include “natural, man-altered, or man-made water and includes water such as rivers, streams, lakes, ponds, impoundments, canals, and ditches [that are not otherwise excluded].” *Id.* Ditches would be excluded from the definition of “tributary” in two limited circumstances: (1) where they are excavated *wholly* in uplands, draining only uplands and having less than perennial flow, and (2) where they do not contribute flow, directly or indirectly, to jurisdictional waters. *Id.* at 22,203.

But to comply with the U.S. Supreme Court’s prior decisions, any definition of tributaries should focus on issues such as duration and flow so that ephemeral waters and waters “remote from any navigable-in-fact water and carrying only minor water-volumes toward it” are not subsumed within the definition. *Rapanos*, 547 U.S. at 781; *see also id.* at 734. The proposed rule includes no such consideration. (p. 7)

Agency Response: See summary responses for sections 8.1.1, 8.2 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. As a result, wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries. However, they still may be considered jurisdictional waters of the U.S. either as adjacent waters. The final rule does not require an evaluation of flow volume, flow duration and flow frequency for tributaries, which was referenced in the 2008 Guidance, because the agencies have determined that existing science supports the conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule outlines numerous exclusions for features that will not be waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries, as well as artificial lakes and ponds created in dry land and used primarily for stock watering, irrigation, settling basins, etc. In addition, all existing statutory exemptions, including those at CWA section 404(f) for normal farming, silviculture and ranching activities and for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule. Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

Wyoming Farm Bureau Federation (Doc. #14406)

- 8.266 Intermittent and ephemeral streams should not be considered as tributaries to WOTUS. The description used by the EPA and the Corps for tributary is contrary to all understanding. Using “beds and banks, bottom and lateral boundaries, or other indicators” is so broad that any kind of land feature could qualify as WOTUS. Again, clarity and increased understanding is not occurring. Allowing EPA or Corps personnel to make these decisions will again be something that will be nearly impossible to prove or disprove. Once designated WOTUS, landowners will be heavily burdened to de-designate. Clarity and certainty is not being given to landowners but additional costs of time and money are. (p. 3)

Agency Response: See summary responses for sections 8.1.1, 8.2 and 8.4. The agencies have determined that existing science supports the conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule outlines numerous exclusions for features that will not be waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries, as well as artificial lakes and ponds created in dry land and used primarily for stock watering, irrigation, settling basins, etc. In addition, all existing statutory exemptions, including those at CWA section 404(f) for normal farming, silviculture and ranching activities and for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule

Kansas Farm Bureau (Doc. #14408)

8.267 The proposed definition of a tributary is simply another attempt by EPA and the Corps to greatly overreach the jurisdiction bestowed on them in the Clean Water Act. As was stated earlier, even Justice Kennedy (the Justice whose opinion the agencies are relying on) stated that the Corps’ treatment of any channel that “feeds into a traditional navigable water (or a tributary thereof) and possesses an ordinary high-water mark defined as a “line on the shore established by the fluctuations of water and indicated by [certain] physical characteristics” as a “tributary” subject to regulation under the CWA is overly broad. Kennedy opined that it “seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water-volumes towards it.”²⁰⁷ The proposed rule simply attempts to reword the definition of a tributary that Justice Kennedy and the plurality has already rejected. Once again, this action does not provide clarity; it simply is another attempt by the agencies to expand their jurisdiction beyond the reasonable bounds of the statute.

By defining tributaries in this manner, the agencies are attempting to include intermittent and ephemeral streams as jurisdictional waters.²⁰⁸ The effect of this action is that the Corps and EPA are attempting to include a significant amount of land that rarely has water on it as a jurisdictional water. Once again, this is an extreme overreach on the part of the federal government.

Given the broad proposed definitions of tributaries and other waters, KFB requests that the agencies provide a detailed description of the anticipated interplay between these definitions and the exemption provided in the CWA for nonpoint source pollution. KFB joins with the comments and concerns of the American Farm Bureau Federation relating to the proposed definitional changes and impacts on nonpoint source pollution. (p. 7-8)

Agency Response: See summary responses for sections 8.1.1, 8.2 and 8.4. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law. Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

²⁰⁷ *Rapanos* at 781.

²⁰⁸ 79 Fed. Reg. at 22202.

Kansas Agriculture Alliance (Doc. #14424)

8.268 Tributaries Cannot be Categorically Included in WOTUS

The first jurisdictional overreach in the proposed rule can be found in its categorical inclusion of all tributaries. The proposed rule states that the term waters of the U.S. shall include: “All tributaries of waters identified in paragraphs (a)(1) through (4)”²⁰⁹ It then goes on to define tributaries in (c)(5) as, “a water physically characterized by the presence of a bed and banks and ordinary high water mark . . . which contributes flow, either directly or through another water”²¹⁰ to TNW. This definition is so broad it sweeps any land feature meeting the above described physical features that might now or in the future be wet.

While the Supreme Court has stated that the word navigable is of limited import, it has also stated the word “navigable” cannot be completely read out of the CWA.²¹¹ The *Rapanos* opinion is particularly insightful in analyzing the agencies’ proposal in relation to tributaries. The plurality in *Rapanos* articulated a clear and decisive limit to the inclusion of tributaries as waters of the U.S. It stated, “[T]he phrase ‘waters of the United States’ includes only those relatively permanent, standing or continuously flowing bodies of water ‘forming geographic features’ that are described in ordinary parlance as ‘streams[,] . . . oceans, rivers, [and] lakes.’”²¹² This definition provides a clear limit to jurisdiction as it relates to tributaries, which would have provided some level of certainty to the agriculture industry that the agencies claim, but fail, to provide with the proposed WOTUS rule.

Even if the agencies decide not to follow the pluralities’ definition in *Rapanos*, however, EPA and the Corps are constrained from adopting the current WOTUS definition in the proposed rule by the concurring opinion of Justice Kennedy. While Kennedy stated that the “Corps may choose to identify categories of tributaries,” he also stated that the categorical inclusion cannot ignore volume of flow and proximity to navigable waters.²¹³ Furthermore, Kennedy found that the Corps’ current definition of tributaries provided no assurance that flow and proximity to navigable waters was considered.²¹⁴ He went on to criticize the Corps’ current definition of tributary by remarking that “[t]he breadth of this standard – which seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor waters toward it – precludes its adoption as the determinative measure”²¹⁵

The definition of tributaries found in the proposed rule, and its inclusion by the agencies in the definition of WOTUS, render the term navigable completely meaningless and far exceed even the outer bounds of jurisdiction articulated by Kennedy. The above definition not only allows the agencies to regulate land that is dry most of the time, but

²⁰⁹ 79 Fed. Reg. at 22262.

²¹⁰ 79 Fed. Reg. at 22263.

²¹¹ See *SWANCC* at 172; *Rapanos* at 731, 779.

²¹² *Rapanos* at 739.

²¹³ *Id.* at 781.

²¹⁴ See *id.*

²¹⁵ *Id.*

contains no means of identifying an individual tributaries' relevance to a TNW. Any amount of flow, even a trickle, would deem a land formation a tributary, even if the flow is not direct into a TNW.²¹⁶ This overreach is compounded by the completely undefined, and reoccurring term “another water”. This term is not tied to the TNW definition and could encompass isolated waters, which the Supreme Court rejected as a basis for jurisdiction.²¹⁷ (p. 3-4)

Agency Response: The agencies disagree that tributaries cannot be categorically considered waters of the United States. See summary response for section 8.1.1. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. Further, Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

Oklahoma Pork Council (Doc. #14911)

8.269 In their WOTUS proposal, EPA and the Corps have defined for the first time what they consider to be a tributary. Making all ephemeral and intermittent tributaries jurisdictional is simply extraordinary. In practice, relying on the plain English meanings of the proposed rule, literally millions of drainage features in every part of every farming region of the country will have characteristics – a bed, bank and ordinary high water mark – that would make them tributaries. This will expand the jurisdiction of EPA and the Corps in an unprecedented manner that conflicts with both the clear direction and intent of the Supreme Court's prior numerous decisions that sought to limit the federal jurisdiction over private lands. (p. 2)

Agency Response: See summary response for Section 8.1.1. The final rule categorically considers tributaries, as defined in the rule and that are not otherwise excluded under paragraph (b) to be waters of the United States. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

²¹⁶ See *Rapanos* at 769 (Kennedy, concurring, criticizing the plurality by stating: “The merest trickle, if continuous, would count as a “water” subject to federal regulation”); see also *Rapanos* at 776-77 (Kennedy, concurring stating: “[B]y saying the Act covers wetlands (however remote) possessing a surface-water connection with a continuously flowing stream (however small), the plurality's reading would permit applications of the statute as far from traditional federal authority as are the waters it deems beyond the statute's reach.”).

²¹⁷ See *SWAANC* at 168, 172.

Indiana Corn Growers Association (Doc. #14933)

- 8.270 The proposal defines tributaries as waters physically characterized by the presence of bed and banks and ordinary high water mark which contributes flow to a traditionally navigable water and other waters. This definition doesn't take in to account whether water flows permanently, intermittently, or ephemerally.

We believe it is not appropriate or lawful for intermittent or ephemeral tributaries to be made categorically WOTUS. The possible scope and reach of making all ephemeral and intermittent tributaries jurisdictional is a stunning overreach by the Agencies' and we strongly object to the definition. Drainage features in every region of Indiana commonly exhibit bed, bank, and ordinary high water mark characteristics that would make them tributaries under the proposed rule.

It is critical to realize that for those streams that are tributaries under the rule, including those that have drainage water in them only after a rainfall, that any field side or roadside drainage ditch they flow to will also be WOTUS. These roadside or field side ditches are found in rural areas all across Indiana and overregulation would cause unneeded burdens on farmers and landowners (p. 2)

Agency Response: The agencies disagree that tributaries cannot be categorically considered waters of the United States. See summary response for section 8.1.1. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. Further, Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. In addition, all existing statutory exemptions, including those at CWA section 404(f) for normal farming, silviculture and ranching activities and for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule. See summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," for a broad discussion of the final rule's exclusions. See also, Section I of the Technical Support Document, which describes the legal basis of the final rule, including its consistency with the statute and case law.

National Corn Growers Association (Doc. #14968)

- 8.271 **Farm Drainage Features as WOTUS Tributaries**--NCGA believes that it is not lawful for intermittent or ephemeral tributaries to be made categorically WOTUS. The reasoning for this given in Section XX below. Aside from the issue of their lawfulness, the potential scope and reach of making all ephemeral and intermittent tributaries jurisdictional is simply breathtaking. Drainage features in every part of essentially every farming region of the country commonly exhibit bed, bank and ordinary high water mark characteristics that would make them tributaries. Many of these, as evidenced in the aerial imagery to follow, were likely to have been natural features (streams) that have been adapted in the agricultural

landscape to serve a drainage function. As the proposed rule makes clear, former tributaries improved for purposes such as drainage are still tributaries and remain WOTUS.

Table A-1 in Appendix One presents the calculated number of miles for many, but far from all, perennial, intermittent, and ephemeral streams in 20 states, as captured in the USGS National Hydrography Database (NHD). Using the 1:100,000 medium resolution dataset, which roughly approximates the perennial and intermittent streams, we estimate there are approximately 1.6 million miles of such streams in these 20 states alone. Using the 1:24,000 NHD dataset, which roughly approximates the perennial and intermittent streams plus about 35 percent of the ephemeral streams on average, we calculate that in these 20 states the number of stream miles jumps to approximately 3.5 million. That 1.9 million mile increase in streams between the medium resolution and high resolution estimates is due to a large extent to the addition of the 35 percent of the ephemeral streams to the calculation. The increase in stream miles would certainly be significantly higher if 100 percent of the ephemeral streams were included in the calculation.

The US EPA has conducted a similar mapping analysis of stream miles, and the results of that effort are posted on the US House of Representatives Science Committee’s website. The national analysis presented there indicates that there are 7,339,124 miles of linear streams in the U.S. (including Puerto Rico). Of these, 77 percent or 5,661,337 miles are intermittent or ephemeral streams.²¹⁸

... It is also critical to realize is that for those streams that are tributaries under the rule, including those that have drainage water in them only after a rainfall, that any field-side or roadside drainage ditch they flow to will also be WOTUS (under the proposed rule any ditch draining a WOTUS is also a WOTUS). If all of these mapped streams are WOTUS, then it is highly likely that each and every drainage ditch in this 10 square mile area is there is a WOTUS even if they have water in them less than permanently.

Will all of these mapped features, including the numerous ones that are ephemeral, be found to be a tributary as defined in the proposed rule through a formal determination? Every farm depicted here will share this concern as the fact of the matter is that, using USGS NHD data, EPA’s own “My Waters Mapper” labels features such as these as streams or ditches. It is impossible to say for sure from these aerial images if a channel with a bed, bank and ordinary high water mark will be visible when standing on the ground next to these features in every instance. But in many instances it is clear from a review of aerial imagery in farm country with the mapped stream and floodplain layers turned on and off that many of the mapped features very well will be WOTUS under the proposed rule.

For example, the images in Figure 2 below are from the “thumb” area of Michigan, east of Saginaw. The upper image has the mapped stream features at the 1:24,000 scale turned on and depicted in red, as well as the FEMA floodplains and stream buffers in light blue and white. The lower image is the aerial view for the same area but with the mapping features turned off. Clearly visible in the lower image are the actual physical channels and the characteristic stream-like morphology for the drainage area that lie under the mapped flowlines, floodplains and buffers in the upper image. Also, it is clear that these

²¹⁸ See <http://science.edgeboss.net/sst2014/documents/epa/national2013.pdf>.

physical, tributary-like channels have in many places been straightened to facilitate drainage; such features are WOTUS under the proposed rule as noted above. Lastly, while it is hard to see in these images, it is very likely that all of the other roadside and field-side drainage ditches in this area are connected to the surface drainage system characterized by these tributaries or tributary-like system and are also themselves WOTUS as a result. Many of these drainage features will only have drainage water in them after a rainfall.

Figure 2 – Mapping analysis of area east of Saginaw, Michigan, with streams, FEMA floodplain and buffer layers depicted in 2 and not depicted in 3.



Figure 2. Mapping analysis of area east of Saginaw, Michigan, with streams, FEMA floodplain and buffer layers depicted in 2 and not depicted in 3.

Figure 3 below contains photographs of farm fields at the ground level. The farm drainage features have a distinct channel that almost certainly would be found to have tributary characteristics as defined in the proposed rule.

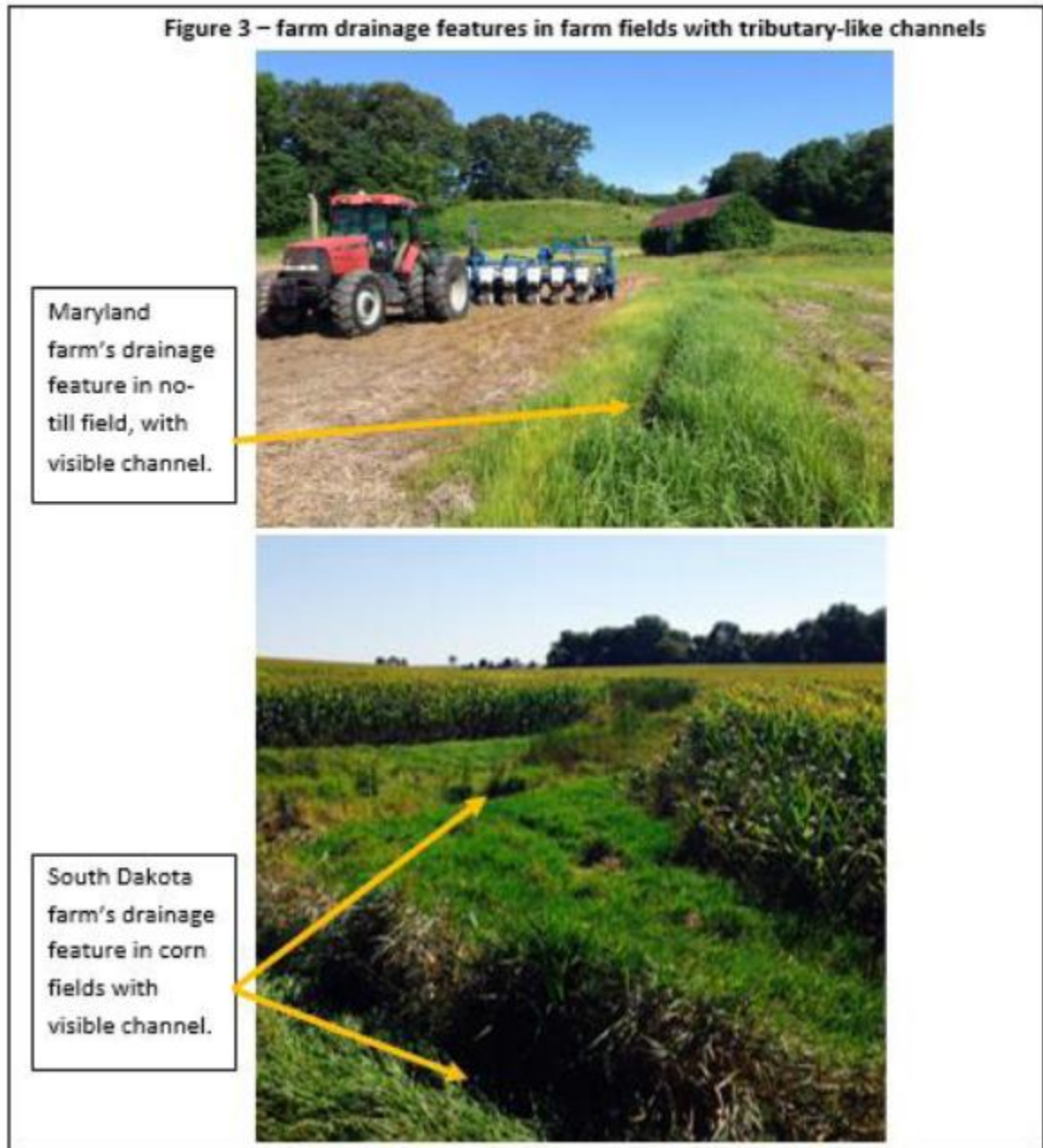


Figure 3 – farm drainage features in farm fields with tributary-like channels

As noted above, such drainage features are found in farm fields across the US. NCGA encourages the Agencies, before finalizing this rulemaking, to conduct a thorough and accurate field review of this class of features across the country and to provide NCGA and the larger agriculture community with its own assessment of the likely jurisdictional consequences for these features. Lacking such an assessment we are convinced that the Agencies will be doing this rulemaking in the absence of critical and important information to help them and the public assess the practical effects of the policies being advanced in the rule. (p. 6-11)

Agency Response: See summary responses for sections 8.1.1, 8.2 and 8.4. The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. In addition, all existing statutory exemptions, including those at CWA section 404(f) for normal farming, silviculture and ranching activities and for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions. See also, Section I of the Technical Support Document, which describes the legal basis of the final rule, including its consistency with the statute and case law. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

8.272 ...we think it is unlawful for any of the following to be deemed WOTUS categorically:

1. Ephemeral or Intermittent or Tributaries. Ephemeral and intermittent tributaries should not be categorically WOTUS. It is possible that, on a case-by-case basis, some of them could be found to have a significant (properly defined and specified) nexus to the TNWs. But it is not appropriate or lawful, under Justice Kennedy’s test, to treat them all as categorically WOTUS. Such tributaries, including ephemeral and intermittent ditches, could well have insufficient volumes of water moving through them to support the finding that they have a significant nexus with traditionally navigable waters downstream. Such a significant nexus finding cannot be made categorically, for all such tributaries, as that could easily ignore the facts in a particular tributary’s situation that would reject a significant nexus finding. Making a categorical finding of a significant nexus for tributaries with minor flow volumes amounts to little more than speculation as to the connection’s substantive effects in specific instances.

... (p. 20-21)

Agency Response: The agencies disagree that tributaries cannot be categorically considered waters of the United States. See summary response for section 8.1.1. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Further, Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

Colorado Cattlemen's Association (Doc. #15068)

- 8.1 In laymen's terms the phrase "regardless of their size or how frequently they flow" means "all." The proposed rule makes all streams federal. Justice Kennedy was clear that "other waters" cannot contain those waters that have little or no connection.²¹⁹ There are many streams across the country that have little or no connection to TNWs, which make the agencies' blanket rule covering all streams beyond the purview of the CWA. If in fact all streams are now federal waters, despite their lack of a significant connection to TNWs, it raises a constitutional question about the CWA itself. (p. 5)

Agency Response: See summary response for Section 8.1.1 The final rule categorically considers tributaries, as defined in the rule that are not otherwise excluded under paragraph (b) to be waters of the United States. Section VII of the Technical Support Document discuss the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

North Carolina Farm Bureau Federation (Doc. #15078)

- 8.2 **"Tributaries" cannot and should not include ephemeral drainages and features.**

The definition of a "tributary" is one of the most expansive and problematic terms in the proposed rule. The American Heritage Dictionary (1982) defines "tributary" as "a stream or river flowing into a larger stream or river." This common understanding of "tributary" simply does not include "ephemeral" drainages that only channel stormwater after heavy rains. Most of the time, ephemeral drainages are dry land-they are not flowing rivers or streams. Yet, the Agencies insist that "[t]ributaries that are small, flow infrequently, or are of substantial distance from the nearest (a)(1) through (a)(4) water, e.g., headwater perennial, intermittent, and ephemeral tributaries" are nevertheless part of the tributary network regulated by this proposal. (79 Fed. Reg. at 22,206.)

The Agencies have proposed an overly broad "tributary" definition focusing on the presence of a bed, bank, ordinary high water mark (OHWM) and any minimal amount of flow that eventually reaches (directly or through any number of other paths and channels) to a creek or stream that in turn ultimately flows to a traditional navigable water. The rule would provide: "The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section." (p. 6-7)

Agency Response: See summary response for sections 8.1.1 and 8.4. The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The Agencies believe that grounding the definition of

²¹⁹ Rapanos, J. Kennedy, at 10.

“tributary” in the final rule to the above referenced specific physical features will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule. Section VII of the Technical Support Document further discusses the science supporting the agencies’ conclusion.

Weyerhaeuser Company (Doc. #15392)

- 8.3 Finally, the requirement that a tributary contribute flow, directly or indirectly, to a downstream jurisdictional water is no requirement at all because any volume and frequency of flow will suffice and proximity to the downstream jurisdictional water is irrelevant.²²⁰ Any low areas in a forest where stormwater naturally channels could be a “water of the United States” so long as they carry stormwater that eventually reaches a traditional navigable water, interstate water, territorial sea, or impoundment. As a practical consequence, forest owners likely must presume that intermittent and ephemeral features on their lands meet the “contributes flow” requirement simply by virtue of the fact that water flows downhill.

The categorical assertion of jurisdiction over all tributaries regardless of flow characteristics or proximity to navigable waters will have profound implications for Weyerhaeuser and other private forest owners. Routinely, forestry operations are undertaken near intermittent and ephemeral streams, as well as many other drainage features that can be in close proximity to each other. The proposed rule would expand the Agencies’ CWA jurisdiction to include all such features and, as a consequence, forest owners would need to respond, likely be establishing expanded riparian management zones, which would remove large acreages from forest management and causing significant financial hardship for forest owners. In addition, forest owners would be faced with the specter of increased enforcement actions and citizen suits. (p. 5)

Agency Response: See summary response for section 8.1.1. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Further, Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. All existing statutory exemptions, including those at CWA section 404(f) for normal farming, silviculture and ranching activities and for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule.

Jensen Livestock and Land LLC (Doc. #15540)

- 8.4 Jensen Livestock and Land LLC. strongly assert that only stream features with “relatively permanent, standing or continuous” flow, pursuant to Justice Scalia’s Plurality Opinion in *Rapanos* should be included in the definition of “tributary.”²²¹ This would limit the

²²⁰ See 79 Fed. Reg. at 22,206.

²²¹ *Rapanos*, J. Scalia, at 20 (In sum, on its only plausible interpretation, the phrase “the waters of the United States”

number of features that can be considered “tributaries” to those that could actually have a significant impact on the water quality of downstream waters, pursuant to the decision in *Rapanos*.²²² It would also provide needed clarity to the ranching community. Jensen Livestock and Land LLC strongly assert that intermittent and ephemeral features should NOT be considered “waters of the U.S.” because these features are best regulated by states and localities, and were not intended by Congress to be regulated by the federal government. EPA’s own *Rapanos* Guidance states, “Justice Scalia emphasizes that relatively permanent waters do not include tributaries ‘whose flow is coming and going at intervals...broken, fitful.’”²²³ While Jensen Livestock and Land LLC assert with the guidance’s ultimate position of being able to claim jurisdiction over intermittent or ephemeral streams under a significant nexus analysis, we request the agencies explain the rationale of this significant policy shift. (p. 10)

Agency Response: See summary response for section 8.1.1. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Further, Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. All existing statutory exemptions, including those at CWA section 404(f) for normal farming, silviculture and ranching activities and for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule.

Dairy Cares (Doc. #16471)

- 8.5 The Proposed Rule would allow the Agencies to assert jurisdiction over a wide range of tributaries without first demonstrating that a nexus exists between the tributary and a more “traditional” WOTUS. This approach contravenes Justice Kennedy’s concurring opinion in *Rapanos*, where he explained that in order to assert jurisdiction over a particular body of water, the Agencies must demonstrate a significant nexus exists to a water that is navigable in the traditional sense.²²⁴ Specifically, the Agencies’ definition of “tributary” would assert jurisdiction over a significant class of waters, rather than a particular body of water, by simply relying on the assumption that flow from tributaries automatically has a significant nexus to a more traditional navigable water. This assumption belies the idea and requirement that a significant nexus be demonstrated. Further, the assumption removes consideration of the significance of the tributary’s affect on the traditional WOTUS; instead, the Agencies merely assume that the contribution of flow will be significant. Regardless of whether an effect rises to a sufficient level of significance, the assumption also relies on the premise that flow actually affects a

includes only those relatively permanent, standing or continuously flowing bodies of water forming geographic features “that are described in ordinary parlance as “stream[,]...oceans, rivers, [and] lakes.”).

²²² *Id.*

²²³ EPA, Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States & Carabell v. United States*, at 7 (Dec. 2, 2008).

²²⁴ *Rapanos*, 547 U.S. at 742.

traditional WOTUS. Conceding that flow—even if ephemeral or intermittent—may establish a hydrologic connection with a jurisdictional water, the Proposed Rule fails to address whether, in fact, the flow affects the traditional WOTUS and whether the effect of the flow is sufficiently significant for purposes of the U.S. Supreme Court’s significant nexus test.

The Proposed Rule’s definition of “tributary” could significantly impact dairy farms and operations. As discussed above, dairy facilities can include several different types of water storage, processing, and conveyance facilities. Dairy farms use ditches and channels to move water from storage ponds to irrigate pastures, provide water to animals, wash facilities, and treat and spread waste. The Proposed Rule’s broad attempt to make jurisdictional all tributaries raises grave concerns regarding the extent to which state and federal regulators will rely on the new definition of “tributary” to assert jurisdiction over these types of dairy facilities and operations not previously regulated. If ditches and channels on dairy operations are to be regulated under the Proposed Rule, dairy farmers and operators will be subject to an additional burdensome layer of expensive regulation that is likely to affect economic productivity. Although the Proposed Rule attempts to protect the categorical exclusions, Dairy Cares is concerned that the definition of “tributary,” whether interpreted by the Agencies or the courts, will ultimately swallow the purpose and applicability of the categorical exclusions.

Accordingly, Dairy Cares requests the Agencies revise the Proposed Rule to be more consistent with Justice Kennedy’s interpretation of WOTUS in *Rapanos*, namely to require case-by-case analysis of tributaries to determine whether specific tributaries actually affect significantly the chemical, physical, or biological properties of the receiving WOTUS. Additionally, Dairy Cares requests the Agencies provide greater certainty—in the language of the definition—on how the definition of “tributary” will not affect a dairy facility’s ability to claim cover under the categorical exclusions. (p. 3-4)

Agency Response: See summary responses for sections 8.1.1, 8.2 and 8.4. The agencies disagree that tributaries should be evaluated on a case-by-case basis. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Paragraph (b) of the final rule excludes many features, including most ditches that are not relocated tributaries or excavated in tributaries. In addition, all existing statutory exemptions, including those at CWA section 404(f) for normal farming, silviculture and ranching activities and for maintenance of existing irrigation and drainage ditches remain in effect and unchanged by the final rule. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions.

Agribusiness Association of Kentucky et al. (Doc. #18005)

- 8.6 The definition of a “tributary” is one of the most expansive and problematic terms in the proposed rule. The American Heritage Dictionary (1982) defines “tributary” as “a stream

or river flowing into a larger stream or river." This common understanding of "tributary" simply does not include "ephemeral" drainages that only channel stormwater after heavy rains. Most of the time, ephemeral drainages are dry land—they are not flowing rivers or streams. Yet, the Agencies insist that "[t]ributaries that are small, flow infrequently, or are of substantial distance from the nearest (a)(1) through (a)(4) water, e.g., headwater perennial, intermittent, and ephemeral tributaries" are nevertheless part of the tributary network regulated by this proposal. 79 Fed. Reg. at 22,206. (p. 6)

Agency Response: See summary response for sections 8.1.1 and 8.4. The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The Agencies believe that grounding the definition of "tributary" in the final rule to the above referenced specific physical features will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule. Section VII of the Technical Support Document further discusses the agencies determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Frasier Farms (Doc. #18660)

- 8.7 On my ranch, I can identify an area that within a few hundred yards includes intermittent and ephemeral streams, rills and gullies, as well as a natural and undrained swale. By definition, some of these topographies would be considered jurisdictional and some not, yet all contribute to the same watershed. If there were determined to be a significant nexus between the features, then the entirety of the sample area – and a good deal of my 29,000 acre ranch – would fall under EPA jurisdiction per the Clean Water Act. It is impractical to regulate and monitor the vast expanses of North America that may be subject to new jurisdictional authority and leaving private land managers in uncertainty will lead to needless costs and unwarranted precautions. It is imperative that any rule change be objectively defined in measurable terms, so that regulators and the regulated community may clearly anticipate what lands and waters are impacted and which are exempt. Any Significant Nexus must be demonstrate a physical connectivity with the evidence of science-based proof. The Proposed Rule must provide descriptive language to define how connectivity will be determined. (p. 1)

Agency Response: See summary response for sections 8.1.1 and 8.4. The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The Agencies believe that grounding the definition of "tributary" in the final rule to the above referenced specific physical features will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule. Section VII of the Technical Support Document further discusses the agencies determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Ohio Pork Council (Doc. #19554)

- 8.8 In their WOTUS proposal, EPA and the Corps have defined for the first time what they consider to be a tributary. Making all ephemeral and intermittent tributaries jurisdictional is simply extraordinary. In practice, relying on the plain English meanings of the proposed rule, literally millions of drainage features in every part of every farming region of the country will have characteristics – a bed, bank and ordinary high water mark – that would make them tributaries. This will expand the jurisdiction of EPA and the Corps in an unprecedented manner that conflicts with both the clear direction and intent of the Supreme Court’s prior numerous decisions that sought to limit the federal jurisdiction over private lands. (p. 2)

Agency Response: See summary response for Section 8.1.1. The final rule categorically considers tributaries, as defined in the rule and that are not otherwise excluded under paragraph (b) to be waters of the United States. Section VII of the Technical Support Document discuss the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Georgia Department of Transportation (Doc. #14282.1)

- 8.9 **A. "Reasonably permanent flow"**

The proposed rule defines "tributary" without any reference to the frequency or extent of flow. Tributaries are defined to include any water that is "physically characterized by the presence of a bed and banks and ordinary high water mark" and that "contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section ." (79 Fed. Reg. 22263). If a water meets these criteria, it is jurisdictional by rule.

By contrast, the 2008 Guidance deemed tributaries as jurisdictional by rule - that it, without the need for a significant-nexus determination - only when the tributaries "*are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e .g., typically three months)*."²²⁵ That guidance also specifically noted that "relatively permanent" waters "do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally. However, CWA jurisdiction over these waters will be evaluated under the significant nexus standard described below."²²⁶

The omission of the "relatively permanent" requirement would substantially broaden the universe of tributaries deemed jurisdictional by rule. In effect, a tributary would be deemed jurisdictional by rule without any consideration of the flow regime in that

²²⁵ 2008 Guidance, p. 6 (emphasis added).

²²⁶ *Id.* at 7.

tributary. A stream with intermittent or even ephemeral flow could be found jurisdictional by rule, simply because it has an indirect, infrequent downstream connection to a jurisdictional water. We believe this approach is inconsistent with the intent of the proposed rule: to clarify, not expand, the scope of the federal jurisdiction under the Clean Water Act.²²⁷

Recommendation: We recommend modifying the proposal rule to ensure that tributaries are evaluated under the same criteria used in the 2008 Guidance: tributaries should be deemed jurisdictional by rule only if they have a "relatively permanent flow" (or an equivalent requirement, such as "perennial flow"), meaning that they "typically flow year-round or have continuous flow at least seasonally (e .g., typically three months)." If relatively permanent flow is not found, the tributary still could be evaluated under the significant-nexus test, as was the case under the 2008 Guidance.²²⁸ (p. 5-6)

Agency Response: See summary responses for sections 8.1.1 and 8.1.2. The final rule eliminates the need to identify a water as relatively-permanent, or conduct a significant nexus determination for each tributary. Instead, the final rule establishes categorical jurisdiction over all waters that meet the definition of "tributary" and that are not excluded in paragraph (b). Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

8.10 B. "Do not contribute flow, either directly or through another water"

As discussed above in the context of the ditch exclusions, we are concerned that the phrase "contributes flow, either directly or through another water" could be interpreted very broadly, so that it encompasses waters that have a highly remote or tenuous downstream connection to other jurisdictional waters.

Recommendation: As noted above, we recommend clarifying that a tributary does not "contribute flow" to another water if its only connection to that water is "insubstantial or remote." We recommend making this change regardless of whether the definition is modified to include a requirement for "relatively permanent" flow. (p. 6)

Agency Response: See summary response for section 8.1.1. The final rule establishes categorical jurisdiction over all waters that meet the definition of "tributary" and that are not excluded in paragraph (b). This position is rooted in a

²²⁷ See "EPA and Army Corps of Engineers Clarify Protection for Nation's Streams and Wetlands: Agriculture's Exemptions and Exclusions from Clean Water Act Expanded by Proposal" (press release), issued March 25, 2014, available at: <http://www2.epa.gov/uswaters>. The same website also states that the proposed rule "Does Not Broaden Coverage of the Clean Water Act."

²²⁸ See Guidance, p. 7 ("Therefore, 'relatively permanent' waters do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally. However, CWA jurisdiction over these waters will be evaluated under the significant nexus standard described below.").

science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

Charlotte-Mecklenburg Storm Water Services (Doc. #3431)

- 8.11 Within the definition of “tributary” the term “flow” is not clearly defined, since even ephemeral ditches contribute flow during wet weather... CMSWS recommends defining “flow” as at least intermittent flow... (p. 2-3)

Agency Response: See summary response for sections 8.1.1, 8.2 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. In addition, paragraph (b) of the final rule excludes many *features* from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and stormwater control features created in dry land. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions features.

Red River Joint Water Resource District (Doc. #4227)

- 8.12 ...the proposed definition of "tributary" is alarmingly expansive. The proposed rules define "tributary" to include any "water" with streamlike physical characteristics, including "a bed, banks, and ordinary high water mark" that "contributes flow" directly or through "another water" to navigable, interstate, or territorial waters, or an impoundment of any of those. The new definition could conceivably include even manmade channels that may "contribute flow" at some point to any downstream jurisdictional water. For example, consider a manmade pond that overflows during a high water event, then flows overland and discharges into a downstream manmade pond; then the downstream manmade pond also overflows, flows overland during a high water event, and discharges into a manmade ditch; then the manmade ditch discharges into another downstream ditch that ultimately discharges into a tributary of a tributary of a navigable/jurisdictional water, the new rule suggests the original manmade upstream pond is jurisdictional under the definition of "tributary." This seemingly ridiculous example of the breadth of the proposed rules may not be the intent of the rules, but would be a consequence of the rules. Despite EPA's suggestions otherwise, the new language in the rules that defines "tributary" is extremely expansive and does, in fact, greatly extend the jurisdiction of EPA and the Corps under the CWA. (p. 2)

Agency Response: See summary response for sections 8.1.1, 8.2 and 8.4. Many man-made and man-altered tributaries, despite human manipulation, continue to have chemical, physical, or biological connections downstream and serve important functions downstream. Section VII of the Technical Support Document discusses

man-made or man-altered tributaries and their effect on the physical, chemical and biological integrity of traditional navigable waters, interstate waters and the territorial seas. However, the agencies’ longstanding practice is to view stormwater water control measures that are not built in “waters of the United States” as non-jurisdictional. Nothing in the proposed rule was intended to change that practice, and the final rule is consistent with that intent. Paragraph (b) of the final rule excludes many *features* from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and stormwater control features created in dry land. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions features.

Florida Federation of Garden Clubs (Doc. #5725)

- 8.13 We support the Agencies’ proposal to define all tributaries as “waters of the United States,” including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 29 percent of Florida’s stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 12 percent of Florida’s stream miles.

These streams are also critical habitat for fish and other aquatic species. Headwater and seasonal streams also feed the drinking water sources of 117 million Americans. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 580 miles of headwater, intermittent and ephemeral streams in Florida that supply drinking water sources. (p. 2)

Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. Intermittent and ephemeral streams that meet the final rule’s definition “tributary” are considered “waters of the United States.” See summary response to section 8.1.1.

Beaufort County Stormwater Utility, South Carolina (Doc. #7326.1)

- 8.14 **II) “Tributaries”** – The current regulations provide for tributaries of a WOTUS as being WOTUS, although “tributary” is not defined. The proposed rule keeps the same reference but has an expansive definition of what a tributary is, including man-altered or man-made ponds, canals and ditches, with limited exceptions.

Agency Response: See summary responses for sections 8.1.1, 8.2 and 8.4. The final rule establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). Many man-made and man-altered tributaries, despite human manipulation, continue to have chemical, physical, or biological connections downstream meet the rule’s definition of “tributary.” Section VII of the Technical Support Document discusses man-made or man-altered tributaries and their effect on the physical, chemical and biological integrity of traditional navigable waters, interstate waters and the territorial seas. However, paragraph (b) of the final rule excludes many features from consideration

as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and stormwater control features created in dry land. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions.

- 8.15 The proposed rule defines “tributary” without any reference to the frequency or extent of flow. Tributaries are defined to include any water that is “physically characterized by the presence of a bed and banks and ordinary high water mark” and that “contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section.” [79 Federal Register (FR) 22263]. If a water meets these criteria, it is jurisdictional by rule. Previous guidance deemed tributaries as jurisdictional by rule without the need for a significant-nexus determination only when the tributaries “are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).” That guidance also specifically noted that “relatively permanent” waters “do not include ephemeral tributaries which flow only in response to precipitation and intermittent streams which do not typically flow year-round or have continuous flow at least seasonally.” However, CWA jurisdiction over these waters will be evaluated under the significant nexus standard. The omission of the “relatively permanent” requirement would substantially expand the number of tributaries that could be deemed jurisdictional by rule. In effect, a tributary would be deemed jurisdictional by rule without any consideration of the flow regime in that tributary. A stream with intermittent or even ephemeral flow could be found jurisdictional by rule, simply because it has an indirect, infrequent downstream connection to a jurisdictional water. The phrase “contributes flow, either directly or through another water” could be interpreted very broadly, so that it encompasses waters that have a highly remote or tenuous downstream connection to other jurisdictional waters.

Recommendation: The Final Rule should be modified to say that tributaries are jurisdictional by rule only if they have a “relatively permanent flow” (or an equivalent requirement, such as “perennial flow”), meaning that they “typically flow year-round or have continuous flow at least seasonally (e.g., typically three months).” If relatively permanent flow is not found, the tributary still could be evaluated under the significant-nexus test. This would be consistent with the 2008 Guidance Document. Also, it should be clarified in the Final Rule that a tributary does not “contribute flow” to another water if its only connection to that water is “insubstantial or remote.” (p. 2)

Agency Response: See summary responses for sections 8.1.1 and 8.1.2. The final rule eliminates the need to identify a water as relatively-permanent, or conduct a significant nexus determination for each tributary. Instead, the final rule establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Black Hills Corporation (Doc. #6248)

- 8.16 The proposed draft rule definition of "tributary" does not speak to the frequency of water flow. Ignoring the frequency of flow could mean that any minimal hydrologic connection could be deemed jurisdictional, encompassing any land-locked area that has ephemeral or intermittent water flows. This definition can include any number of streams, ditches, potholes, dry streambeds, impoundments, and other natural depression. If the definition of "tributary" is not better defined, costs to review and permit environmentally and economically insignificant water features may skyrocket. (p. 4)

Agency Response: See summary responses for sections 8.1.1. The rule definition of "tributary" requires that flow be of sufficient volume, frequency, and durations to create physical characteristics of bed and banks and an OHWM. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. *Section VII* of the Technical Support Document discusses the science supporting the agencies' conclusion. Paragraph (b) of the final rule outlines numerous exclusions for features that will not be waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries, water-filled depressions created in dry land incidental to mining or construction activity and erosional features, including gullies, rills, and other ephemeral features that do not meet the definition of "tributary."

Northwest Colorado Council of Governments Water Quality/Quantity Committee (Doc. #10187)

- 8.17 Mountain streams in the western United States often are diverted into pipes and tunnels for portions of their reach and then resurface downstream to join the main stream once again. The proposed rule correctly recognizes that such modifications do not alter the interconnectivity of a tributary to navigable waters and should not change the jurisdictional status of the tributary. However, QQ tributaries that flow through shale fields or other natural barriers should not be categorically defined as waters of the United States because those waters may have no connection to waters of the United States. Instead, QQ recommends that tributaries interrupted by natural features be evaluated under the significant nexus test. (p. 4)

Agency Response: See summary responses for sections 8.1.1 and 8.3. Under the final rule, a water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.

- 8.18 The proposed definition of "tributaries" would include tributary streams whose flow is due to intercepted groundwater (as long as they have a bed, bank and ordinary high water mark). These pristine streams fed by groundwater are common in the headwaters region, where they are often important sources of drinking water. QQ supports the inclusion of headwaters springs fed from groundwater, and encourages the EPA and Corps to clarify

that groundwater-fed tributaries are specifically included in this proposed definition. (p. 4)

Agency Response: See summary response for sections 8.1.1. The definition of "tributary" in the final rule emphasizes the importance of flow; specifically, it requires flow be of sufficient volume, frequency, and durations to create physical characteristics of bed and banks and an OHWM. A great majority of headwater streams are covered by this definition, and waters that are adjacent to a tributary at the upper limit of the channel can be jurisdictional as adjacent waters. See sections IV(G) and IV(H) of the final rule preamble. Further, while the agencies have never interpreted "waters of the United States" to include groundwater, this exclusion does not apply to surface expressions of groundwater, such as where groundwater emerges on the surface and becomes baseflow in streams or spring fed ponds. Section III(C) of the final rule preamble and Section VII of the Technical Support Document.

Mohave Electric Cooperative, Inc. (Doc. #10953)

- 8.19 What is very much unclear in the Proposed Rule is the level of effort that must be made to demonstrate that a given ephemeral wash, no matter how small or how distant from a key receiving water, "contributes flow" to that key receiving water. Does the phrase "contributes flow" imply continual discharge to a key receiving water (either directly or indirectly)? Annual discharge? What about ephemeral washes that can only be demonstrated to discharge flows into a key receiving water in a 100-year storm event? Or is the threshold the "one molecule of water" test that the U.S. Army Corps of Engineers (Corps) has used in the past, i.e. if a single molecule of water can reach a key receiving water then the wash would be considered to "contribute flow"?

The difficulties of determining the tributary (and therefore jurisdictional) status of ephemeral washes in the Proposed Rule will therefore still require case-specific analysis, and perhaps a more robust analysis than is currently required for a significant nexus analysis. If the stated goal of the Proposed Rule is to provide clarity to regulators and the regulated community, the interpretation of the plurality in *Rapanos* should be applied. The Plurality clearly articulated the term "waters of the United States" as covering "relatively permanent, standing or continuously flowing bodies of water that are connected to traditional navigable waters, as well as wetlands with a continuous surface connection to such relatively permanent water bodies." (p. 4)

Agency Response: Agency Response: See summary response for sections 8.1.1 and 8.4. The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. Section VII of the Technical Support Document further discusses the science supporting the agencies' conclusion that all waters that meet the definition of "tributary" and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. For these reasons, the final rule does not require that a case-by-case determination be made regarding whether an ephemeral or tributary stream has a

significant nexus to navigable waters. Instead, the case-by-case inquiry is whether or not the water under consideration meets the rule’s definition of “tributary” and is not excluded by paragraph (b). See also summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of “contribute flow.” Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

Duke Energy (Doc. #13029)

8.20 This new definition of tributary is extremely broad and extends jurisdiction to features that the agencies have not previously regulated, such as ephemeral drainages, ditches and conveyances. Under the proposed rule, the definition of tributary will cover many new features that are remote, intermittent, have broken or man-made connections, carry only minor water volumes or flow for a few hours or days following a rain event. While the proposed definition requires a tributary to contribute flow, that flow can be absent for any period of time and can also be supplied through groundwater. The definition does not contain any temporal limits on how often a tributary needs to contribute flow to a TNW. It could take years, decades, or even centuries for flow to reach a navigable water. There are also no geographical limits on how distant the flow that is per se jurisdictional is from navigable water and no need to show that the flow could carry pollutants to the navigable water.

Subsequently, the proposed rule does not provide any support for evaluation of the significance of any nexus to an (a)(1) through (a)(4) water based on the “frequency, magnitude, duration, predictability [or] consequences of connections” as recommended by EPA’s Science Advisory Board (SAB) panel.²²⁹ The definition for a tributary is also in conflict with Justice Kennedy’s explanation in *Rapanos* that frequency and duration of flow, as well as proximity to traditional navigable waters are important considerations in evaluating whether a water body has a significant nexus.²³⁰ Additionally, not all states currently include ephemeral waters in their regulatory program, therefore any definition of tributary that automatically includes waters with less than intermittent flow would be an expansion of jurisdiction. (p. 22-23)

Agency Response: See summary responses for sections 8.1.1 and 8.2. The longstanding regulatory definition of “waters of the United States” included “tributaries” without any limitations regarding volume or duration of flow. The final rule established a definition of “tributary” that requires flow to be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. Section VII of the Technical Support Document further discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in

²²⁹ Draft SAB Panel Recommendations on EPA’s Connectivity Report (8-11-14 version), Page 2.

²³⁰ See *Rapanos*, 547 U.S. at 786

the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

- 8.21 The proposed rule states that “a tributary connection may be traced using direct observation or U.S. Geological Survey maps, aerial photography or other reliable remote sensing information.” In a March 27, 2014 hearing before the House Appropriations Committee Subcommittee on Interior, Environment, and Related Agencies, Administrator Gina McCarthy told Chairman Rogers that EPA has “some mapping in the docket associated with this rule that people can access at this point.” Administrator McCarthy went on to say: “There has been no mapping before, there has been no certainty so we are identifying the rivers and streams and tributaries and other water bodies that science tells us is really necessary to protect the chemical, physical, and biological integrity of navigable waters. We have taken the opportunity to map those; we are certain we will get comment on them.”²³¹ Despite the fact that Ms. McCarthy had apparently seen maps, no such maps were placed in the docket for the rulemaking. These maps were later provided to Congress in July following an additional inquiry during a separate hearing with EPA. However, Acting Administrator Nancy Stoner asserted that the maps developed by EPA using USGS data are “not to depict the scope of waters protected under the Clean Water Act.”²³²

These recently released maps, developed specifically for EPA, show the extent of water features identified within each state, including all stream/rivers (perennial, intermittent, ephemeral, unclassified), canals/ditches, lakes/ponds/reservoirs, swamp/marshes, playas, and washes.²³³ In response to inquiries about these newly-generated maps, EPA states “[it] has never and is not now relying on maps to determine jurisdiction under the Clean Water Act. The U.S. Army Corps of Engineers determines jurisdiction using detailed site specific information in response to requests.”²³⁴ So in addition to the confusion with regards to how maps should or should not be used, the statement above seems to be in direct conflict with the agencies’ stated purpose for the proposed rule which is to “reduce documentation requirements and the time currently required for making jurisdictional determinations [...] and reduce time and resource demanding case-specific analyses prior to determining.” EPA’s Associate Administrator of Public Affairs, Mr. Tom Reynolds, goes on to state that “[wh]ile these maps are useful tools for water resource managers, they cannot be used to determine Clean Water Act jurisdiction – now or ever.” If that is the case, what was the purpose of developing these high-resolution maps for each state? How will they be used or verified for accuracy? (p. 35-36)

Agency Response: The agencies have not developed, nor will they be developing, maps of jurisdictional waters. While a map can be a tool in, for example, tracking the course of a stream, whether that stream or any water is jurisdictional is a distinct question. The preamble addresses the use of remote sensing and mapping to assist in establishing the presence of water, such tools include the USGS

²³¹ <http://appropriations.house.gov/calendararchive/eventsingle.aspx?EventID=373134> (46:08 to 50:00).

²³² Letter from Nancy Stoner to Congressman Lamar Smith, July 28, 2014.

²³³ <http://science.house.gov/epa-maps-state-2013#overlay-context>.

²³⁴ EPA Blog by Tom Reynolds (August 28, 2014) (See Appendix E).

topographic data, the USGS National Hydrography Dataset (NHD), Natural Resources Conservation Service (NRCS) Soil Surveys, and State or local stream maps, as well as the analysis of aerial photographs, and light detection and ranging (also known as LIDAR) data, and desktop tools that provide for the hydrologic estimation of a discharge sufficient to create an ordinary high water mark, such as a regional regression analysis or hydrologic modeling. These sources of information can sometimes be used independently to infer the presence of a bed and banks and another indicator of ordinary high water mark, or where they correlate, can be used to reasonably conclude the presence of a bed and banks and ordinary high water mark. The agencies have been using such remote sensing and desktop tools to delineate tributaries for many years where data from the field are unavailable or a field visit is not possible. However the use of any one remote sensing or desktop tool is usually insufficient to establish jurisdiction without studies and or significant experience showing that use of the remote sensing or desktop tool results in the same extent of jurisdiction as a field investigation in that region.

See summary also response for section 8.1.1. Determinations of whether a water “contributes flow” are expected to be done in a manner similar to what has been practiced in the field for decades. The final rule preamble discusses this process in greater length in Section IV.F.1.

Murray Energy Corporation (Doc. #13954)

- 8.22 The Proposal also advances the position that a tributary can never lose its legal status as a jurisdictional tributary, regardless of the presence of man-made or natural structures. *Id.* This *carte blanche* “no de-federalization” approach could be extremely problematic, especially since the Agencies have proposed no geographic or temporal limits to its application... (p. 11)

Agency Response: See summary responses for sections 8.1.1 and 8.3. Under the final rule, a water that otherwise qualifies as a tributary under the rule’s definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. These physical indicators demonstrate the water contributes sufficient flow to have a significant impact on downstream waters. Absence of these indicators generally represent the upper limit of the tributary. Section IV of the Technical Support Document discusses further the science that supports the agencies’ conclusion. Further, the agencies will continue existing practice of making case by case determinations of the length of break in OHMD that does not sever the connection to downstream waters.

County of San Diego, California (Doc. #14782)

- 8.23 **8. Simplify the definition for tributaries**

The definition for tributaries should be revised to contain less subjective terms, include appropriate exemptions, and be simply defined so as to minimize broad interpretation.

Tributaries have never before been defined in the regulations for Waters of the U.S. In the proposed rule, the definition for tributaries is vaguely defined, lacking necessary exemptions, and containing many subjective terms. Furthermore, this definition of tributary could be interpreted to include stormwater conveyance or treatment facilities that previously were not defined as a tributary. By broadening the definition, clean-up activities in stormwater conveyance channels could trigger the need for additional permits and lengthy certification processes. Because man-made features could be considered tributaries under the proposed definition, it should be revised to include appropriate exemptions for features that require County maintenance and oversight. Features such as BMPs, roadside ditches, and water conveyances should be exempt. Additionally, the definition states that the flow in the tributary may be *ephemeral*, *intermittent* or *perennial*. These terms are not further defined in the new rule, and can have varying definitions. To avoid broad and subjective interpretation, the terms *ephemeral* and *intermittent* should be removed, as these terms could be applied to any area that is wet and carries water during a single rain event. The term *perennial* is more appropriate for the definition of tributaries and in-line with the existing regulatory language, which defines a tributary as being relatively permanent.

EXAMPLE: The County maintains and monitors waterways including roadside ditches, flood control channels, and drainage conveyances, which are used to safely guide water away from homes, businesses, properties and roads. Man-made features such as ditches and canals can be considered tributaries under the proposed definition. Therefore, the definition needs to be revised to contain appropriate exemptions in order to appropriately monitor and maintain these features. In addition, a ditch that carries water once a year and ultimately connects to a Traditionally Navigable Water can be considered *ephemeral* and, therefore, would be a tributary based on the new definition. The word *ephemeral* should be eliminated from the definition because it can be too broadly and subjectively applied. (p. 7)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. As defined, “tributary” can include perennial, intermittent or ephemeral streams. This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. The final rule also excludes many features from consideration as waters of the United States, including most ditches that are not relocated tributaries or excavated in tributaries and stormwater control features created in dry land. See summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” for a broad discussion of the final rule’s exclusions features.

Southeast Metro Stormwater Authority (Doc. #14935)

- 8.24 SEMSWA is troubled that the proposed tributary definition will likely expand what is considered jurisdictional Waters of the US. Many remote ephemeral drainages that were

not considered Waters of the US, based on an individual determination made by the local USACE office, would be brought into the scope of jurisdictional Waters of the US under the proposed rule. (p. 1)

Agency Response: See summary response for section 8.1.1. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). Ephemeral streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary, and are thus considered waters of the United States. The agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. However, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not waters of the United States. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Arizona Public Service Company (Doc. #15162)

- 8.25 ...How much flow and at what frequency is sufficient to qualify a water as a tributary? If an ephemeral stream only flows to another WOTUS once a year, is this adequate to demonstrate connectivity? What if the connection is less frequent—on the order of several years, decades, or longer? (p. 10)

Agency Response: See summary response for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The Agencies believe that grounding the definition of “tributary” in the final rule to the above referenced specific physical features will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule. Section VII of the Technical Support Document further discusses the science supporting the agencies’ conclusion.

Albuquerque Metropolitan Arroyo Flood Control Authority (Doc. #15221)

- 8.26 3. *Rapanos* Requires a Case-By-Case Analysis

The conclusion that all MS4 tributaries are jurisdictional per se is counter to the principles established in the *Rapanos* decision. As the Court noted in its decision, for an effect to be significant it must be more than speculative or insubstantial. However, MS4 systems have extremely limited effect on TNWs because they flow only when it rains. Nevertheless, the proposed rule concludes that streams—regardless of their size or frequency of flow—strongly influence how downstream waters function, whether it be by supplying most of the water, transporting sediment or organic matter, providing habitat, or changing nutrients. Yet none of these apply to the AMAFCA MS4 system. The Rio Grande is impacted by the Albuquerque MS4 only during the strongest events during the rainy season, usually consisting of a matter of hours or days of water contribution. The stormwater does not affect downstream water function, such as by providing organic matter, habitat, or taking up nutrients. Unlike other tributaries, the primary function of the

MS4 system is not to transport sediment downstream, but to capture stormwaters to prevent flooding. The stormwater does not provide flow to downstream rivers to support navigation. Instead, the primary claim to jurisdiction has been on the ability of the MS4 system to deposit pollutants in the river.

However, for a significant nexus to exist, there must be more than an insubstantial or speculative effect on the chemical, physical, or biological integrity of the river. Without evaluating the individual MS4 systems, including the capacity of each to carry pollutants, and the multitude of data collected under the NPDES permit regarding water quality at the time of conveyance, it is impossible to determine whether a significant nexus does in fact exist.

Furthermore, as AMAFCA is aware of the debris and floatable pollutants which enter the MS4 systems from various point sources, AMAFCA has implemented water quality treatment measures throughout the system. AMAFCA conducts extensive maintenance on these facilities throughout the year to remove pollutants and ensure the water quality features work as designed. To date, there is no data to support any contention that either chemical or floatable pollutants from the MS4 system are impacting the river, especially in quantities greater than those authorized under the existing NPDES discharge permit. More importantly, the potential to impact chemical integrity is unlike that of other tributaries. While most tributaries affect the TNW by trapping chemicals or transporting suspended sediments, the waters from the MS4 serve no such function.

Instead, jurisdiction based on the system's ability to affect the chemical consistency of the river would be based merely on the presence of pollutants in the system upstream of the installed BMP's. Concluding that the system affects the chemical integrity of the river because of the presence of pollutants upstream of installed BMPs requires speculation as to the effectiveness of those BMPs. As *Rapanos* has made clear that speculation is impermissible in asserting jurisdiction, such a conclusion is prohibited. Instead, in order to assert jurisdiction, a case-specific evaluation must be made to determine whether the AMAFCA MS4 system is actually having an impact on the Rio Grande River. (p. 5-6)

Agency Response: See summary responses for sections 8.1.1 and 8.1.2. The final rule eliminates the need to identify a water as relatively-permanent (as was required under the *Rapanos* guidance) or conduct a significant nexus determination for each tributary. Instead, the final rule establishes categorical jurisdiction over all waters that meet the definition of "tributary" and that are not excluded in paragraph (b). Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. The agencies further note that the final rule is solely a definitional rule, and specific implementation of permitting programs, including the CWA NPDES program, are beyond the scope of the rule. See additional responses addressing rule's application to man-made structures and stormwater control features.

Southern Company (Doc. #14134)**8.27 I. The New Definition of “Tributary” Extends to Waters that Historically Have Not Been Regulated and that Have, at Best, an Insubstantial Connection with TNWs**

The agencies propose a new definition for “tributary” that is extremely broad. It would make all tributaries of TNWs jurisdictional, without regard to a “significant nexus” evaluation. This would include all perennial, intermittent, and ephemeral features. That is, under the proposal as written, all tributaries would be deemed *by rule* to have a significant nexus to TNWs. In several respects, this aspect of the proposal far exceeds the scope of tributaries historically deemed jurisdictional and is not supported by science or law.

A. The Definition for Tributary Is Inconsistent with the Agencies’ Goal of Providing Greater Clarity and the SAB’s Recommendations

At a minimum, under the proposed rule, tributaries must *contribute flow* (directly or indirectly) to TNWs or impoundments in order to be jurisdictional. Determining whether a feature contributes flow, however, will require a case specific assessment—particularly where there is no “continuous surface connection.” As a practical matter, this determination is likely to look a lot like the agencies’ proposed “significant nexus” determination. In this way, the agencies’ proposed new definition for “tributary” is at odds with the structure of the rule and the agencies’ goal of providing predictability, consistency, and certainty.

Under the proposal’s new definition, the critical inquiry in the context of whether a feature is a tributary (and jurisdictional), is whether the feature contributes flow. Yet, the proposal is essentially silent on what this means, and the agencies have offered no standards for the requisite frequency, duration, magnitude, predictability, and consequences of those flow contributions. This was a significant criticism by the SAB panelists and only creates more confusion and uncertainty.

The agencies have based their assumption regarding tributaries in large part on the purported scientific evidence in the Draft Connectivity Report. Despite the fact that this report had not yet been finalized, the agencies concluded in their proposal that the scientific consensus supports its decision to assert jurisdiction over all tributaries based on their importance and significant nexus to TNWs. *See* 79 Fed. Reg. at 22201. Yet, as noted above, the SAB Connectivity Panel has since criticized the agencies’ basic approach to defining significant nexus, including in the context of tributaries. SAB Final Report at 3 (“[T]he EPA should recognize that there is a gradient of connectivity.”) The SAB made numerous recommended revisions to EPA regarding the agency’s Connectivity Report to reflect a gradient approach that recognizes variation in the frequency, duration, magnitude, predictability, and consequences of those connections.

To provide greater clarity, the agencies must offer clear, step-by-step guidance for use in the field for determining whether a nexus is more than speculative. For example, one of the SAB panelists, Dr. Genevieve Ali, offered a methodology that could provide an objective nexus score (ranging from 1—30) for any given water based on the frequency, magnitude, and duration of the connectivity. We believe this type of approach, with sufficient guidance and clarity for field implementation, is potentially promising and

warrants further consideration. This approach could be further developed and proposed for public comment in a re-issued proposal or supplemental proposed rule. (p. 30-31)

Agency Response: See summary response for section 8.1.1. Previous definitions of “waters of the United States” regulated all tributaries without qualification. Compared to the historic scope of the existing rule, the final rule is narrower; compared to agency practice in light of guidance issued after SWANCC and Rapanos, the final rule is generally broader, but not broader than the existing rule. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. See also summary responses for section 8.1. The final rule is similar to the proposal, but important revisions and clarifications have been made in response to public comments. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an OHWM. The preamble in section IV.F.1 includes an explanation of bed and banks adapted largely from longstanding agencies’ practice, as well as public comments on the proposed rule. The final rule adds the Corps’ existing regulatory OHWM definition to EPA’s regulations. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus. Further, the agencies note that the SAB found the available science provides an adequate scientific basis for the key components of the proposed rule. Section III(B) of the preamble discusses in detail the Science Report and the SAB’s comments on the proposed rule and how they were addressed in the final rule. Overall, the agencies conclusions were informed by the Science Report and the review and comments of the SAB, but not dictated by them. The rule reflects the judgment of the agencies when balancing the science, the statute, the Supreme Court opinions, the agencies’ expertise, and the regulatory goals of providing clarity to the public while protecting the environment and public health. Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

8.28 ***B. The Agencies Should Not Make Ephemeral Features Categorically Jurisdictional***

This is the first time the agencies have asserted blanket jurisdiction over all tributaries as per se jurisdictional. Historically, only certain ephemeral features with an OHWM have been deemed jurisdictional, following a case specific analysis. See 65 Fed. Reg. 12823 (2000) and GAO-04-297 Report “Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction. The agencies have failed to provide a sufficient rationale for abandoning this longstanding approach. And by establishing per se jurisdiction over all tributaries and abandoning case-by-case assessments of intermittent and ephemeral features, the agencies are building this important proposal on legally and technically unstable ground. This is problematic for several reasons.

For one, the blanket assertion of jurisdiction over all tributaries contravenes Justice Kennedy’s significant nexus text, which Justice Kennedy applied to tributaries, particularly minor tributaries involving insignificant connections to TNWs. “This

standard presumably provides a rough measure of the volume and regularity of flow. Assuming it is subject to reasonably consistent application . . . it may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute ‘navigable waters’ under the Act.” Rapanos, 547 U.S. at 781–82 (Kennedy, J. concurring). Thus, Justice Kennedy’s significant nexus test does not support a broad and unlimited assertion of jurisdiction over all tributaries without regard to their connection to downstream waters.

In addition, as a practical matter, ephemeral features flow only in direct response to precipitation and only for a brief period. Such features do not always reach perennial water and many only reach perennial water during certain substantial storm events. To exercise jurisdiction over all such ephemeral features, without establishing whether their connectivity is, in fact, “more than speculative or insubstantial,” is unlawful under a proper reading of Rapanos.

Also, as noted above, the SAB Connectivity Panel has called for a gradient versus categorical approach to define connectivity. If the agencies were to choose to ignore this recommendation and retain their categorical approach, as they appear poised to do, they should establish bright line tests only where bright lines actually exist. The most basic and supportable approach would be to define “categorically jurisdictional” tributaries based on the Rapanos plurality and limit the definition of “tributaries” to “those relatively permanent, standing or continuously flowing bodies of water.” Id. at 716 (“The phrase ‘the waters of the United States’ includes only those relatively permanent, standing or continuously flowing bodies of water ‘forming geographic features’ that are described in ordinary parlance as ‘streams,’ ‘oceans, rivers, [and] lakes,’ Webster’s New International Dictionary 2882 (2d ed.), and does not include channels through which water flows intermittently or ephemeral, or channels that periodically provide drainage for rainfall. . .”). (p. 32-33)

Agency Response: The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). Ephemeral streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary, and are thus considered waters of the United States. The agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. However, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not waters of the United States. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. See also responses addressing significance of “breaks” in bed and bank and OHWM and discussion in TSD and elsewhere regarding consistency of rule with applicable Supreme Court cases.

- 8.29 *C. The Agencies Must Revisit Preamble Statements That Confuse “Tributary” and “Adjacency” Concepts*

The preamble to the proposed rule indicates that tributaries “must drain, or be part of a network of tributaries that drain” into TNWs or impoundments. 79 Fed. Reg. at 22202 (emphasis added). If that is the case, then a feature could be a categorically jurisdictional tributary, even if it does not itself drain to a TNW, as long as it is part of a larger network of features that do drain to a TNW or impoundment. This is inconsistent with the basic requirement that tributaries must “contribute flow” and it blurs the line between a tributary analysis and an adjacency analysis under the agencies’ proposed rule. Equally troubling is the fact that the concept of “be[ing] part of a network of tributaries” is left entirely undefined and open to competing interpretations. Thus, here again, we have a component of the proposal that invites confusion.

To the extent that the agencies’ reference to “a network of tributaries” indicates that they are infusing their proposed “aggregation” analysis into the tributary analysis, we find this to be equally troubling. We firmly believe that aggregation should not be part of the proposed rule’s case-by-case “significant nexus” analysis. It most certainly should not be included within the “categorically jurisdictional” features of the proposed rule (*i.e.*, tributaries and adjacent waters). (p. 33)

Agency Response: See summaries for sections 8.1 and 8.2. The final rule reflects public comments on the proposed rule in several important ways. In particular, the final rule emphasizes the importance of flow. The rule definition of “tributary” requires that flow much be of sufficient volume, frequency, and durations to create physical characteristics of bed and banks and an OHWM. As a result, wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, however, they still may be considered jurisdictional waters of the U.S. either as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See TSD section 8 for adjacency, section 7 for tributaries, and section 2.B for treatment of similarly situated waters.

8.30 E. The Agencies’ Proposal Fails to Consider Practical Problems Associated with an Expansive Definition of “Tributary”

The agencies approach to defining “tributary” has, at best, blurred well-established jurisdictional lines and, at worst, extended them far beyond longstanding legal boundaries. We are equally concerned about a number of practical difficulties this approach would impose.

For one, under the proposal, a tributary would not lose its status as a tributary (*i.e.*, cannot be de-federalized) by man-made can be WOUS under current practice. The final rule does not change this practice. The breaks or activities (*e.g.*, can be one or more constructed breaks (such as bridges, culverts, pipes, or dams), or even where a tributary may naturally disappear and flow underground.²³⁵ 79 Fed. Reg. 22201–02. Such an

²³⁵ According to the preamble, “A water that otherwise qualifies as a tributary under the proposed definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as debris piles, boulder fields, or a stream segment that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.” 79 Fed. Reg. at 22202.

approach could be extremely problematic, especially since the agencies have proposed no geographic or temporal limits to its application. At a minimum, the agencies must establish geographic and temporal limits on the hydrologic breaks that would categorically not disrupt CWA jurisdiction. (p. 35)

Agency Response: See summary responses for sections 8.1.1 and 8.3. Under the final rule, a water that otherwise qualifies as a tributary under the rule's definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) *so long as a bed and banks and an ordinary high water mark can be identified upstream of the break*. These physical indicators demonstrate the water contributes sufficient flow to have a significant impact on downstream waters. Absence of these indicators generally represent the upper limit of the tributary. Section IV of the Technical Support Document discusses further the science that supports the agencies' conclusion. Further, the agencies will continue existing practice of making case by case determinations of the length of break in OHMD that does not sever the connection to downstream waters.

CPS Energy (Doc. #14566)

- 8.31 In making all "tributaries" categorically jurisdictional, the Agencies are attempting to apply a bright line rule to very complex hydro-ecological systems and making a broad general assumption that all dry, ephemeral creeks found in arid and semi-arid areas, or seasonal seeps and springs, have connectivity or significant nexus to traditional jurisdictional waters. The *Rapanos* plurality opinion states that jurisdictional WOUS are "only those **permanent, standing or continuously flowing bodies of water** ... that are described in ordinary parlance as streams, oceans, rivers, (and) lakes and **do not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall.**" CPS Energy believes that the Agencies should retain the case-by-case jurisdictional determination for significant nexus that has been practiced by the Corp since *Rapanos* for water bodies that do not have a physical manifestation of connectivity to downstream traditional water bodies. (p. 3)

Agency Response: See summary response for section 8.1. The agencies disagree that tributaries should be evaluated on a case-by-case basis. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section I of the Technical Support Document describes the legal basis of the final rule, including its consistency with the statute and case law.

Colorado Water Congress Federal Affairs Committee (Doc. #14569)

- 8.32 Despite the proposal's stated objective to add clarity to the regulatory process, the proposal in fact creates great confusion and uncertainty. Some of the unanswered questions have been alluded to above, e.g., what will be the effect of the proposal on the construction and operation of stormwater control facilities or the repair and replacement

of ditches. Other issues that must be addressed, through clarification and in the context of an ongoing dialogue amongst stakeholders, include:

...

- Is it accurate to state that “all” ephemeral or intermittent streams will now be considered jurisdictional (should be treated as case-by-case “other waters”);
- Is it accurate to state that waters adjacent to tributaries, including non-navigable tributaries, regardless of how remote or insubstantial the connection, are now jurisdictional (should be case-by-case determination);

... (p. 6, 7)

Agency Response: See summary response for section 8.1.1 and 8.2. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). Ephemeral and intermittent streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary, and are thus considered waters of the United States. The agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion with regard to tributaries. Section VIII of the TSD addresses adjacency and section II.B addresses analysis of similarly situated waters.

Southern Nevada Water Authority (Doc. #14580)

- 8.33 Under the Proposed Rule, a tributary with ephemeral flow that is "part of a network of tributaries that drain into a[traditional WOTUS]" (79 FR 22202) would automatically be a WOTUS. In the desert southwest, dry washes may be interconnected over a broad region. However, they very rarely carry any water, and only have flowing water when there is an intense, typically highly localized, rain event. Unless ephemeral washes are located near a stream with perennial water flow, water carried through most) or one or more natural ephemeral washes quickly percolates back into the ground before reaching any traditional WOTUS. Thus, for most of the desert southwest, water conveyed through ephemeral washes does not directly, or indirectly through another water, flow into a traditional WOTUS. Thus, these ephemeral flows would not contribute to the chemical, physical, and biological conditions of downstream traditional WOTUS. SNWA recommends ephemeral flow be removed from the definition of tributary, and that the Proposed Rule clarify an ephemeral drainage, or portion thereof, would be jurisdictional only if it conveys water that actually reaches and flows into a traditional WOTUS. (p. 2)

Agency Response: See summary response for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The Agencies believe that grounding the definition of “tributary” in the final rule to the above referenced specific physical features will

help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule. Section VII of the Technical Support Document further discusses the science supporting the agencies' conclusion.

Santa Clara Valley Water District, California (Doc. #14776)

- 8.34 The definition of tributaries should make clear that they contribute flow during dry weather. During wet weather, water flows in small channels and rivulets across what is indisputably uplands. If channelized wet-weather flow plus overland flow of runoff from precipitation is enough to become waters of the United States, then much of the landscape would be waters. After all, during even a moderate storm, water is flowing across virtually the entire landscape, and, because sheet flow is rare, nearly all of that water is flowing in some sort of channel. The first sentence of paragraph (c)(5) of the proposed regulation should be revised to clarify that the term tributary does not apply to areas that channel water during wet weather only. (p. 3-4)

Agency Response: See summary response for 8.1.1." The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. These physical indicators demonstrate there is sufficient volume, frequency and duration of flow to significantly affect downstream waters. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. By grounding the definition of "tributary" in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a "tributary" or a non-jurisdictional "erosional feature" will be minimal. Section VII of the Technical Support Document further discusses the science supporting the agencies' conclusion that all waters that meet the definition of "tributary" and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. See also summary response under section 8.4: Distinction between ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.

ERO Resources Corporation (Doc. #14914)

- 8.35 The proposed rule takes a "one size fits all" approach to a very wide range of drainage types (except for the narrow range of drainages that qualify as exempt). Assuming that all tributaries, including ephemeral and intermittent drainages, are jurisdictional by rule is an oversimplification. While this approach may be expedient from the agencies' perspective, it is not supported by the literature (discussed below), intuitively does not make sense, is contrary to the *Rapanos* opinions, and does not provide the regulated community an opportunity to demonstrate that an ephemeral or intermittent drainage lacks a significant nexus to a jurisdictional water. The proposed presumption that all waters that meet the definition of tributary are jurisdictional by rule is only accurate over a portion of the spectrum of potential tributary types. The presumption is applicable at the wet end of the spectrum (e.g., rivers and perennial streams) and becomes increasingly less applicable as one moves toward the drier end of the tributary spectrum, particularly with smaller

drainages in the arid West. At the drier portion of the tributary spectrum, the presumption of jurisdictional by rule is no longer accurate and becomes arbitrary. (p. 11-12)

Agency Response: The agencies disagree that tributaries cannot be categorically considered waters of the United States. See summary response for section 8.1.1. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Further, Section I of the Technical Support Document discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

- 8.36 The proposed rule does not distinguish between ephemeral and intermittent drainages, which further underscores how the rule considers all tributaries to be the same and inappropriately biases dry intermittent and ephemeral drainages toward jurisdiction as "jurisdictional by rule." These differences are accentuated in the arid West where precipitation is limited and seasonal, and year-to-year ground water levels can vary considerably. It is also clear that the hydrology of ephemeral and intermittent drainages is very different from rivers and perennial streams. The Corps currently recognizes these differences in the Nationwide Permit (NWP) regulations. For example, for NWPs 29 Residential Development, 39 Commercial and Institutional Developments, and 42 Recreational Facilities, the Corps distinguishes between the impact threshold for loss of streambed for perennial streams and ephemeral or intermittent streams. For ephemeral or intermittent streambeds, the district engineer can waive the 300-linear-foot impact threshold. If the Corps believed that the resources of all tributaries were equal, the NWP-specific impact thresholds would not distinguish between perennial streams and ephemeral or intermittent streams. (p. 13)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. As defined, “tributary” can include perennial, intermittent or ephemeral streams. This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Utility Water Act Group (Doc. #15016)

- 8.37 The Proposed Rule does not provide for any examination of the frequency or volume or duration of flow. A tributary connection does not have to be “continuous” for a waterbody to be a jurisdictional tributary. Even if there are one or more man-made breaks (e.g., bridges, culverts, pipes, or dams) or one or more natural breaks (e.g., such as wetlands along the run of a stream, debris piles, boulder fields, or a stream that flows underground), the tributary retains its jurisdictional status so) as long as there is OHWM above and below the break. The extent of jurisdiction of tributaries are limited to those that have a bed, and bank, and ordinary high water mark can be identified upstream of the

break. Thus, the presence of only a few physical features has become the legal test for a jurisdictional “tributary”; no consideration of chemical and biological attributes – either within the water being evaluated or in a downstream TNW – is required. The Proposed Rule also, for the first time, specifically defines ditches as jurisdictional tributaries under all CWA programs. Other man-made conveyances that drain or connect would also likely qualify as tributaries. Under the Proposed Rule, the “tributary” definition therefore would sweep in many features that are remote and carry only minor water volumes. It also would expressly sweep in man-made water features, unless specifically excluded. (p. 48-49) and OHWM. Waters which do not contribute flow to an (a)1-(a)3 WOUS are also not defined as tributaries.

Agency Response: See summary responses for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. The agencies have determined that streams with these physical characteristics provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. See also discussion in 8.3 regarding relevance of breaks on OHWM.

- 8.38 The Agencies have proposed a determination that a tributary can have a significant nexus when the waterbody itself is considered with all other tributaries within a watershed:

[T]he agencies conclude that tributaries, including headwaters, intermittent, and ephemeral streams, and especially when all tributaries in a watershed are considered in combination, have a significant nexus

79 Fed. Reg. at 22,206 col. 1.

UWAG believes that this determination (referred to as “tributary aggregation”) is highly speculative from a scientific standpoint, for the following reasons:

- The structure and function of tributaries within a single watershed can vary markedly, based on the physicochemical and biological factors that shape the structure and function. Thorp et al. (2006) state:

Poole (2002) proposed that: (a) rivers are composed of patchy discontinua where the community responds to local features of the fluvial landscape; and (b) *a community within a stream segment is not necessarily more similar structurally and functionally to communities in adjacent segments than it is to groups located farther upstream or downstream.*

Id. at 125 (emphasis added).

- Regulatory agencies, when determining whether waterbody segments are attaining applicable water quality standards, assess individual streams. If one stream is not attaining a particular standard or criterion, no assumption is made whether adjacent streams display the same condition.

- Refuting the “tributary aggregation” assumption is virtually impossible because actually evaluating the hydrological connectivity of all streams in a watershed would be overly burdensome. (p. 129-130)

Agency Response: The agencies disagree with the comment that aggregating tributaries within a watershed is highly speculative from a scientific standpoint. One of the main conclusions of the Science Report is that the incremental contributions of individual streams and wetlands are cumulative across entire watersheds, and their effects on downstream waters should be evaluated within the context of other streams and wetlands in that watershed. See preamble discussion in section III(B). In their review of the scientific and technical adequacy of the rule, the SAB panel members “generally agreed that aggregating ‘similarly situated’ waters is scientifically justified, given that the combined effects of these waters on downstream waters are often only measurable in aggregate.” See also summary responses for Compendium 4, in particular 4.3.1. “Proposed rule method of similarly situated in the region.” Lastly, the agencies’ experience evaluating similarly situated tributaries for a significant nexus under the 2008 Guidance has informed our understanding of streams and while resource intensive, was not overly burdensome.

Colorado River Water Conservation District, Colorado (Doc. #15070)

- 8.39 The proposed definition of tributary includes ephemeral and intermittent drainages have a bed, banks, and a high water mark. Currently, there is no automatic presumption that ephemeral and intermittent drainages are jurisdictional; rather, their jurisdictional status is determined on a case-by-case basis. Considering ephemeral and intermittent drainages jurisdictional by rule could substantially expand Clean Water Act jurisdiction. This is particularly true in the arid West where substantial portions of the landscape are comprised of ephemeral and intermittent drainages that are dry for most months of the year, and sometimes for years at a time. The inclusion of intermittent and ephemeral tributaries as jurisdictional by rule would deprive a potentially regulated entity from asserting that such a tributary has no significant nexus to a traditionally navigable water, and therefore not jurisdictional. (p. 2)

Agency Response: See summary response for section 8.1.1 and 8.2. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). Ephemeral and intermittent streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary, and are thus considered waters of the United States. The agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Illinois Fertilizer & Chemical Association (Doc. #15129)

- 8.40 Ephemeral, intermittent and less than perennial flow waters must be removed from the definition of tributary. The U.S. Supreme Court has stated at least seasonal flow is necessary for water to qualify as a “water of the U.S.” (p. 1)

Agency Response: See summary response for section 8.1.1. Also, Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

Idaho Power Company (Doc. #15501)

- 8.41 The Agencies should revise their jurisdictional-by-rule proposal to clarify that jurisdictional "tributaries" are limited to waters that contribute direct flow to a traditional navigable water via a continuous surface connection. (p. 7)

Agency Response: See summary response for section 8.1.1. The definition of “tributary” in the final rule retains the phrase “contributes flow, either directly or through another water.” This reflects scientific literature about the connectivity among waters discussed in the summary response of this section, the Technical Support Document, and the Science Report. The final rule does not require that the flow be contributed either directly or through waters that are themselves jurisdictional. Water contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters.

Lower Colorado River Authority (Doc. #16332)

- 8.42 1. *The Agencies Should Adopt the Rapanos Plurality’s Approach to Regulating Tributaries, or a Similar Approach.*

...The WWG objects to the Agencies’ proposal to categorically regulate all “tributaries,” a term defined to include intermittent and ephemeral streams and most ditches. As further explained below, the Agencies’ proposal is inconsistent with the plain language of the CWA, the Supreme Court’s interpretations of the Act, and the evidence before the Agencies.

Rather than automatically regulating most water bodies with a bed and a bank, the Agencies should adopt the approach described in Justice Scalia’s plurality opinion in *Rapanos*. Regardless of whether or not the plurality opinion represents the holding of *Rapanos*, the plurality opinion is consistent with the Supreme Court’s historic treatment of tributaries. As noted above, *Rapanos* and *Riverside Bayview* concerned the unique question of whether wetlands that were “inseparably bound up” with adjacent water bodies were jurisdictional. Their holdings did not address non-wetland water bodies such as ponds, natural streams, and manmade ditches. *SWANCC*, by contrast, addressed the question of whether an isolated pond was jurisdictional. The Court’s clear answer was that such ponds were not jurisdictional because the CWA was not intended to regulate “nonnavigable, isolated, intrastate waters.”

Consistent with *SWANCC*’s limited view of CWA jurisdiction over non-wetland water bodies, the plurality opinion in *Rapanos* limited jurisdiction to “those relatively

permanent, standing or continuously flowing bodies of water ‘forming geographic features’ that are described in ordinary parlance as ‘streams,’ ‘oceans, rivers, [and] lakes.’” The *Rapanos* plurality also held that CWA jurisdiction does not include channels through which water flows intermittently or ephemerally, or channels that periodically provide drainage for rainfall. The plurality opinion further indicated that the Agencies’ attempt to regulate manmade water bodies as tributaries is not supported by the CWA:

In applying the definition to “ephemeral streams,” “wet meadows,” storm sewers and culverts, “directional sheet flow during storm events,” drain tiles, man-made drainage ditches, and dry arroyos in the middle of the desert, the [Army] Corps has stretched the term “waters of the United States” beyond parody. The plain language of the statute simply does not authorize this “Land Is Waters” approach to federal jurisdiction.²³⁶

The Agencies should revise the Proposed Rule to define jurisdiction over tributaries consistent with the *Rapanos* plurality. Under the plurality’s approach, the Agencies would define a tributary as a water that contributes direct flow to a traditional navigable water via a continuous surface connection. The plurality’s approach is consistent with the plain language of the CWA and its policy to preserve States’ authority over land and water use. It is also consistent with SWANCC. The plurality opinion provides a clear, defensible basis for the Agencies to draw bright lines including certain types of water bodies within CWA jurisdiction and excluding other types of water bodies such as intermittent and ephemeral streams.

In the alternative, if the Agencies insist on applying the “significant nexus” test in evaluating jurisdiction over tributaries, that test should be applied only to tributaries that are not covered by the *Rapanos* plurality—that is, tributaries that are not “relatively permanent, standing or continuously flowing bodies of water ‘forming geographic features.’”²³⁷ Under this alternative approach, the Agencies could categorically regulate these types of non-permanent tributaries while evaluating jurisdiction over other tributaries (such as intermittent streams) using the “significant nexus” test. Ephemeral streams, however, should not be treated as jurisdictional under any circumstance. No reasonable reading of Supreme Court precedent supports the regulation of such clearly non-navigable water bodies. (p. 13-14)

Agency Response: See summary response for section 8.1.1. Also, Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions.

- 8.43 In determining whether a water body is a jurisdictional tributary, the Agencies should consider not only the presence of these features but also factors such as the frequency, duration, and volume of flow. As discussed above, the Agencies must consider such factors to maintain consistency with Justice Kennedy’s concurring opinion in *Rapanos* and to give meaning to the word “navigable” in the CWA.

²³⁶ *Rapanos*, 547 U.S. at 734.

²³⁷ *Id.* at 739.

The jurisdictional status of water bodies will be particularly difficult to determine for streams that contribute no direct flow to navigable waters, but may contribute flow “indirectly,” through other waters. The Agencies fail to clarify how such an indirect contribution may be identified, and fail to specify whether such a contribution must be made via a surface water connection or rather, in the Agencies’ view, may be made via groundwater. To the extent that the Agencies intend to establish indirect connections via groundwater, the WWG objects to such an interpretation, which is unsupported by the CWA or any of the Supreme Court’s decisions. (p. 16)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. The final rule also retains the phrase “contributes flow, either directly or through another water.” This reflects scientific literature about the connectivity among waters discussed in the summary response of this section, the Technical Support Document, and the Science Report. The final rule does not require that the flow be contributed either directly or through waters that are themselves jurisdictional. Water contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters.

Basin Electronic Power Cooperative (Doc. #16447)

- 8.44 The Agencies are attempting to assert jurisdiction by the using "tributaries" that directly or indirectly contribute flow to a navigable water. The Agencies fail to provide consideration of the frequency, duration, or amount of flow the tributary provides or the tributary's proximity to the navigable water. Definitions must be based on clear, objective standards that can be easily understood and consistently applied in the field. (p. 3)

Agency Response: See summary responses for sections 8.1.1 and 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. This position is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Cloud Peak Energy (Doc. #18010)

- 8.45 The proposed definition of "tributary" is very troubling and has the potential to greatly expand the scope of the waters regulated as tributaries on mines in Wyoming. The rule categorically determines that tributaries regardless of size or significance, that have a

significant nexus to traditional navigable waters (TNW), interstate waters and the territorial seas, and will therefore be jurisdictional.²³⁸ "Thus any water that meets the broad definition of "tributary" will be a jurisdictional WOTUS. Further any water or wetland adjacent to tributaries will also be jurisdictional.

This expansive categorical determination is not supported by science. The Science Advisory Board (SAB) stated in their review of the Connectivity Report that it is not appropriate to treat connectivity as a binary property (connected versus not connected). Further the SAB recommended "that the interpretation of connectivity be revised to reflect a gradient approach that recognizes variation in the frequency, duration, magnitude, predictability and consequences of connections."²³⁹ As pointed out in the GEI report provided in the WAC comments, "all tributaries ... exist on a gradient of connectivity, and the science has not identified the point on the gradient (i.e., the strength of connectivity) where the significant nexus falls." Additionally this connectivity report, on which the EPA is relying on to support their proposed definition of "tributary", has failed to go through the process of peer review for finalization. In sum, the agencies have failed to establish any scientific basis for including all tributaries within the definition of WOTUS. (p. 2)

Agency Response: The agencies disagree that tributaries cannot be categorically considered waters of the United States. Further, the Science Advisory Board expressed support for the rule's inclusion of tributaries as categorical waters of the United States. See summary response for section 8.1.1. Section VII of the Technical Support Document discusses the science supporting the agencies' determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. Lastly the connectivity report did complete multiple levels of peer review, see TSD section II.A.

Xcel Energy (Doc. #18023)

- 8.46 Xcel Energy recommends the agencies identify a new standard for tributaries that is based on scientific evidence and covers only tributaries that have the requisite relationship to jurisdictional waters, such as where there is a relatively permanent or ordinary presence of water... (p. 7)

Agency Response: See summary responses for sections 8.1.1 and 8.1.2. The final rule eliminates the need to identify a water as relatively-permanent, or conduct a significant nexus determination for each tributary. Instead, the final rule establishes categorical jurisdiction over all waters that meet the definition of "tributary" and that are not excluded in paragraph (b). Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies'

²³⁸ 79 Fed. Reg. at 22,201.

²³⁹ SAB Panel Review of Connectivity Report, Exhibit 5 at 3. The gradient approach to connectivity is recommended at least 28 times in the SAB review of the Connectivity Report.

determination that waters meeting the definition of "tributary" have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

Ducks Unlimited (Doc. #11014)

- 8.47 We agree with the agencies' statement that the literature "clearly demonstrates that streams, "regardless of their size or how frequently they flow, strongly influence how downstream waters function." The preamble provides an excellent summary of the relationship between the synthesis of the science related to tributaries and the purposes of the Act... Therefore, based on the science thoroughly reviewed in the draft Connectivity Report and in Appendix A, Scientific Evidence (henceforth, "Appendix"), the finding that all tributaries, as a class, have a significant nexus with and impact upon the physical, chemical and biological integrity of downstream (a)(1) through (a)(3) waters and are therefore jurisdictional by rule, is scientifically appropriate and sound. (p. 13)

Agency Response: The agencies agree with the commenter that tributaries provide important functions that support the chemical, physical and biological integrity of downstream waters. Any water meeting the definition of "tributary," as stated in the final rule, has a significant nexus to traditional navigable waters, interstate waters, or the territorial seas, and is therefore considered a "waters of the United States." In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies were guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate."

- 8.48 ... We agree that the literature "clearly demonstrates that streams, regardless of their size or how frequently they flow, strongly influence how downstream waters function." Therefore, the finding that all tributaries, as a class, have a significant nexus with and impact upon the physical, chemical and biological integrity of downstream (a)(1) through (a)(3) waters and therefore should be jurisdictional by rule, is scientifically appropriate and sound... (p. 75)

Agency Response: See response immediately above.

Choose Clean Water Coalition et al. (Doc. #11773.1)

- 8.49 **The Proposed Rule Will Protect Drinking Water in the Chesapeake Bay Watershed.**

Approximately 11 million people - nearly two out of three - in the Chesapeake Bay watershed get their drinking water directly from the rivers and streams flowing into Chesapeake Bay.²⁴⁰ All of these river and streams are dependent on high quality water

²⁴⁰ U.S. Environmental Protection Agency, "National Hydrography Dataset Plus; Federal Safe Drinking Water Information System 4th Quarter 2006 Data."

from intermittent and ephemeral streams in their headwater areas - waters that would be protected by this proposed rule,

Delaware: In Delaware, over 280,000 people receive their drinking water from public systems that rely at least in part on intermittent, ephemeral or headwater streams.

Maryland: Nearly four million Marylanders receive their drinking water from public systems that rely at least in part on intermittent, ephemeral or headwater streams.

New York: Across New York, over eleven million people receive their drinking water from public systems that rely at least in part on intermittent, ephemeral or headwater streams.

Pennsylvania: More than 8 million Pennsylvanians receive their drinking water from public systems that rely at least in part on intermittent, ephemeral or headwater streams.

Virginia: Across Virginia, over 2.3 million people receive their drinking water from public systems that rely at least in part on intermittent, ephemeral or headwater streams.

West Virginia: More than one million West Virginians receive their drinking water from public systems that rely at least in part on intermittent, ephemeral or headwater streams. The Elk River disaster in Charleston, West Virginia - which impacted the drinking water source of upwards of 300,000 people - underscored the importance of protecting drinking water sources for all Americans. (p. 2)

Agency Response: The agencies agree with the commenter that ephemeral and intermittent streams can be valuable sources of drinking water in the Chesapeake Bay Watershed. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters (including intermittent, ephemeral and headwater streams) which meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies were guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

8.50 **The Proposed Rule Will Protect Sensitive Waters in the Chesapeake Bay Watershed.**

One of the most important aspects of the proposed rule is its protection of intermittent and ephemeral streams. Protection of these sensitive headwaters is critical to safeguarding water quality and wildlife throughout the Chesapeake Bay watershed.

The Chesapeake Bay watershed has 147,149 miles of rivers and streams.²⁴¹ Thirty eight percent, or 56,689 of those miles, are intermittent or ephemeral streams that would be protected by the proposed rule.²⁴² In Maryland, sixteen percent or 3,874 of the state's

²⁴¹ United States Geological Service, available at: <http://nhd.usgs.gov/> <ftp://nhdftp.usgs.gov/DataSets/Staged/SubRegions/>

²⁴² United States Geological Service, available at: <http://nhd.usgs.gov/> <ftp://nhdftp.usgs.gov/DataSets/Staged/SubRegions/>

23,671 stream miles are intermittent or ephemeral. Approximately 32,000 miles - or 65 percent - of Virginia's streams could be considered headwater tributary streams.²⁴³ The Susquehanna River watershed, which runs through New York, Pennsylvania, and a small part of Maryland, boasts 45,582 miles of streams and rivers. Twenty six percent - or 12,878 miles - of those streams are intermittent and would be protected under the proposed rule. (p. 3)

Agency Response: The final rule, like the proposed rule, establishes categorical jurisdiction over all waters (including intermittent, ephemeral and headwater streams) which meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies were guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Southern Environmental Law Center et al. (Doc. #13610)

8.51 Overall, we support the proposed rule’s approach to protecting tributary streams. The proposed rule provides more clarity and better corresponds to the robust science linking tributary streams with their downstream rivers.²⁴⁴ As stated above, small streams make up a majority of stream miles in the United States and making their impact on the chemical, physical and biological integrity of our waters indisputable. Of those streams, intermittent and ephemeral streams comprise a significant portion of the river network, underscoring the need for their protection. For example, in arid and semi-arid states including Arizona, New Mexico, Nevada, Utah, Colorado and California, over 81% of stream miles have been classified as ephemeral or intermittent.²⁴⁵ Even in some non-arid states, intermittent streams are predominant as in Alabama where 80% of stream miles in the National Forest are classified as intermittent.²⁴⁶ The value of these small streams for the nation’s clean

²⁴³ Virginia Department of Environmental Quality comments on Advanced Notice of Public Rulemaking on definition of Waters of the US, EPA Docket OW-2002-0050, March 28, 2003.

²⁴⁴ See e.g., J.L. Meyer and J.B. Wallace, *Lost linkages and lotic ecology: rediscovering small streams* in Ecology: Achievement and Challenge 295-317 (M.C. Press et al. eds. 2001); M.J. Patz et al., *Trace Elements in Coalbed Methane Produced Water Interacting with Semi- and Ephemeral Stream Channels*, 170 Water Air and Soil Pollution 55, 55-67 (2006); Judy E. Meyer et al., *Where Rivers are Born: The Scientific Imperative for Defending Small Streams and Wetlands* (2003), available at www.americanrivers.org/newsroom/resources/where-rivers-areborn-the-scientific-imperative-for-defending-small-streams-and-wetlands/ (last visited Nov. 10, 2014).

²⁴⁵ Lainie R. Levick et al., *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest*, U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046 (2008).

²⁴⁶ J.L. Meyer, et al., Comments of Professional Aquatic Scientists on Advanced Notice of Proposed Rulemaking for on the Clean Water Act Regulatory Definition of "Waters of the United States" (Docket ID No. OW-2002-0050) (2003).

and safe drinking water is well recognized, providing drinking water for 117 million Americans,²⁴⁷ and yet is currently under threat.²⁴⁸

Headwater streams, whether perennial, ephemeral or intermittent impact downstream flooding, base flows, water quality and the entire aquatic, and in many cases, terrestrial food chain.²⁴⁹ Headwater streams prevent devastating floods by absorbing significant amounts of rainwater, runoff, and snowmelt. While headwaters comprise the smallest upstream component of a river network, they have the largest surface area of soil in contact with available water, thereby providing the greatest opportunity for groundwater recharge.²⁵⁰ Physical, chemical, and biological processes of headwaters retain and transform excess nutrients preventing them from entering downstream community water supplies, lakes and eventually estuaries. These headwaters not only provide numerous ecosystem services to humans but also provide vital habitat for numerous species. Most species spend at least some portion of their life cycle in these small perennial, ephemeral and intermittent streams. Preserving headwater streams under the Clean Water Act means cleaner water for larger downstream rivers, estuaries and oceans. It is well known that processes occurring upstream within these small streams affect the entire river network's structure and function.

Given the critical nature of tributary streams, we are pleased to see the agencies' reading of current law and science to continue its protection of tributary stream systems. Specifically, we support the presumptive coverage of non-navigable tributaries connected to navigable waters and the recognition of the cumulative impact of stream systems on downstream waters through application of Justice Kennedy's direction to evaluate wetlands "alone or in combination with similarly situated wetlands in the region" to streams. We offer the following recommendations to strengthen the final rule to better protect tributaries and clean water. (p. 46-47)

Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent, ephemeral and headwater streams, which meet the definition of "tributary" and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

²⁴⁷ U.S. Environmental Protection Agency, Geographic Information Systems Analysis of the Surface Drinking Water Provided by Intermittent, Ephemeral, and Headwater Streams in the U.S. [hereinafter EPA, GIA Analysis], http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm (last visited Nov. 10, 2014).

²⁴⁸ Charles Duhigg and Janet Roberts, *Rulings Restrict Clean Water Act, Foiling EPA*, New York Times, Feb. 28, 2010 (quoting New York State Assistant Commissioner for Water Resources on the gaps left in clean water protections: "There are whole watersheds that feed into New York's drinking water supply that are, as of now, unprotected."), http://www.nytimes.com/2010/03/01/us/01water.html?pagewanted=all&_r=0.

²⁴⁹ *Id.* see also, *supra* note 147.

²⁵⁰ Meyer, *supra* note 144.

- 8.52 We support EPA’s proposed analysis for cumulative analysis of similarly situated waters. Watershed networks are inherently connected, and failure to protect small upstream tributaries could result in “alterations [to] downstream hydrology, water quality, biota and geomorphic processes.”²⁵¹ Once EPA or the Corps makes a determination that a tributary stream has a significant nexus to any traditional navigable waters or interstate water, all downstream stream segments by necessity must also be jurisdictional. EPA should make clear that field staff should document the tributary that was found to have a significant nexus with downstream traditional navigable waters or interstate waters as well as all waters in between the two to ensure those waters are clearly recognized as jurisdictional. This data should be widely available and be used to create an ongoing database of waters that are jurisdictional for continual development of the category of “similarly situated” waters. (p. 48)

Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent, ephemeral and headwater streams, which meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

National Wildlife Federation (Doc. #15020)

- 8.53 ...in the interest of improved clarity, we do support a reorganization of the first part of the tributary definition that more clearly identifies contribution of flow as the key element of every tributary, and specifies two categories of water bodies that function as tributaries and therefore meet the tributary definition. For example:

The term tributary means a water in either of the following two categories:

(a) a water which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (a)(4) of this section, and which is physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e); or

(b) wetlands, lakes, and ponds (even if they lack a bed and banks or ordinary high water mark), if they contribute flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (a)(4) of this section.

While more clearly defined in regulation for the first time, the proposed tributary definition is essentially the same as the Corps’ working definition of tributary at the time of the *Rapanos* decision – a working definition referenced and seemingly supported by

²⁵¹ Mary C. Freeman et al., *Hydrologic Connectivity and the Contribution of Stream Headwaters to Ecological Integrity at Regional Scales*, 43 *Journal of the American Water Resources Association* 5, 6-14 (2007).

Justice Kennedy in his *Rapanos* concurring opinion. Justice Kennedy suggests the current definition of tributary “may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute ‘navigable waters’ under the Act.”²⁵² (p. 34-35)

Agency Response: The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent, ephemeral and headwater streams, which meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate. See summary responses for sections 8.1.1 and 8.1.2. The final rule eliminates the need to identify a water as relatively-permanent, or conduct a significant nexus determination for each tributary. Instead, the final rule establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). Section I of the Technical Support Document further discusses the legal issues concerning the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ determination that waters meeting the definition of “tributary” have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas and biological integrity of traditional navigable waters, interstate waters, and the territorial seas.

8.54 **D. The agencies’ treatment of headwater and ephemeral streams is scientifically and legally sound.**

The preamble to the proposed rule, including the Appendix A Science Evidence, includes the well-documented conclusion that:

Tributaries that are small, flow infrequently, or are a substantial distance from the nearest (a)(1) through (a)(3) water (e.g., headwater perennial, intermittent, and ephemeral tributaries) are essential components of the tributary network and have important effects on the chemical, physical, and biological integrity of (a)(1) through (a)(4) waters, contributing many of the same functions downstream as larger streams. When their functional contributions to the chemical, physical and biological conditions of downstream waters are considered at a watershed scale, the scientific evidence supports a legal determination that they meet the ‘significant nexus’ standard articulated by Justice Kennedy in *Rapanos*. 79 Fed. Reg. 22206, 22231-32.124

For example, intermittent headwaters streams throughout the Rocky Mountain West contribute cold, clean water to larger perennial tributaries that flow into traditionally

²⁵² *Id.* at 2249.

navigable or interstate waters. Fish move through both intermittent and ephemeral streams²⁵³ and fish and other aquatic species use these systems for certain life stages.²⁵⁴

The continued inclusion of ephemeral streams as tributaries and “waters of the United States” in accordance with the proposed rule is well supported by the scientific literature, the CWA, the case law, and past agency practice.²⁵⁵ EPA has estimated that intermittent or ephemeral streams comprise fifty-nine percent of all stream miles in the United States, excluding Alaska.²⁵⁶ As Western Resource Advocates notes in its Proposed Guidance Comments (July 2011), the vast majority of river miles in the Interior West are smaller headwaters and plains streams that do not flow year-round. EPA Region 8 estimates that only 17% of the waters within its five states flow year-round.²⁵⁷ In Colorado and Utah, respectively, only 25 and 21 percent of stream miles are perennial.²⁵⁸

In Arizona, an estimated 96% of the state’s stream miles are intermittent or ephemeral.²⁵⁹ Moreover, in Arizona, in the early 2000s, the State estimated that 97% of its permitted point source discharges were to headwaters, intermittent and ephemeral streams.²⁶⁰ In its

²⁵³ Stefferud & Steffrud, “Fish Movement through Intermittent Stream Channels: A Case History Study” (2007), available at <http://www.usbr.gov/lc/phoenix/biology/azfish/pdf/intermittentStreams.pdf>.

²⁵⁴ Wigington, et al. “Coho Salmon Dependence on Intermittent Streams,” (2006), available at <http://www.roguebasinwatersheds.org/files/intermittent%20streams%20and%20coho.pdf>.

²⁵⁵ See, e.g., *United States v. Deaton*, 332 F.3d 698, 712 (4th Cir. 2003), cert denied, 124 S. Ct. 1874 (2004) (“jurisdiction over the whole tributary system of any navigable waterway is warranted”); *Quivira v. EPA*, 765 F.2d 126 (10th Cir. 1985) (arroyo with continuous groundwater connection and occasional surface water connection jurisdictional under the Act); *United States v. Ashland Oil and Transportation Co.*, 504 F.2d 1317, 1325 (6th Cir. 1974) (finding “Congress knew exactly what it was doing and that it intended the Federal Water Pollution Control Act to apply, as Congressman Dingell put it, ‘to all water bodies, including main streams and their tributaries.’ Certainly the Congressional language must be read to apply to our instant case involving pollution of one of the tributaries of a navigable river. Any other reading would violate the specific language of the definition [of navigable waters as waters of the United States] and turn a great legislative enactment into a meaningless jumble of words.”) (quoting 118 Cong. Rec. 33756-57).

²⁵⁶ Letter from Benjamin H. Grumbles, Assistant Administrator, U.S. Environmental Protection Agency to Jeanne Christie, Executive Director, Association of State Wetland Managers (Jan. 9, 2006) [mistakenly date stamped Jan. 9, 2005] at 2.

²⁵⁷ See Congressionally Requested Report on Comments Related to Effects of Jurisdictional Uncertainty on Clean Water Act Implementation, Report No. 09-N-0149 at 8 (2009), available at <http://www.epa.gov/oig/reports/2009/20090430-09-N-0149.pdf>.

²⁵⁸ See Streams Lakes and Trout Streams of Colorado, <http://www.cotrout.org/Portals/0/pdf/legislative/State%20of%20Colorado%20Ephemeral%20Comparison.pdf>; EPA, Percentage of Surface Drinking Water from Intermittent, Ephemeral, or Headwater Streams in Utah, available at http://www.epa.gov/owow/wetlands/science/surface_drinking_water/pdfs/surface_drinking_water_ut.pdf (last visited 06/28/11).

²⁵⁹ See Letter from Stephen A. Owens, Director, Arizona Department of Environmental to Benjamin H. Grumbles, Assistant Administrator, Office of Water, U.S. Environmental Protection Agency (December 5, 2007) at 2 (describing the quality and function of surface waters in Arizona) (submitted as comments on the Guidance) (2007 ADEQ Comments); See NWF, NMWF, TU, DU, *Imperiled Treasures: How Recent Supreme Court Decisions and Agency Actions Have Endangered Southwest Waters and Wildlife* (January 2008) at 16; Nadeau & Rains, Hydrological Connectivity Between Headwater Streams and Downstream Waters: How Science can Inform Policy, 43 J. Am. Water Resources Ass’n 118, Fig. 3b (2007), available at <http://www.albergstein.com/cao/Best%20Available%20Science/Headwater%20Streams/JAWRA%20Headwaters%20Issue/Headwaters%20ecological%20connectivity%20-%20science%20and%20policy.pdf>.

²⁶⁰ *Id.* at 127.

comments on the 2007 Rapanos Guidance, the Arizona Department of Environmental Quality (ADEQ) acknowledged that without Clean Water Act jurisdiction over its intermittent and ephemeral streams, it “will be unable to assure the general public that these discharges of effluent in the desert are not harmful to the environment, and we will be unable to achieve our overall mission to enhance and protect Arizona’s environment.”²⁶¹

The agencies’ rulemaking record also considers that, particularly in the West, some rivers and streams that are ephemeral today used to flow with greater frequency because of water supply infrastructure that has diverted the natural flows of these rivers and streams elsewhere.²⁶² While the South Platte River in Colorado once flowed year round, today there are reaches of the South Platte where the flow in the river can be composed entirely of effluent from point source permitted discharges.²⁶³

Because the watersheds in the West have a high concentration of ephemeral streams, the contribution of these streams to the larger tributaries is critical to maintain tributary function, including the function of providing habitat to native species that even ephemeral streams provide. WRA notes, for example, one set of three small warm/cool water fishes – the bluehead sucker, the flannelmouth sucker and the roundtail chub – that is the subject of a conservation plan among Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming.²⁶⁴ These fish occupy primarily headwaters tributaries, many of which are intermittent or ephemeral. In one study, the fish were found in deep pools above ephemeral reaches, indicating that both adult and juvenile fish move throughout their headwaters habitat, including along ephemeral channels.²⁶⁵

Natural and artificial ephemeral streams, even if they carry only stormwater (or effluent from point source discharges), eventually flow into intermittent or perennial tributaries or traditionally navigable or interstate waters. The pollutants in the storm water or effluent also find their way downstream. WRA offers the example that, in an effort to keep its drinking water source watershed as clean as possible, the Pagosa Area Water and Sanitation District has published a page on its website cautioning loggers to “avoid poor logging practices” that cause excessive sediment contributions to the larger system.²⁶⁶

There is agency precedent for regulating ephemeral streams. In 2007, the Arizona Department of Environmental Quality (ADEQ) commented to EPA that, “Arizona’s ephemeral streams have been considered jurisdictional waters at least since the first days

²⁶¹ 2007 ADEQ Comments, *Imperiled Treasures*, supra note 131

²⁶² See, e.g., 79 Fed. Reg. at 22201 citing *U.S. v. Moses*, 496 F. 3d 984 (9th Cir. 2007), cert. denied, 554 U.S. 918 (2008); SAB Connectivity Peer Review Report at 31-32, 57-58; Western Resource Advocates 2014 Rule Comments at 9, 16.

²⁶³ *Id.* citing USGS, Water Quality in the South Platte River: Colorado, Nebraska & Wyoming 1992-1995, Circular 1167 at 18 (1998).

²⁶⁴ *Id.* at 10, citing White Water Park at Rock Park, <http://www.cityofsparks.us/residents/parks-and-facilities/whitewater-park-rock-park> (last visited Oct. 3, 2014).

²⁶⁵ Michael R. Bower, et al., *Habitat Features Affect Bluehead Sucker, Flannelmouth Sucker, and Roundtail Chub Across a Headwater Tributary System in the Colo. River Basin*, 23 J. Freshwater Eco. 3, pp. 347-58 (Sept. 2008), available at <http://www.uwyo.edu/frahel/pdfs/bower-2008-1.pdf>.

²⁶⁶ *Id.* citing Watersheds, <http://www.pawsd.org/watershed-protection.html> (last visited Oct. 3, 2014).

of the 1972 [Clean Water Act].”²⁶⁷ Prior to the 2007 guidance, the Los Angeles District often took jurisdiction on “dry washes,” at least where they could readily identify an Ordinary High Water Mark.²⁶⁸ In 2007, the Kansas City District found jurisdictional a first-order, ephemeral, stream based on the presence of a “significant nexus.”²⁶⁹ Even the 2008 Guidance extended CWA jurisdiction to “[c]ertain ephemeral waters in the arid west” where they are “tributaries and they have a significant nexus to downstream traditional navigable waters. For example, in some cases these ephemeral tributaries may serve as a transitional area between the upland environment and the traditional navigable waters.”²⁷⁰ The 2008 Guidance failed to explain, however, why such waters outside of the arid West do not likewise provide important functions and warrant protection. (p. 39-41)

Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent, ephemeral and headwater streams, which meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

American Rivers (Doc. #15372)

8.55 In general, we are supportive of the Agencies’ approach to defining tributaries under the CWA. The proposed definition reflects the overwhelming scientific consensus that tributaries impact the chemical, physical, and biological integrity of downstream waters.²⁷¹ Tributaries transport water, sediment, nutrients, and organisms downstream, capture and store floodwaters, filter out pollutants, and provide habitat for aquatic organisms, plants, and animals.²⁷² As the scientific literature demonstrates, all tributaries have a significant nexus to jurisdictional waters and we support the Agencies’ decision to categorically protect them as “waters of the United States.”

Additionally, we are strongly supportive of the inclusion of intermittent, and ephemeral tributaries which make up approximately 60 percent of streams in the continental United

²⁶⁷ 2007 ADEQ Comments, Imperiled Treasures at 17, *supra* note 131.

²⁶⁸ *Imperiled Treasures*, *supra*, at 17.

²⁶⁹ See U.S. Army Corps of Eng’rs, Kansas City District, Approved Jurisdictional Determination: Coffey County RWD 3, NWK-2007-02080-2, at 5 (Dec. 6, 2007) (describing multiple effects of stream).

²⁷⁰ 2008 Guidance at 11.

²⁷¹ *Definition of ‘Waters of the United States’ Under the Clean Water Act*, 79 Fed. Reg. 76, 22201 (proposed April 21, 2014) [hereinafter Definition of WOTUS]. Letter from Dr. David T. Allen, Chair of the Science Advisory Board to EPA Administrator Gina McCarthy, Science Advisory Board (SAB) *Consideration of the Adequacy of the Scientific and Technical Basis of the EPA’s Proposed Rule titled, “Definition of Waters of the United States Under the Clean Water Act”* 2 (Sep. 30, 2014) [hereinafter SAB review of the proposed rule].

²⁷² *Definition of WOTUS*, 79 Fed. Reg. at 22226-22227.

States and contribute to the drinking water supplies of 117 million Americans.^{273, 274} It is important to protect all tributaries under the CWA because they provide many functions, as discussed above, that directly affect the quality of downstream waters. We agree with the Agencies that, “It is necessary to regulate the entire tributary system to fulfill the objective of the CWA.”²⁷⁵

The legislative and judicial history of the CWA supports the comprehensive protection of tributaries. Justice Kennedy determined that “waters of the United States” encompasses waters that “possess a significant nexus to waters that are or were navigable in fact or that could reasonably be so made.”²⁷⁶ The significant nexus test is assessed in terms of the CWA’s goals to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.”²⁷⁷ Tributaries clearly meet this “significant nexus” test. Justice Kennedy also rejected the plurality’s approach that only “relatively permanent” waters fall under the scope of the CWA.²⁷⁸ He stated that the requirement of “permanent standing water or continuous flow... makes little practical sense in a statute concerned with downstream water quality.”²⁷⁹ Thus, the inclusion of perennial as well as intermittent and ephemeral waters is appropriate under the CWA. (p. 17)

Agency Response: The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent, ephemeral and headwater streams, which meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Western Resource Advocates (Doc. #16460)

8.56 **V. To protect the West’s rivers and ecosystems, Clean Water Act protection must extend to all tributaries of navigable and interstate waters.**

WRA agrees with the proposed rule, 42 C.F.R. §122(a)(5) and elsewhere, to define all tributaries of traditional navigable and interstate waters as waters of the US. EPA’s Science Advisory Board recently issued its final review of the agencies’ scientific support for this aspect of the rule, finding *inter alia*, that EPA’s review “provides strong scientific support for the conclusion that ephemeral, intermittent and perennial streams exert a strong influence on the character and functioning of downstream waters and that tributary

²⁷³ *Geographic Information Systems Analysis of the Surface Drinking Water Provided by Intermittent, Ephemeral, and Headwater Streams in the U.S.*, *supra* note 63.

²⁷⁴ EPA, *Streams* (last updated Oct. 30, 2013), <http://water.epa.gov/type/rsl/streams.cfm>.

²⁷⁵ *Definition of WOTUS*, 79 Fed. Reg. at 22227

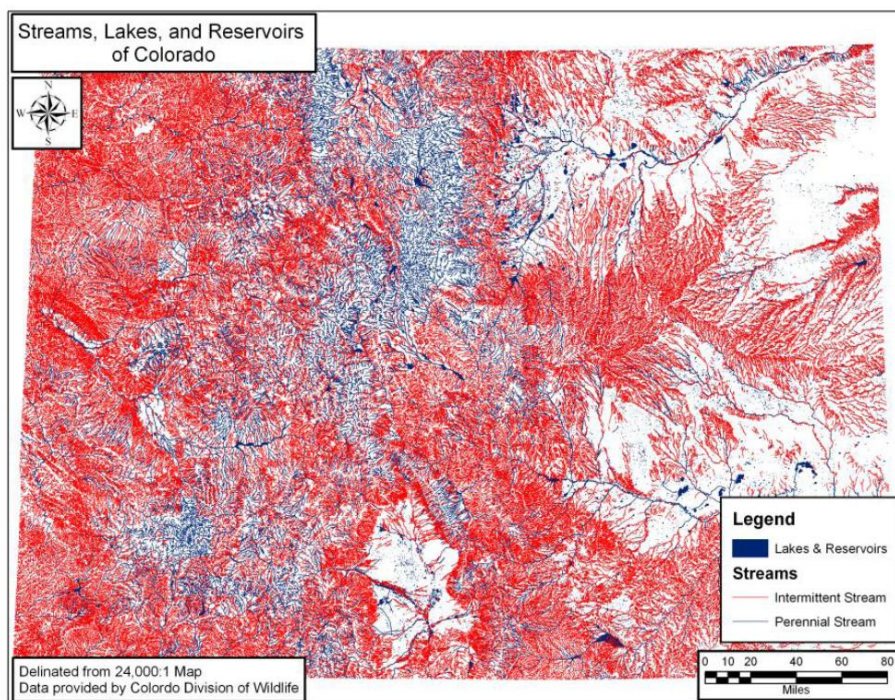
²⁷⁶ *Rapanos*, 547 U.S. at 759.

²⁷⁷ 33 U.S.C. §1251(a) (2013).

²⁷⁸ *Rapanos*, 547 U.S. at 739.

²⁷⁹ *Id.* at 769.

streams are connected to downstream waters.”²⁸⁰ If anything, the Science Advisory Board suggested that the justification for a finding of connectivity in at least one type of water (unidirectional non-floodplain wetlands), is **stronger** than the agency’s stated conclusion.²⁸¹ In the arid and semi-arid southwest, where three quarters or more of river miles are intermittent and ephemeral, it is imperative to implement the Clean Water Act so that these tributaries be covered. In Colorado alone, as EPA has acknowledged, 3.7 million people receive all or part of their drinking water from intermittent and ephemeral tributaries.²⁸² To understand why, consider the map below, which shows perennial tributaries in blue, intermittent tributaries in red:²⁸³



Streams, Lakes and Reservoirs of Colorado

Intermittent Tributaries

Intermittent, or in the *Rapanos* plurality’s language, “seasonal,” streams contribute cold, clean water to larger perennial tributaries that flow into traditionally navigable or interstate waters. As is not true elsewhere in the country, the majority of river miles in the southwest are not perennial. Flows of many rivers and streams in this region fluctuate

²⁸⁰ Letter from David Allen & Amanda Rodewald, EPA, to Gina McCarthy, EPA p.3 (Oct. 17, 2014) (regarding SAB Review of the Draft EPA Report, Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence) available at [http://yosemite.epa.gov/sab/sabproduct.nsf/WebBoard/AF1A28537854F8AB85257D74005003D2/\\$File/EPA-SAB-15-001+unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/WebBoard/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf).

²⁸¹ *Id.*

²⁸² Env'tl. Protection Agency, Analysis of Surface Drinking Water Provided By Intermittent, Ephemeral, and Headwater Streams in the U.S (State-by-State) and (County-by-County) (2009), available at http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm.

²⁸³ Andrew Todd, Aquatic Specialist, Trout Unlimited (2007) (White areas may be wetlands or uplands).

based on a yearly hydrologic cycle of mountain snowmelt, resulting in a peak flow during late spring and early summer, followed by low or no flows the rest of the year.²⁸⁴ The southwest's intermittent tributaries have ordinary high water marks and relatively well defined courses with beds and banks, although these waterways may move within the flood plain during floods, as do perennial tributaries and TNW. Fish move through intermittent tributaries far more often than once thought,²⁸⁵ and, fish (as well as other aquatic species) rely on these systems during certain of their life stages.²⁸⁶

Modern water development has also changed the character of tributaries in the West, transforming these waters both from intermittent to perennial and from perennial to intermittent. Thus, rivers like the South Platte (tributary to the Platte) which flows through Denver, have increased flows during what traditionally was their low (or no) flow season, because irrigation return flows or effluent discharges make up much, and at times all, of what flows down the river.²⁸⁷ While some regional rivers were intermittent pre-development, other southwestern rivers and streams that are today intermittent once flowed year-round in wet and average water years. The Salt River, a tributary to the Colorado that flows through and below Phoenix, Arizona, is one example; the Santa Fe River (tributary to the Rio Grande) through the City of Santa Fe in New Mexico is another. These rivers and streams now run dry – or flow only as a result of effluent discharges—because the region's extensive system of dams and other water supply infrastructure has diverted or impounded the natural flows of these rivers and streams. As noted above, these tributaries include the primary river systems flowing through – and supplying drinking water to – some of the nation's largest metropolitan areas. WRA supports inclusion of all of these tributaries as jurisdictional.

Ephemeral Tributaries

Ephemeral streams differ from intermittent streams in that ephemeral streams flow in response to precipitation events (rainstorms). Studies even document the movement of fish in and through ephemeral waters.²⁸⁸ Ephemeral streams must remain jurisdictional for the future effectiveness of Clean Water Act protections, especially in the arid and semi-arid Southwest. As noted above, the Tenth Circuit Court of Appeals, whose territory includes a substantial portion of this region, has repeatedly stated that Congress intended such streams be included as waters of the US.

Naturally ephemeral streams are important to the nation's waters in many ways. Just as intermittent streams play an important role in watersheds in the Rockies, so too do ephemeral streams.²⁸⁹ In the southwest, a relatively higher percentage of native fish are

²⁸⁴ Poff, Leroy, et al., *The Natural Flow Regime*, 47 BIOSCIENCE 769 (1997), available at [http://rydberg.biology.colostate.edu/~poff/Public/poffpubs/Poff1997\(BioScience_NFR\).pdf](http://rydberg.biology.colostate.edu/~poff/Public/poffpubs/Poff1997(BioScience_NFR).pdf).

²⁸⁵ Sally E. Stefferud & Jerome A. Stefferud, *Fish Movement Through Intermittent Stream Channels: A Case History Study* (2007), available at <http://www.usbr.gov/lc/phoenix/biology/azfish/pdf/intermittentStreams.pdf>.

²⁸⁶ Wigington, et al., *Coho Salmon Dependence On Intermittent Streams*, (2006), available at <http://www.esajournals.org/doi/abs/10.1890/1540-9295%282006%294%5B513%3ACSDOIS%5D2.0.CO%3B2> (last visited Nov. 4, 2014).

²⁸⁷ USGS, *Water Quality in the South Platte River: Colorado, Nebraska & Wyoming 1992-1995*, Circular 1167 at 18 (1998).

²⁸⁸ Stefferud, *supra*.

²⁸⁹ Levick, et al., *supra*.

imperiled than in other areas of the country. Similarly, as a general matter, a higher percentage of terrestrial species are at risk for extinction than elsewhere in the nation.²⁹⁰ Because the region's watersheds have a high concentration of ephemeral streams, the contribution of these streams to the larger tributaries is critical to maintaining tributary function, including providing habitat to native species in the ephemeral streams themselves. The Colorado River Basin is home to many native fish currently threatened from a variety of sources including pollutants, non-native fish, barriers and low flows caused by dams and diversions. One set of three small warm/cool water fishes – the bluehead sucker, the flannelmouth sucker and the roundtail chub – is the subject of a conservation plan among Arizona, Colorado, Nevada, New Mexico, Utah and Wyoming.²⁹¹ Unlike the “big river” native fish on the Colorado that live in perennial rivers and adjacent wetlands, these smaller fish occupy primarily headwaters tributaries, many of which are intermittent or ephemeral. In one study, the fish were found in deep pools above ephemeral reaches, indicating that both adult and juvenile fish move throughout their headwaters habitat, including along ephemeral channels.²⁹²

Natural and artificial ephemeral streams, even if they carry only storm water, effluent from point source discharges or sediment from non-point source activities like road building and logging, eventually flow into intermittent or perennial tributaries or traditionally navigable or interstate waters. Thus, the pollutants in the storm water or effluent also find their way downstream and can have significant effects (positive or negative) downstream. For example, in an effort to keep its drinking water source watershed as clean as possible, the Pagosa Area Water and Sanitation District has published a page on its website cautioning loggers to “avoid poor logging practices” that cause excessive sediment contributions to the larger system.²⁹³

If there are numerous, similarly situated ephemeral streams in a single entry watershed, then their combined impact in terms of pollutant load on the tributary, navigable water or interstate water can be significant. From an efficiency standpoint, it will almost always be more efficient to control these pollutants at their source rather than wait to control them downstream, especially because the pollutants are likely to have adverse effects on the aquatic life or recreational opportunities along the way. As the Pagosa example demonstrates above, many public water suppliers divert in a headwaters system that receives flows and pollutants from upstream ephemeral and intermittent reaches. In the southwest, water users also divert directly from intermittent and even ephemeral streams during the times of the year when they flow.²⁹⁴ Thus, pollutant discharges to these small, seasonal waters must be controlled at their sources to protect the integrity of the region's municipal and agricultural water supplies. (p. 10-13)

²⁹⁰ Walker & Burr, *Status of Freshwater Fishes of the United States: Overview of an Imperiled Fauna*, 19 Fisheries 6 (1994).

²⁹¹ *Supra* note 38.

²⁹² Michael R. Bower, et al., *Habitat Features Affect Bluehead Sucker, Flannelmouth Sucker, and Roundtail Chub Across a Headwater Tributary System in the Colo. River Basin*, 23 J. Freshwater Eco. 3, pp. 347-58 (Sept. 2008), available at <http://www.uwyo.edu/fradel/pdfs/bower-2008-1.pdf>.

²⁹³ Watersheds, <http://www.pawsd.org/watershed-protection.html> (last visited Oct. 3, 2014).

²⁹⁴ Wendy Bowden Crowther, Clyde Snow & Sessions, P.C., *Utah Water Law 101* (2009), available at <http://slco.org/watershed/symposium/pdf2009/Symp09Crowther.pdf>.

Agency Response: See summary response for section 8.1.1. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent, ephemeral and headwater streams, which meet the definition of "tributary" and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. The agencies' interpretation is informed by the Science Report and the review and comments of the SAB, but not dictated by them. The rule reflects the judgment of the agencies when balancing the science, the statute, the Supreme Court opinions, the agencies' expertise, and the regulatory goals of providing clarity to the public while protecting the environment and public.

8.57 *Tributaries with a significant nexus when aggregated with other similar tributaries*

WRA agrees that all intermittent and ephemeral streams within a single entry watershed will have a significant nexus on the downstream perennial navigable and interests waters if their effects are aggregated. For all of the scientific and legal reasons the agencies lay out in the Preamble, the appendices and the Connectivity Report, including the sources cited above and information from studies that WRA cited in our comments on the Guidance three years ago, WRA agrees with the agencies' proposal to define all intermittent tributaries as jurisdictional, by rule, because they have a significant nexus to navigable and interstate waters.²⁹⁵ (p. 17)

Agency Response: See response provided immediately above.

National Waterways Conference, Inc. (Doc. #12979)

8.58 The definition contains no reference to the volume or frequency of flow, which would seem an important consideration in determining whether an area constitutes a "water" or not. That creates additional uncertainty and potential for jurisdictional overreaching. The definition thus could encompass impermanent waters that lack consistent flow, clearly deviating from the standard articulated by Justice Scalia in the *Rapanos* plurality opinion²⁹⁶ and raising serious problems under the "significant nexus" test. (p. 10)

Agency Response: See summary response for section 8.1.1. The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. Section VII of the Technical Support Document further discusses the science supporting the agencies' conclusion that all waters that meet the definition of "tributary" and that are not

²⁹⁵ The support for the agencies position is described in the preamble to the proposed rule, 79 Fed. Reg. 22188 (April 21, 2014), EPA's CONNECTIVITY OF STREAMS AND WETLANDS TO DOWNSTREAM WATERS: PEER REVIEW AND SYNTHESIS OF THE SCIENTIFIC EVIDENCE, available at [http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/7724357376745F48852579E60043E88C/\\$File/WOUS_ERD2_Sep2013.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/fedrgstr_activites/7724357376745F48852579E60043E88C/$File/WOUS_ERD2_Sep2013.pdf), and the EPA's Science Advisory Board review thereof, supra note 45. WRA's 2011 comments on the proposed guidance are attached.

²⁹⁶ 547 U.S. at 739 (finding that the agencies' authority should extend only to "relatively permanent, standing or continuously flowing bodies of water" connected to traditional navigable waters.).

excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. See also discussion in TSD and elsewhere discussing consistency of the rule with Supreme Court case law.

Trout Unlimited (Doc. #18015)

8.59 TU supports the proposal because it restores protection for headwater streams.

Connectivity and Clean Water Act jurisdictional protection are most important for small headwater streams and the trout and salmon that call them home. Unfortunately, the two Supreme Court decisions have put at risk the jurisdictional protection of the Clean Water Act for these small streams, particularly for ephemeral and headwater streams which may not flow the entire year. At least 80% of the stream miles in the country are headwater streams, with 53% of total stream length categorized as first-order streams. Headwater streams are incredibly important not only for downstream water quality, but also as habitat for trout and salmon. Lahontan cutthroat trout, for instance, exist entirely in terminal waters in the Great Basin Desert. Having already been extirpated from 90% of its stream habitat, over 70% of the remaining populations occupy only the highest headwater streams, many of which dry up seasonally before reaching mainstem rivers.

There are a variety of activities that threaten headwater streams. Increased development of natural gas, and the road building and land clearing associated with gas development, are prominent examples of the existing challenges our headwater streams are facing. (p. 1-2)

Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent, ephemeral and headwater streams, which meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Environment Council of Rhode Island (Doc. #3532)

8.60 Our organizations support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 54% of Rhode Island's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 97% of Rhode Island's stream miles. These streams are also critical habitat for fish and other aquatic species. There is great potential for re-connecting and protecting the many miles of river and stream systems in RI, benefitting migratory fish species (salmon, river herring, shad) and also resident freshwater fish and wildlife populations (trout and freshwater mussels, crayfish).

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans, including 564,893 residents in Rhode Island. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 169 miles of streams in Rhode Island that 54% of our residents depend on for drinking water.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important. (p. 2)

Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, tributary ditches and other man-made or man-altered waters that meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Clean Water Action et al. (Doc. #13997)

- 8.61 We support the Agencies' proposal to define all tributaries as "waters of the United States," including headwaters and small streams that may only flow seasonally. Headwater streams provide most of the flow to downstream streams and rivers, and make up 29 percent of Florida's stream miles. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 12 percent of Florida's stream miles.

These streams are also critical habitat for fish and other aquatic species. Headwater and seasonal streams also feed the drinking water sources of 117 million Americans. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 580 miles of headwater, intermittent and ephemeral streams in Florida that supply drinking water sources.

In addition, we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important. (p. 2)

Agency Response: See response to Environment Council of Rhode Island (Doc. #3532) above.

Kansas Natural Resource Council (Doc. #14599)

- 8.62 Ephemeral and Intermittent waters

We are pleased to see in the proposed rule statements that speak specifically to the nature and importance of intermittent and ephemeral streams. A 2012 report by the Kansas Department of Health and Environment found that only 41% of the State's stream mileage designated to support aquatic life actually does at the level required by the Clean Water Act. Many of the waterways in the western third of Kansas are intermittent or ephemeral and are therefore not perceived as affecting to any great degree downstream perennial flows, the so-called "real" navigable waters. The proposed rule and companion scientific report firmly establish that ephemeral streams are important and unique aquatic habitat and are critical contributors to downstream water quality. (p. 1)

Agency Response: The agencies agree with the commenter that ephemeral and intermittent tributaries provide important functions that support the chemical, physical and biological integrity of downstream waters. Any water meeting the definition of "tributary," as stated in the final rule, has a significant nexus to traditional navigable waters, interstate waters, or the territorial seas, and is therefore considered a "waters of the United States." In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies were guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Mystic River Watershed Association (Doc. #14633)

- 8.63 Our organization supports the Administration's efforts to clarify that all tributaries – including intermittent, ephemeral, and headwater streams – are "waters of the United States" and should be protected under the law. These streams feed into iconic waterways from the Chesapeake Bay to the Great Lakes to Puget Sound. (p. 2) commenter's examples.

Agency Response: See response to Kansas Natural Resource Council (Doc. #14599) above.

Citizens Committee to Complete the Refuge (Doc. #14738.1)

- 8.64 We concur that the scientific literature conclusively demonstrates that "all tributary streams, including perennial, intermittent, and ephemeral streams are chemically, physically, and biologically connected to downstream rivers," and that they clearly warrant regulation under the Clean Water Act. (p. 2)

Agency Response: See response to Kansas Natural Resource Council (Doc. #14599) above.

Montana Audubon (Doc. #14755)

- 8.65 **3. Streams that have a bed, bank, and Ordinary High Water Mark (OHWM).** Currently it is unclear which streams are included in WOUS. The proposed rule therefore clarifies that ephemeral, intermittent, perennial, and streams that run underground for a distance can be included in the definition of WOUS if they have a bed, bank, and OHWM. This makes sense—only those streams with water running through them

regularly will develop these features; and streams with water running through them regularly should be protected under the Clean Water Act.

In the map appearing [below], the project site for Corps permit NWO-2013-01330-MTB was considered non-jurisdictional, despite the fact that the adjacent stream was perennial with a bed, banks and OHWM, because of the one-mile (+) length of stream that flowed underground. The project site is marked in red. Allowing perennial streams that run underground for even a mile to be considered WOUS is important if we are to protect water quality long-term.



5,802 feet from end of Big Lost Creek Bowser-Tracy Ditch to Spring Creek

(p. 4)

Agency Response: See summary responses for sections 8.1.1 and 8.3. Under the final rule, a water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more natural breaks (such as a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.”

Clean Water Action et al. (Doc. #14884)

8.66 For the last decade, polluter-backed loopholes in the Clean Water Act have caused confusion about which streams, wetlands and other water are protected from pollution and destruction. Headwater and seasonal streams feed the drinking water sources of 117 million Americans, including 2.2 million residents in Connecticut. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 844 miles of streams that 63% of our residents depend on for drinking water. This number includes 100% of those who depend on public water supplies

...

Our organizations support the Agencies’ proposal to define all tributaries as “waters of the United States,” including headwaters and small streams that may only flow seasonally. Headwater streams – streams that have no other streams flowing into them - account for 52% of the total stream miles in Connecticut. Intermittent and ephemeral

streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and make up 8% of Connecticut's stream miles. These streams are also critical habitat for fish and other aquatic species. (p. 1, 2)

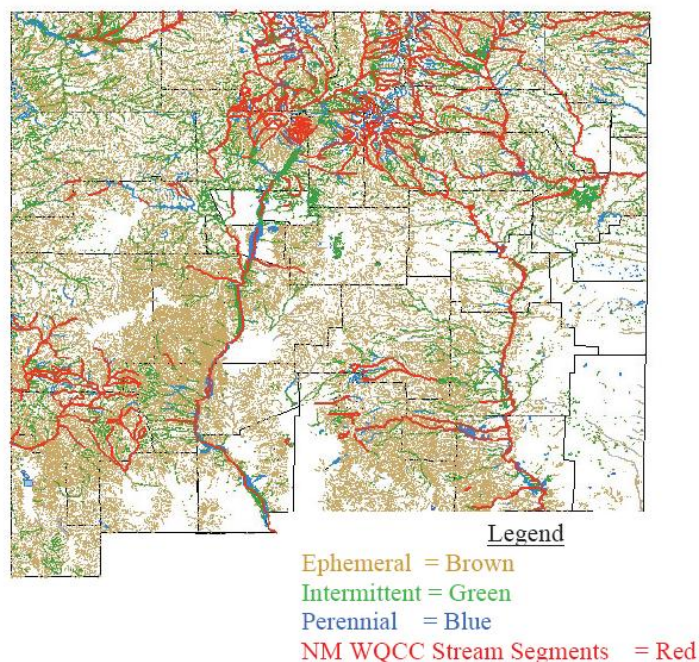
Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent and ephemeral stream that meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Amigos Bravos (Doc. #14974)

- 8.67 In New Mexico, where up to 94% of our waters are intermittent and ephemeral,²⁹⁷ we strongly support the clarification that Clean Water Act protections apply to streams that flow only seasonally. (See Figure 1 below for map of intermittent and ephemeral waters in New Mexico.) Since the US Supreme Court decisions in the Rapanos and Carabell cases there has been a loss of historic protections for many of our small streams which provide clean water for drinking, irrigation and wildlife in New Mexico. These Supreme Court decisions have made it confusing and burdensome for the U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers to protect small streams and wetlands under the Clean Water Act. As a result, enforcement actions against polluters have declined, and it has become clear that some polluters are using the decisions as a justification to avoid permitting and reporting requirements for discharging pollutants into our waters. The Rule would clarify that some of the waters that have lost protections in the confusion after the Supreme Court decisions, namely ephemeral and intermittent tributaries, are once again protected under the Clean Water Act.

²⁹⁷ See 2010-2012 State of New Mexico Clean Water Act 303d/305b Integrated Report, page 4. Available at: <http://www.nmenv.state.nm.us/swqb/303d-305b/2010-2012/>.

Figure 1: Types of New Mexico Surface Waters



(Figure taken from NMED exhibit at New Mexico's 2004 Triennial Review of Water Quality Standards. Almost all of the red stream segments are perennial)

Figure 1: Types of New Mexico Surface Waters

I. Importance of Ephemeral and Intermittent Waters in New Mexico

Ephemeral waters are critically important for the health of New Mexico's communities, wildlife and economy. A search of the New Mexico Department of Game and Fish's BISON-M database shows that almost one fifth of NM vertebrate species, excluding fish, (127 species) use ephemeral and/or intermittent waters (list attached as Exhibit 1). These 127 vertebrate species include: 9 taxa classified as State and/or federal threatened, endangered or candidate; 8 taxa classified as State and/or federal sensitive or species of concern 24 taxa classified as State "Species of Greatest Conservation Need"; 25 game species; 1 taxa endemic to NM; and 10 species listed as of cultural importance to Pueblo Tribes (Exhibits 2 and 3). Even some fish use ephemeral waters. For example, Pecos Pupfish and White Sands Pupfish (both State Threatened, State "Species of Greatest Conservation Need", and federal Species of Concern) are exploiters which will move into ephemeral waters when available. The New Mexico Department of Game and Fish (NMDGF) actively manages 17 isolated wetlands and five intermittent streams (Mimbres River, Running Water Draw, Tularosa Creek, Three Rivers, Tajique Creek) to provide fishing opportunities for resident and non-resident anglers.²⁹⁸

Ephemeral waters are essential for all three species of spadefoot toads in New Mexico. Spadefoots stay burrowed in the soil (several years has been documented) until

²⁹⁸ Letter from Larry Bell, Director of the New Mexico Department of Game and Fish to EPA (NMDGF comment letter on the 2003 ANPRM), April 15, 2003, at 5.

conditions are suitable for breeding. Emergence from burrows is triggered by thunderstorms and breeding occurs quickly (as short as one night) in ephemeral waters. Eggs hatch in as little as 15 hours, and tadpoles metamorphose and leave the ephemeral waters in as little as 13 days. Ephemeral waters also appear to be important to Box Turtles, Garter Snakes, and tiger salamanders. Many of crustaceans and insects also occur in ephemeral and intermittent streams.

Protecting ephemeral and intermittent waters in New Mexico is essential for protecting public health. EPA estimates that 280,000 people in New Mexico receive drinking water from sources that rely at least in part on ephemeral, intermittent or headwater streams (Exhibit 4).²⁹⁹ These impacts are not hypothetical as there have been numerous instances of ephemeral waters being found not jurisdictional in New Mexico.³⁰⁰ (p. 3-4)

Agency Response: The agencies agree with the commenter that ephemeral and intermittent stream not only provide important functions that support the chemical, physical and biological integrity of downstream waters, but serve as valuable drinking waters sources in New Mexico. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent and ephemeral stream that meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Clean Water Action Maryland et al. (Doc. #15072)

- 8.68 **Our organizations support the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries. We urge the Agencies to strengthen the final rule by further clarifying that important wetlands and other waters located beyond floodplains are also categorically protected under the Clean Water Act.**

Headwater and seasonal streams feed the drinking water sources of 117 million Americans, including 3,990,016 residents in Maryland. Clarifying that all tributary streams, regardless of size or frequency of flow are covered under the Clean Water Act will restore protections to 2210 miles of streams in Maryland that 77% of our residents depend on for drinking water. In the Baltimore City area that’s roughly 1.6 million people and 100% of City residents.

Millions of small streams and wetlands provide most of the flow to our most treasured rivers that feed the Chesapeake Bay. If we do not protect these streams and wetlands, we

²⁹⁹ Note that this analysis was conducted in 2006 prior to the surface water diversions for the cities of Albuquerque and Santa Fe going online, so this number is most likely substantially greater now.

³⁰⁰ See SPA-2007-636-ABQ, SPA-2007-00677-ABQ, SPA-2007-442-ABQ, SPA-2007-3540-ABQ, SPA-2008-54-ABQ (research was conducted only for 2007 and 2008 and is not comprehensive)

cannot protect the livelihood on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes drinking water sources, public health and quality of life, as well as jobs and revenue for businesses that depend on clean water, including commercial fishing, outdoor activities and water-based recreation.

Our organizations support the Agencies’ proposal to define all tributaries as “waters of the United States,” including headwaters and small streams that may only flow seasonally. Headwater streams, streams that have no other streams feeding into them, provide most of the flow to downstream streams and rivers, and account for 59% of the total stream miles in Maryland. In 2007, EPA estimated that 46% of individual NPDES discharge permits in Maryland are for discharges into headwater streams, including some streams that do not flow year round.

Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients and making up 19% of streams in Maryland do not flow year round. These streams are also critical habitat for fish and other aquatic species. There is great potential for re-connecting and protecting the many miles of river and stream systems flowing throughout Maryland and into the Chesapeake Bay. These waters benefit resident freshwater and saltwater fish and wildlife alike, contributing significantly to the state’s economy in commercial fishing industry, recreation and tourism. (p. 1-2)

Agency Response: The agencies agree with the commenters that ephemeral and intermittent stream provide important functions that support the chemical, physical and biological integrity of downstream waters and can be valuable sources of drinking water. The final rule establishes categorical jurisdiction over all waters that meet the definition of “tributary” and are not excluded in paragraph (b). The definition of “tributary” in the final rule requires physical indicators of bed and bank and an ordinary high water mark. These physical indicators demonstrate there is sufficient volume, frequency and duration of flow to significantly affect downstream waters. In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Environmental Justice Coalition for Water (Doc. #15105)

- 8.69 The Environmental Justice Coalition for Water supports the Administration's efforts to clarify that all tributaries - including intermittent, ephemeral, and headwater streams - are -waters of the United States and should be protected under the law. (p. 2)

Agency Response: The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent and ephemeral stream that meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need

for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Friends of the Cacapon River (Doc. #15121)

- 8.70 As a watershed organization caring for a headwater tributary, we believe that defining intermittent, ephemeral, and headwater streams as "Waters of the U.S." provides important clarification to the Clean Water Act's jurisdiction.

The Supreme Court opined that the EPA and Army Corps of Engineers must demonstrate a significant nexus between, among others, headwaters and downstream waters. EPA's assessment, titled *Connectivity of Streams and Wetlands to Downstream Waters*, presents a review and synthesis of more than 1,000 pieces of scientific literature. This assessment was reviewed by the independent Science Advisory Board, or SAB.

In its report to EPA, the SAB found that "the literature review provides strong scientific support for the conclusion that ephemeral, intermittent, and perennial streams exert a strong influence on the character and functioning of downstream waters and that tributary streams are connected to downstream waters" This review of scientific literature presents hard evidence that providing drinking water to West Virginians as well as millions of Americans along the Potomac and Ohio rivers downstream depends in part on healthy headwaters in West Virginia. (p. 1)

Agency Response: The agencies agree with the commenter that headwater streams provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent and ephemeral stream that meet the definition of "tributary" and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Tulane Environmental Law Clinic et al (Doc. #15123)

- 8.71 Although we believe that the Act's invocation of interstate commerce provides an equally valid reason for the proposed Rule's clarification of "waters of the United States,"³⁰¹ we also support its science-based determination that all tributaries, including "ephemeral" and "intermittent" streams, are categorically waters of the United States because they are physically, chemically and biologically connected to traditionally navigable waters...

A. Tributaries must be categorically protected.

³⁰¹ The current regulations define "waters of the U.S." as including "[a]ll other waters ... the use, degradation or destruction of which could affect interstate or foreign commerce. . . ." 40 C.F.R. § 110.1 (definition of navigable waters). This provision was left untouched by SWANCC and *Rapanos*.

We support the decision to provide categorical protection for all tributaries. The proposed Rule clarifies which small streams and headwaters are covered by the CWA. Paragraph (s)(5) recognizes “tributaries” as waters of the United States, and defines “tributary” as “a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 C.F.R. § 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4) of [the proposed Rule].”³⁰² Tributaries are further defined to include wetlands, lakes, ponds, and—notably—headwater streams.³⁰³

...Categorical protection of all tributaries, including headwaters is essential, because tributaries connect the river network and provide vital ecosystem functions. The importance of headwater streams and wetlands to the health of larger, navigable rivers like the Mississippi cannot be overstated.

The structure and function of downstream waters are highly dependent on the constituent materials contributed by and transported through water bodies located elsewhere in the watershed. Most of the materials in a river, including water, sediment, wood, organic matter, nutrients, chemical contaminants, and certain organisms, originate outside of the river, from upstream tributaries, wetlands, or other components of the river system, and are transported to the river by water movement, wind, or other means.³⁰⁴

The evidence of connectivity between headwater streams and larger rivers is well established. Most rivers receive the majority of their water from tributaries rather than through direct precipitation or from groundwater.³⁰⁵ Roughly half of the water of larger tributaries and rivers originates from headwater streams.³⁰⁶

Additionally, studies show that nutrients and other substances are exported from small prairie streams³⁰⁷ and can significantly affect downstream water quality.³⁰⁸ Ecosystem

³⁰² Definition of “Waters of the United States” Under the Clean Water Act, 79 Fed. Reg. 22,188, 22,269 (proposed Apr. 21, 2014) (to be codified at 40 C.F.R. pts. 110, 112, 116, 117, 122, 230, 232, 300, 302 & 401).

³⁰³ *Id.*

³⁰⁴ U.S. EPA, Office of Research & Development, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence – External Review Draft* (Sept. 2013) (hereinafter “Connectivity Report”), p. 1-4.

³⁰⁵ Winter, T. C. 2007. The role of groundwater in generating streamflow in headwater areas and in maintaining base flow. *Journal of the American Water Resources Association* 43:15-25; Bukaveckas, P. A. 2009. Rivers. Pages 721-732 in G. E. Likens, editor. *Encyclopedia of Inland Waters*. Elsevier, Oxford, UK.

³⁰⁶ Connectivity Report at 4-20.

³⁰⁷ Dodds, W. K., J. M. Blair, G. M. Henerbry, J. K. Koelliker, R. Ramundo, and C. M. Tate. 1996a. Nitrogen transport from tallgrass prairie watersheds. *Journal of Environmental Quality* 25:973-981.

functions provided by headwaters include denitrification, which removes nitrate from stream water through transformation to atmospheric nitrogen. Denitrification is widespread among headwater streams³⁰⁹ including the small streams of the Mississippi River Basin.³¹⁰ In fact, one study found that uptake and transformation of inorganic nitrogen were most rapid in the smallest streams.³¹¹ Small tributaries also affect the downstream delivery of nutrients through abiotic processes wherein nutrients adsorb to stream sediments.³¹² Yet another study found that small streams deliver less nitrogen and phosphorus to the Gulf of Mexico than larger rivers due to increased in-stream nutrient uptake and removal by smaller streams.³¹³ According to the Connectivity Report, “Even infrequent flows through ephemeral or intermittent channels influence fundamental biogeochemical processes....”³¹⁴

Nearly two million miles of the nation’s streams – about 59 percent of the total -- outside of Alaska are intermittent or ephemeral.³¹⁵ For the main-stem states of the Mississippi River, the value of streams measured as intermittent or ephemeral streams, or otherwise noted as headwater streams (no known tributary), cannot be understated. To our knowledge, there are two known and published counts for ephemeral and intermittent stream miles for the nation and each individual state. EPA has long cited the information conveyed in Table 1, which uses the National Hydrography Dataset 1:100,000 scale. This table demonstrates the percentage of streams in the Basin states that are not the recipient of any tributaries (% Start Reach), and the percentage of streams that are considered intermittent or ephemeral.

³⁰⁸ Kemp, M. J., and W. K. Dodds. 2002. Comparisons of nitrification and denitrification in prairie and agriculturally influenced streams. *Ecological Applications* 12:998-1009. Dodds, W. K., K. Gido, M. R. Whiles, K. M. Fritz, and W. J. Matthews. 2004. Life on the edge: The ecology of Great Plains prairie streams. *Bioscience* 54:205-216. Dodds, W. K., and R. M. Oakes. 2006. Controls on nutrients across a prairie stream watershed: Land use and riparian cover effects. *Environmental Management* 37:634-646. Several additional studies have documented the export of phosphorus from headwater streams to traditionally navigable waters in the Mississippi River Basin. Royer, T. V., M. B. David, and L. E. Gentry. 2006. Timing of riverine export of nitrate and phosphorus from agricultural watersheds in Illinois: Implications for reducing nutrient loading to the Mississippi River. *Environmental Science & Technology* 40:4126-4131; Bayless, M. A., M. G. McManus, and J. F. Fairchild. 2003. Geomorphic, water quality and fish community patterns associated with the distribution of *Notropis topeka* in a Central Missouri watershed. *American Midland Naturalist* 150:58-72; and Jacobson, L. M., M. B. David, and L. E. Drinkwater. 2011. A spatial analysis of phosphorus in the Mississippi River basin. *Journal of Environmental Quality* 40:931-941.

³⁰⁹ Mulholland, P. J., et al., 2008. Stream denitrification across biomes and its response to anthropogenic nitrate loading. *Nature* 452:202-205.

³¹⁰ Alexander, R. G., R. A. Smith, and G. E. Schwarz. 2000. Effect of stream channel size on the delivery of nitrogen to the Gulf of Mexico. *Nature* 403:758-761.

³¹¹ Peterson, B. J., W. M. Wollheim, P. J. Mulholland, J. R. Webster, J. L. Meyer, J. L. Tank, E. Martí, W. B. Bowden, H. M. Valett, A. E. Hershey, W. H. McDowell, W. K. Dodds, S. K. Hamilton, S. Gregory, and D. D. Morrall. 2001. Control of nitrogen export from watersheds by headwater streams. *Science* 292:86-90.

³¹² Meyer, J. L. 1979. The role of sediments and bryophytes in phosphorus dynamics in a headwater stream ecosystem. *Limnology and Oceanography* 24:365-375.

³¹³ Alexander (2000); Alexander, R. B., R. A. Smith, G. E. Schwarz, E. W. Boyer, J. V. Nolan, and J. W. Brakebill. 2008. Differences in phosphorus and nitrogen delivery to the Gulf of Mexico from the Mississippi River basin. *Environmental Science & Technology* 42:822-830.

³¹⁴ Connectivity Report at 1-7.

³¹⁵ Letter from Benjamin H. Grumbles, Assistant Administrator for Water, U.S. EPA, to Jeanne Christie, Executive Director, Association of State Wetland Managers, at 2 (Jan. 9, 2006) (mis-dated as Jan. 9, 2005).

Table 1. Percentage of Non-Navigable Stream Miles³¹⁶

State: Minnesota

% Start Reach: 45

% Intermittent/Ephemeral: 51

State: Wisconsin

% Start Reach: 53

% Intermittent/Ephemeral: 45

State: Illinois

% Start Reach: 56

% Intermittent/Ephemeral: 55

State: Iowa

% Start Reach: 59

% Intermittent/Ephemeral: 62

State: Missouri

% Start Reach: 58

% Intermittent/Ephemeral: 66

State: Kentucky

% Start Reach: 55

% Intermittent/Ephemeral: 29

State: Tennessee

% Start Reach: 60

% Intermittent/Ephemeral: 28

State: Arkansas

³¹⁶ Natural Resources Defense Council, Missing Protection: Polluting the Mississippi River Basin's Small Streams and Wetlands. NRDC Issue Paper, p. 21 (2008).

% Start Reach: 52

% *Intermittent/Ephemeral*: 63

State: Mississippi

% Start Reach: 55

% *Intermittent/Ephemeral*: 58

State: Louisiana

% Start Reach: 38

% *Intermittent/Ephemeral*: 36

Alternatively, in the lead up to the proposed Rule, EPA had maps made for each state using the National Hydrography Dataset 1:24,000 scale (Table 2). These maps conveyed the cumulative length of intermittent and ephemeral streams in each state, and the percentage of a state's overall stream mileage represented by ephemeral and intermittent streams.

Table 2. Percentage of Non-Navigable Stream Miles³¹⁷

State: Minnesota

Stream Miles Intermittent/Ephemeral: 38,116

% *Stream Miles Intermittent/Ephemeral*: 44

State: Wisconsin

Stream Miles Intermittent/Ephemeral: 42,145

% *Stream Miles Intermittent/Ephemeral*: 57

State: Illinois

Stream Miles Intermittent/Ephemeral: 78,763

% *Stream Miles Intermittent/Ephemeral*: 73

State: Iowa

Stream Miles Intermittent/Ephemeral: 72,258

³¹⁷ U.S. Environmental Protection Agency: Streams and Waterbodies Maps, the National Hydrography Dataset, High Resolution (October, 2013). Prepared by INDUS Corporation under contract with U.S. EPA, Office of Water, and published on the House Committee on Science, Space, and Technology webpage: <http://science.house.gov/epa-maps-state-2013>

% Stream Miles Intermittent/Ephemeral: 70

State: Missouri

Stream Miles Intermittent/Ephemeral: 94,416

% Stream Miles Intermittent/Ephemeral: 56

State: Kentucky

Stream Miles Intermittent/Ephemeral: 51,960

% Stream Miles Intermittent/Ephemeral: 65

State: Tennessee

Stream Miles Intermittent/Ephemeral: 31,851

% Stream Miles Intermittent/Ephemeral: 32

State: Arkansas

Stream Miles Intermittent/Ephemeral: 90,032

% Stream Miles Intermittent/Ephemeral: 74

State: Mississippi

Stream Miles Intermittent/Ephemeral: 105,236

% Stream Miles Intermittent/Ephemeral: 80

State: Louisiana

Stream Miles Intermittent/Ephemeral: 58,458

% Stream Miles Intermittent/Ephemeral: 57

Though the numbers vary between these two different tables, the general and overwhelming consensus is that ephemeral and intermittent streams make up a significant, and in some cases, majority, of the hydrologic network in states up and down the Mississippi River. These waters are extremely prevalent, and have significant influence on the downstream water quality and quantity in traditionally navigable waters.

Likewise, intermittent and ephemeral streams have significant influence upon public drinking water sources throughout the Mississippi River states. In these ten states alone,

more than 16 million people depend to some degree on non-navigable streams for their drinking water.³¹⁸

Table 3. Non-Navigable Streams as Drinking Water Sources³¹⁹

State: Minnesota

Population Served By SWPA Containing Non-Navigable Streams: 978,928

State: Wisconsin

Population Served By SWPA Containing Non-Navigable Streams: 391,531

State: Illinois

Population Served By SWPA Containing Non-Navigable Streams: 1,680,948

State: Iowa

Population Served By SWPA Containing Non-Navigable Streams: 667,428

State: Missouri

Population Served By SWPA Containing Non-Navigable Streams: 2,498,142

State: Kentucky

Population Served By SWPA Containing Non-Navigable Streams: 3,282,980

State: Tennessee

Population Served By SWPA Containing Non-Navigable Streams: 3,572,494

State: Arkansas

Population Served By SWPA Containing Non-Navigable Streams: 941,225

State: Mississippi

Population Served By SWPA Containing Non-Navigable Streams: 110,141

³¹⁸ EPA, “Analysis of the Surface Drinking Water Provided By Intermittent, Ephemeral, and Headwater Streams in the U.S.” July 2009. Available at http://water.epa.gov/lawsregs/guidance/wetlands/upload/2009_12_28_wetlands_science_surface_drinking_water_surface_drinking_water_results_state.pdf

³¹⁹ *Id.*

State: Louisiana

Population Served By SWPA Containing Non-Navigable Streams: 1,886,783

State: TOTAL

Population Served By SWPA Containing Non-Navigable Streams: 16,101,600

(p. 1, 2-6)

Agency Response: The agencies agree with the commenter that ephemeral and intermittent stream provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent and ephemeral waters that meet the definition of “tributary” and are not excluded in paragraph (b). Many of these waters are headwater streams. See summary for section 8.1.1. In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Audubon California et al. (Doc. #15200)

- 8.72 **1. The rule appropriately provides categorical protection to all tributaries, including perennial, intermittent and ephemeral streams.** We cannot emphasize enough the importance of protecting intermittent and ephemeral streams through this rule-making. Nearly two-thirds of California’s stream miles do not flow year-round, but they remain critical resources for water supply, water quality, recreation, habitat and aquatic species. The current 3-year drought has caused even more areas to lose stream flow, and increasing temperatures are also affecting the amount of water in our waterways and the seasons in which flow can be found.

A strong example of the impact of tributaries on traditional navigable waters is found in the state’s Gold Rush legacy of mercury pollution. California’s State Water Resources Control Board identifies 80 reservoirs that are contaminated with mercury. The rivers that drain the watershed below each reservoir are also impaired. Mercury is a neurotoxin, affecting the brain and central nervous system, as well as the immune system, kidneys and heart. Children and pregnant women are most affected, and the state has spent millions developing and posting warning signs in the hundreds of miles of streams where fishing occurs. Clearly the headwaters feeding these reservoirs are affecting the “chemical, physical and biological integrity” of covered waters. (p. 2-3)

Agency Response: The agencies agree with the commenter that ephemeral and intermittent stream provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent and

ephemeral waters that meet the definition of “tributary” and are not excluded in paragraph (b). See summary for section 8.1.1. In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate.

Western Pennsylvania Conservancy (Doc. #15202)

- 8.73 Basing the proposed definition of tributary on the characteristics of direct or indirect flow into certain categories of jurisdictional water is consistent with the scientific body of evidence asserting interconnectedness of hydrologic systems as a foundational concept. Downstream waters are affected by their tributaries, and as such should be considered as a system. Waters or wetlands do not necessarily need to be adjacent to navigable waters to have hydrologic, biologic or chemical impacts to jurisdictional waters. These facts are reinforced in the major conclusions section of the synthesis of peer-reviewed literature. (p. 2)

Agency Response: The agencies agree with the commenter that headwater streams and wetlands provide important functions that support the chemical, physical and biological integrity of downstream waters. The final rule retains the phrase “contributes flow, either directly or through another water.” The final rule does not require that the flow be contributed either directly or through waters that are themselves jurisdictional. Water contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters. This reflects scientific literature about the connectivity among waters discussed in the summary response of this section, the Technical Support Document, and the Science Report.

Center for Water Advocacy et al. (Doc. #15225)

- 8.74 The proposed rule affirms excepted scientific principles that the network of small and interconnected wetlands and headwater streams, even those that flow intermittently or remote from navigable water bodies, serve a critically important purpose protecting downstream waters by capturing flow and waterborne pollutants. (p. 4)

Agency Response: The agencies agree with the commenter that headwater streams and wetlands provide important functions that support the chemical, physical and biological integrity of downstream waters. Any water that meets the definition of “tributary” in the final rule is considered a “waters of the United States.” Although wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, they still may be considered jurisdictional waters of the U.S. either as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. Importantly, waters, including wetlands, which are adjacent to a tributary at the upper limit of the channel are jurisdictional as adjacent waters. See summary sections for 8.1.1, 8.1.2 and 8.2.

Hackensack Riverkeeper, Hudson Riverkeeper, Milwaukee Riverkeeper, New York/New Jersey Baykeeper and Raritan Riverkeeper (Doc. #15360)

8.75 *Waters of the United States Should Include Tributaries to Other Definitional Waters*

It is the most basic common sense that tributaries to Waters of the United States possess a significant nexus - if not a continuous surface connection - to Waters of the United States, and are thus subject to regulation under *Rapanos*. The accompanying SAB Report supports common sense with scientific data.

Per the SAB Report, tributary waterbodies - including wetlands, low order streams, seasonal bodies and ephemeral bodies possess a significant nexus to bodies that are waters of the United States in their own right, and are thus subject to the act. "All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported. Headwater streams (headwaters) are the most abundant stream type in most river networks and supply most of the water in rivers. In addition to water, streams transport sediment, wood, organic matter, nutrients, chemical contaminants, and many of the organisms found in rivers." SAB Report at 1.2

Consequently, the definition of Waters of the United States should include,

6. Tributaries that contribute flow to above listed waters (p. 10)

Agency Response: The agencies agree with the commenter that headwater streams and wetlands provide important functions that support the chemical, physical and biological integrity of downstream waters. See summary response for section 8.1.1. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of "tributary" and that are not excluded in paragraph (b). Ephemeral and headwater streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary, and are thus considered waters of the United States.

Sierra Club, Cumberland Chapter (Doc. #15466)

8.76 We offer the following basis for our support for the proposed rulemaking...

2. Over 3.2 million people in Kentucky receive their drinking water from public drinking water systems that rely at least in part on intermittent, ephemeral, or headwater streams, and the proposed rulemaking will make source water protection more efficient and more effective.

We have attached to this letter a map showing the "Percentage of Surface Drinking Water from Intermittent, Ephemeral, and Headwater Streams in Kentucky," found on the USEPA web page on WOTUS. Based upon this Federal Safe Drinking Water Information System 4th Quarter 2006 data, in Kentucky there are 15,065 total miles of streams that provide water for surface water intakes supplying public drinking water systems within the mapped Source Protection Areas (SPA). An SPA is an area upstream from a drinking water source or intake that contributes surface water flow to the drinking water intake during a 24-hour period. Of that total stream miles, 8,185 miles, or 54%, are intermittent, ephemeral, or headwater streams. Over 3.2 million people in Kentucky

receive drinking water from public drinking water systems that rely at least in part on intermittent, ephemeral, or headwater streams.

... (p. 2-3)

Agency Response: The agencies agree with the commenter that ephemeral and intermittent stream not only provide important functions that support the chemical, physical and biological integrity of downstream waters, but serve as valuable drinking waters sources. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters, including intermittent and ephemeral stream that meet the definition of “tributary” and are not excluded in paragraph (b). In making this determination, the agencies relied not only on the science, but also on their technical expertise and practical experience in implementing the CWA during a period of over 40 years. In addition, the agencies are guided, in part, by the compelling need for clearer, more consistent and easily implementable standards to govern administration of the CWA, including brighter lines where feasible and appropriate

Wisconsin Wetlands Association (Doc. #15629)

- 8.77 The rule establishes “the contribution of flow, either directly or through another water, to a water identified in paragraphs (s)(1) through (4)” as the defining characteristic of a tributary, and provides that this applies to streams, wetlands, and other source waters. We support this approach, and encourage you to modify the first sentence of this definition to clarify that contribution of flow, rather than the physical presence of a bed, bank, and OHWM must be present to satisfy the definition of tributary.

...

In Wisconsin, many tributary streams and most headwater wetlands will not have a bed, bank, or OHWM. For this reason, we suggest modifying the definition to clarify that these features are reliable indicators of the presence of a tributary stream, but need not be present if other physical evidence of the contribution of flow is visible. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters. The agencies analyzed the Science Report, SAB comments, and other scientific literature to determine which tributaries to traditional navigable waters, interstate waters, or the territorial seas have a significant nexus to constitute “waters of the United States” under the Act such that it is reasonable to assert CWA jurisdiction over them by rule. The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. In the Final Rule, by definition tributaries must have bed and banks and an OHWM, as well as contribute flow to an (a)(1) through (3) water. Lakes, wetlands, and other features lacking these physical characteristics are no longer defined as tributaries but may be considered jurisdictional waters of the U.S. as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See also the summary response for Section 8.2.

Friends of the Rappahannock (Doc. #15864)

8.78 B. The Proposed Rule Will Protect Water Quality in the Chesapeake Bay

...The Rappahannock River and its tributaries are among the many Rivers and streams in the Chesapeake Bay that provides drinking water, wildlife habitat, and recreational opportunities to its residents and visitors.

Our River is over 190 miles long³²⁰ stretching from Chester Gap in the Blue Ridge Mountains all the way to the Chesapeake Bay, which makes it the longest free flowing River in the Chesapeake Bay. The watershed includes hundreds of small intermittent and ephemeral streams as well as both tidal and non-tidal wetlands which are essential to providing drinking water, habitat, and flood protections.

These waters are actually small ecosystems that are paramount to the health and function of the larger watershed. FOR works tirelessly to protect and restore stream banks, shorelines, and wetlands throughout the watershed on both public and private land to protect and improve water quality. These efforts need to be complimented by strong and clear protections for the waters in our watershed.

C. The Proposed Rule Will Protect Sensitive Waters in the Chesapeake Bay Watershed

...Both the main stem of the Rappahannock River and its largest tributary- the Rapidan River, are positioned in the foothill of the Blue Ridge and Shenandoah Mountains. Land use in these regions range from forest and farms, to new development. Every year, FOR works with local students and conservation organizations to protect the sensitive headwater reaches of the Rappahannock watershed through stream restoration, riparian plantings, and livestock fencing. These practices are an essential part of reaching larger Total Maximum Daily Load (TMDL) and Bay Program goals for water quality. Protection of these sensitive headwaters is critical to safeguarding water quality and wildlife throughout the Rappahannock Watershed, Commonwealth of Virginia, and the Chesapeake Bay watershed. (p. 3-4)

Agency Response: The Agency appreciates your comments regarding the affect of the Rappahannock River and its tributaries on the Chesapeake Bay. See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters.

Regulatory Environmental Group for Missouri (Doc. #16337.1)

8.79 The Proposed Rule sets neither time limits nor geographic limits on the contributory flow. It is per se jurisdictional. By claiming tributaries as jurisdictional; the Proposed Rule eliminates the consideration of site-specific conditions which violates both the *Rapanos* plurality decision of Justice Scalia and the concurrence opinion of Justice Kennedy. The concurring opinion relied on a “significant nexus” but, as noted, further insisted that mere hydrologic connection does not bestow ecological significance to certain waters. (p. 6)

³²⁰ U.S. Geological Survey. National Hydrography Dataset high-resolution flowline data. The National Map, accessed April 1, 2011.

Agency Response: Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ conclusions that certain categories of waters are jurisdictional are not based on an “any connection” theory; instead they are based on careful examinations of the science and the law to conclude that particular categories of waters significantly affect the chemical, physical, and biological integrity of a traditional navigable water, interstate water, or the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

Charles River Conservancy et al. (Doc. #16453)

- 8.80 **We support the Agencies’ proposal to define all tributaries as “waters of the United States,” including headwaters and small streams that may only flow seasonally.** These streams are also critical habitat for fish and other aquatic species. Headwater and seasonal streams also feed the drinking water sources of 117 million Americans.

The Agencies’ commonsense proposal is based on the best scientific understanding of how streams and wetlands affect downstream water quality. The public benefits of the rule – in the form of flood protection, filtering pollution, providing wildlife habitat, supporting outdoor recreation and recharging groundwater – far outweigh the costs. When finalized, this rule will provide the regulatory assurance that has been absent for over a decade, eliminate permit confusion and delay, and better protect the critical water resources on which our communities depend. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsections on jurisdiction over intermittent and ephemeral waters.

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

- 8.81 Defenders strongly supports the inclusion of “tributaries” to waters identified in (s)(1)-(s)(4) as waters of the U.S. However, as noted below and in Earthjustice’s comments, the definitions in proposed subsections (s)(5) and (u)(5) are too limited.

The science is overwhelming that tributaries significantly affect downstream waters, and that to protect a downstream navigable and/or interstate water, its tributaries must also be protected. As the agencies acknowledge, “[t]he great majority of tributaries are headwaters streams, and whether they are perennial, intermittent, or ephemeral, they play an important role in the transport of water, sediments, organic matter, nutrients, and organisms to downstream environments.” 79 Fed. Reg. at 22201; see EPA Connectivity Report at 1-3 (“All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported.”). Similarly, the SAB concluded, “[t]here is strong scientific evidence to support the EPA’s proposal to include all tributaries within the jurisdiction of the Clean Water Act.” SAB letter at 2; see also SAB Review at 3 (“Strong scientific support has been provided” for the agencies’ conclusion

that “all tributary streams are physically, chemically, and biologically connected to downstream waters” and “related findings”).

The inclusion of intermittent and ephemeral tributaries is particularly critical to protect downstream waters. See 79 Fed. Reg. at 22202 (“The flow in the tributary may be ephemeral, intermittent, or perennial, but the tributary must drain, or be part of a network of tributaries that drain, into an [s](1) through [s](4) water under today’s proposed rule.”). According to EPA’s data, 59% of the streams in the lower 48 states and Hawai’i are intermittent or ephemeral. EPA Office of Research and Development, “The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest,” (2008), at 5 (hereinafter “EPA 2008”).³²¹ In the desert Southwest, the number and importance of ephemeral and intermittent tributaries to hydrologic systems is even greater: 81% of all streams in the six Southwestern states are ephemeral or intermittent, including 94% of Arizona’s streams and nearly two-thirds of California’s streams. Id. at 5, 48. Thus, allowing degradation of ephemeral or intermittent streams – by failing to protect them under the Clean Water Act as waters of the U.S. – would detrimentally affect most of the Southwest’s and California’s watersheds. EPA 2008 at 48.

Ephemeral and intermittent tributaries play an important part in the area’s ecology and water supply by flowing above ground into perennial waters of the U.S., charging aquifers, or otherwise connecting underground to perennial waters of the U.S. As EPA explained, the water in these streams provides critical hydrologic connections to all other waters in the watershed:

Ephemeral streams are unique in that they lack permanent flow except in response to rainfall events. Intermittent streams flow continuously only in places where it receives water from a ground-water source or from seasonal runoff. Nevertheless, they perform the same critical hydrologic functions as perennial streams: they move water, sediment, nutrients, and debris through the stream network and provide connectivity within the watershed.

Id. at 13; id. at 72 (“We believe that the information presented in this report shows that ephemeral and intermittent streams in the arid and semi-arid Southwestern U.S. are ecologically and hydrologically connected to downstream waters, and have a significant effect on the chemical, physical, and biological integrity of those waters.”). Similarly, one member of the SAB explained, “[i]n many landscapes, especially the arid and semi-arid and western US, these intermittent or ephemeral connections are critical, providing much of the connectivity that facilitates that transport of mass, energy, and organisms to downgradient waters (e.g., Izbicki, 2007).” “Compilation of Preliminary Comments from Individual Panel Members on the Scientific and Technical Basis of the Proposed Rule Titled ‘Definition of Waters of the United States Under the Clean Water Act,’” (as of August 14, 2014) (hereinafter “Member Comments”) Dr. Mark Rains, at 71, attached as Exh. B; see also EPA 2008 at 64 (“Ephemeral and intermittent streams and tributaries provide a wide range of functions that are critical to the health and stability of arid and

³²¹ Also available at http://www.epa.gov/esd/landsci/pdf/EPHEMERAL_STREAMS_REPORT_Final_508-Kepner.pdf (last visited Sept. 23, 2014).

semi-arid watersheds and ecosystems in the American Southwest. Most importantly, they provide hydrologic connectivity within a basin, linking ephemeral, intermittent, and perennial stream segments, thereby facilitating the movement of water, sediment, nutrients, debris, fish, wildlife, and plant propagules throughout the watershed.”).

According to the California Department of Fish and Wildlife, ephemeral streams in dryland watersheds provide the same ecosystem services as perennial streams, largely determining the ecological health of the entire watershed. These desert streams and washes support biological communities that do not depend on mature woodland or stream corridor conditions and are the predominant fluvial forms in arid and semiarid environments, supporting high biodiversity and habitat values relative to drier uplands. For example, in the Mojave Desert, these ephemeral streams provide important habitat for threatened Desert tortoise, Desert bighorn sheep, and a myriad of migratory birds. Ephemeral streams provide ecosystem services such as: watershed and landscape hydrologic connections; water supply protection and water quality filtering; wildlife habitat and movement/migration corridors; groundwater recharge and discharge; sediment transport, storage and deposition; nutrient cycling and movement, and vegetation community support. Letter to California Energy Commission from the California Department of Fish and Wildlife on the subject of Hidden Hills Solar Electric Generating System, State Waters Compensatory Mitigation (February 14, 2014).

The riparian areas around ephemeral and intermittent streams “generally support the greatest concentrations of wildlife, providing the primary habitat, predator protection, breeding and nesting sites, shade, movement corridors, migration stopover sites, and food sources.” EPA 2008 at 47. “In the arid Southwest, about 80 percent of all animals use riparian resources and habitats at some life stage, and more than 50 percent of breeding bird species nest chiefly in riparian habitats (Krueper 1993).” *Id.*

EPA’s 2008 Report on Ephemeral and Intermittent Streams in the Southwest highlighted some of the many wildlife species that depend on the habitats created by ephemeral and intermittent streams for various life stages. For example, in southern Arizona and adjacent Sonora, Mexico, “[m]any reptiles and amphibians depend on permanent springs, seeps, and ephemeral streams for their survival. Although these species are widely distributed throughout the region, their narrow ecological distributions and low densities make them extremely vulnerable to habitat degradation.” *Id.* at 55. These impacts include groundwater pumping and pollution. *Id.* In Saguaro National Park near Tucson, Arizona, lowland leopard frogs depend on bedrock pools in ephemeral streams for breeding habitat. *Id.* The canyon tree frog uses the temporary pools during summer rains for breeding and is found along temporary, intermittent, and permanent streams, springs, and tinajas in rocky desert canyons in much of the Southwest. *Id.* at 56. Similarly, many species of birds, mammals, and invertebrates depend on ephemeral and intermittent streams, in some cases more than perennial streams. *Id.* at 57-62. EPA cited one study that compiled a list of 55 mammals that use riparian areas in any way for breeding, foraging, cover or migration, and noted that only a few mammals in Arizona were truly tied to aquatic habitats found in perennial streams. *Id.* at 60. Moreover, many species of fish can be found in isolated perennial pools in otherwise ephemeral or intermittent streams. *Id.* at 63. Even where ephemeral streams cannot support fish, they help fish

indirectly by supplying the required nutrients and other materials to the perennial segments. *Id.* at 64.

The importance of protecting the ephemeral and intermittent stream connections is illustrated in the mountains surrounding the town of Patagonia, Arizona. Tailings piles from more than 100 abandoned hard-rock mines have contaminated ephemeral and intermittent tributaries of Harshaw Creek and Sonoita Creek. For example, the Trench Mine filled the head of Alum Gulch, an intermittent tributary to Sonoita Creek, with mine tailings. Flow in upper Alum Gulch carries measurable quantities of cadmium, copper, and zinc and has excessively low pH. During heavy rain events in 2014, this contaminated water flowed through Alum Gulch directly into Sonoita Creek, a perennial water. This stretch of Sonoita Creek is the site of proposed critical habitat for the threatened western yellow-billed cuckoo. Other federally listed species dependent on Sonoita Creek include the Huachuca water umbel, Gila Topminnow, Chiricahua leopard frog, and northern Mexican gartersnake. Sonoita Creek eventually flows through Lake Patagonia, where many people fish and recreate, Sonoita Creek state natural area, and then ultimately into the Santa Cruz River.

Outside of the arid Southwest and California, headwater streams, which are not always perennial, are also critical for fish and wildlife. For example, headwater streams provide critical habitat for fish species that migrate between marine and small stream environments, such as Pacific and Atlantic salmon, and American eels. EPA Connectivity Report at 1-8. Similarly, many fishes in prairie streams swim upstream to tributaries to lay their eggs, which develop as they float downstream. EPA Connectivity Report at 1-8. Small streams also provide “refuge habitat for riverine organisms seeking protection from temperature extremes, flow extremes, low dissolved oxygen, high sediment levels, or the presence of predators, parasites, and competitors.” *Id.* (p. 3-6)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters. The agencies analyzed the Science Report, SAB comments, and other scientific literature to determine which tributaries to traditional navigable waters, interstate waters, or the territorial seas have a significant nexus to constitute “waters of the United States” under the Act such that it is reasonable to assert CWA jurisdiction over them by rule. As discussed above, the rule’s definition of “tributary” requires bed and banks and OHWM as physical indicators of flow, which as a result does not include all waters considered tributary in the scientific literature. The agencies conclude tributaries as defined have a significant impact on the chemical, physical, and biological integrity of waters into which they eventually flow— for CWA purposes, traditional navigable waters, interstate waters, and the territorial seas. The great majority of covered tributaries are headwater streams, and whether they are perennial, intermittent, or ephemeral, they play an important role in the transport of water, sediments, organic matter, nutrients, and organisms to downstream waters. Covered tributaries serve to store water, thereby reducing flooding; provide biogeochemical functions that help maintain water quality; trap and transport sediments; transport, store and modify pollutants; provide habitat for plants and animals; and sustain the biological productivity of downstream rivers, lakes, and estuaries. Such waters have these significant effects whether they are

natural, modified, or constructed, as discussed below. For further discussion, see Final Rule Preamble and the Technical Support Document.

Michigan United Conservation Clubs (Doc. #16395)

8.82 C. The Proposed Rule Will Protect Sensitive Waters in the Michigan and the Great Lakes

One of the most important aspects of the proposed rule is its protection of intermittent and ephemeral streams, which is important to Michigan anglers and all coldwater fishing in Michigan. Protection of these sensitive headwaters is critical to safeguarding water quality, fisheries and wildlife habitat throughout the Great Lakes region. While some of these areas are already protected by Michigan's state statute, there are areas even in Michigan still under the USACE administration that would still benefit from clarification. But more importantly, this proposed rule is bringing other Great Lakes states up to Michigan's standards of protection and providing consistency of protection. (p. 2)

Agency Response: See summary response for "Relevance of Flow Regime" above, particularly subsection on jurisdiction over intermittent and ephemeral waters.

Waterkeeper Alliance et al. (Doc. #16413)

8.83 ... the agency must clarify in the definition of tributary and/or the Preamble what it intends when it states that in order to be defined as a tributary, the tributary must contribute "flow, either directly or through another water, to a water identified in paragraphs (l)(1)(i) through (iv)." It is unclear from this language whether the agencies will require "another water" to also be a defined "water of the United States." We urge the agencies to clarify that they mean any body of water whether it is a defined "water of the United States or not." This would be consistent with the Connectivity Report and the law. While this interpretation is implied by the language in footnote 3 of the Proposed Definition, it requires further clarification.³²²

Jurisdictional limitations for tributaries under existing definition arose nearly exclusively from the agencies' 2003 and 2008 Guidance. This Guidance placed additional requirements on the agencies' ability to assert CWA jurisdiction over tributaries that were not required or supported by law and science. However, even under the 2008 Guidance, the agencies claimed jurisdiction over non-navigable tributaries that met the "relatively permanent" or the "significant nexus" test,³²³ Although we disagree with the interpretation of the "relatively permanent" and "significant nexus" tests reflected in the 2008 Guidance for the reasons set forth in our comments,³²⁴ the 2008 Guidance document illustrates that the agencies believed that tributaries could be protected under both of these *Rapanos* jurisdictional tests. Accordingly, it is difficult to understand why the agencies are only applying the "significant nexus" test to determine the extent of

³²² See 79 Fed.Reg. at 22191, fn. 3.

³²³ Jurisdiction Following *Rapanos v. United States* and *Carabell v. United States*, *supra* note 49.

³²⁴ In support of our comments, we hereby incorporate by reference the comments submitted by national environmental organizations on the 2008 Guidance, which are a part of the official public docket in 2011 at <http://www.regulations.gov/#!documentDetail;D-EPA-HQ-QW-0282-0001> at HQ-QW-2002-00S0-1674.

jurisdiction over tributaries in the Proposed Definition and Preamble.³²⁵ We strongly object to the agencies' approach - the EPA and the Corps should be asserting jurisdiction over all tributaries covered under the existing regulations, all tributaries that meet the "relatively permanent" test and all tributaries that meet the "significant nexus" test. There is simply no valid legal or scientific reason to do otherwise.

Although we believe that the EPA and the Corps should not rely solely on the "significant nexus" analysis as the agencies' basis for including tributaries in the definition, we do agree that the inclusion of ephemeral, intermittent and perennial tributaries, as "waters of the United States" is legally and scientifically sound and is supported by the EPA's "significant nexus" analysis, the Connectivity Report, and the SAB Member Comments. We also believe that wetlands, lakes and ponds should be included as tributaries based on the findings of the Connectivity Report and many individual SAB Member Comments."³²⁶

In addition to the Connectivity Report and SAB Report, numerous scientific reports and government documents from across the country illustrate the importance of protecting these waters. A recent report produced by Trout Unlimited, using USGS National Hydrography Dataset, documents the abundance and importance of intermittent and headwater streams across the country showing, for example, that 48 percent of stream miles with native trout historical range are classified as intermittent or ephemeral, and 58 percent of stream miles are in headwater streams.³²⁷ The Trout Unlimited Report also states that 64 percent of stream miles with salmon/steelhead range are classified as intermittent or ephemeral, and 57 percent of stream miles are in headwater streams. In North Carolina, research conducted by the North Carolina Department of Natural Resources - Division of Water Quality, concluded that:

In summary, staff of the Division of Water Quality have been I conducting intensive research on headwater streams and headwater wetlands across the state for the past several years. Headwater streams are very common and provide significant I benefits to downstream water quality and aquatic life. Intermittent streams have significant aquatic life even though their flow is not constant throughout the year. Headwater wetlands are often associated with these streams and provide important water quality filtration to protect downstream water quality as' well as significant aquatic life habitat. Therefore based on this on-going research, the Division of Water Quality believes that protection of these

³²⁵ Proposed Definition, 79 Fed.Reg. at 22189, 22201 ("The agencies emphasize that the categorical finding of jurisdiction for tributaries and adjacent waters was not based on the mere connection of a water body to downstream waters, but rather a determination that the nexus, alone or in combination with similarly situated waters in the region, is significant based on data, science, the CWA, and caselaw.").

³²⁶ See e.g., Connectivity Report *supra* note 3, at 1-8 (nutrient removal and cycling); Member Comments, *supra* note 72 Rosi-Marshall at 81 and Sullivan at 85.

³²⁷ Rising to the Challenge - How Anglers Can Respond to Threats to Fishing in America, *available at*: http://www.tu.org/sites/default/files/TU_Rising_to_the_Challenge_web.pdf.

headwater streams and wetlands is essential to protect downstream water quality.”³²⁸ (p. 28-30)

Agency Response: The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary.” Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions and utilization of the significant nexus standard. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. A great majority of the tributaries covered by the rule are headwater streams. The final rule’s definition of “tributary” retains many elements from the proposed rule, but reflects public comments in several important ways. In particular, the final rule emphasizes the importance of flow. The rule definition of “tributary” requires that flow must be of sufficient volume, frequency, and durations to create physical characteristics of bed and banks and an OHWM. As a result, wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule. However, they still may be considered jurisdictional waters of the U.S. either as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. Importantly, waters, including wetlands, which are adjacent to a tributary at the upper limit of the channel are jurisdictional as adjacent waters. See Preamble sections H and G for further discussion. Further, the Final Rule clarifies that flow can be contributed through waters that are not themselves jurisdictional. Waters contributed through non-jurisdictional features can have the same impact on the integrity of downstream waters as water contributed through jurisdictional waters. The agencies maintain that some waters may pass through non-jurisdictional waters, such as excluded ditches, but will still be classified as tributaries both upstream and downstream of the non-jurisdictional feature.

Wyoming Outdoor Council (Doc. #16528)

- 8.84 One important recognition in the proposed rule is that “headwaters” streams can and often do supply the most water to downstream streams and are the most abundant source of water in many systems (via perennial, intermittent, and ephemeral flows). 79 Fed. Reg. at 22197, 2220 I. Tributaries are the dominant source of water in most rivers, even if they are seasonally dry, rather than water being contributed principally through direct precipitation or groundwater input. *Id.* at 22205. These headwaters tributaries play an important role in the transport of water, sediments, organic matter, nutrients, and organisms downstream and also serve to store water, which can reduce flooding and reduce pollution downstream. Headwaters have these impacts even if they are located at

³²⁸ Memo from John Dorney, Wetlands Program Development Unit, NC DWQ. April 5, 2006. Background information on the water quality and aquatic life values of headwater streams and headwater wetlands, available at http://aswm.org/pdf_lib/cover_letter_and_summary_nc.pdf.

some distance from an (a)(1)-(3) water. Id. at 22206. Headwaters are recognized as "essential components" of the tributary network. Id. Moreover, it is recognized that the aggregate impact of a number of headwaters streams and tributaries on downstream chemical, physical, and biological integrity must be considered-the aggregate impact can be very substantial. Id. at 22195.

Given the strength of these impacts on downstream waters it is clear tributaries have a significant (not speculative or insubstantial) impact on downstream chemical, physical, and biological integrity, and thus defining tributaries as waters of the United States by rule is warranted. 79 Fed. Reg. at 22195-96. That is, they clearly have a significant nexus with downstream waters. (p. 2-3)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters.

Tennessee Clean Water Network et al. (Doc. #16537)

- 8.85 Categorical protection of all tributaries, including headwaters is essential, because tributaries connect the river network and provide vital ecosystem functions. The importance of headwater streams to the health of larger, navigable rivers like the Tennessee and Mississippi Rivers cannot be understated. 30% of Tennessee's streams are intermittent or ephemeral. Intermittent and ephemeral streams have significant influence upon public drinking water sources in Tennessee with over 3.5 million residents getting their drinking water from these streams.

Protecting tributaries and headwater streams is also vital to the fishing industry of our state and the defense of threatened and endangered species. The vast majority of Tennessee's aquatic biological diversity, including state and federally threatened and endangered species, occurs in non-navigable streams as traditionally protected by the Act.³²⁹ Also, the majority of Tennessee's trout streams are not traditionally navigable streams. Sport fishing contributed more than a billion dollars to the Tennessee economy. This popular activity is dependent on clean water and healthy habitat

The vital role of headwaters in the health of larger rivers and in human health and recreation makes categorical protection of tributaries essential. The science regarding connectivity and essential ecosystem services is clear. Case-by-case jurisdictional determinations are no longer workable and cannot provide the level of protection needed for headwaters and other tributaries. (p. 2)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters.

Audubon Society of Greater Denver (Doc. #16934)

- 8.86 1. Protection of headwater, intermittent and ephemeral streams.

³²⁹ Tennessee Wildlife Resources Agency, Comments on "Advance Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of 'Waters of the United States,'" Docket ill OW-2002-00S0 at p- 2-3 (Feb. 26, 2003).

In Colorado, as in many other states, some streams contain water only in spring and early summer and run dry later in the year. When running, they obviously connect to downstream waters; when dry, they still contribute to water quality downstream through migration of eroded materials, groundwater pathways and movement of biota. Thus they can still strongly influence the integrity of downstream waters. Due to this connectivity they should receive protection under the Clean Water Act, and the proposed Rule will help to ensure this. (p. 1)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters.

Warm Springs Watershed Association (Doc. #18019)

- 8.87 As a watershed organization caring for a headwater tributary, we believe that defining intermittent, ephemeral, and headwater streams as “Waters of the U.S.” provides important clarification to the Clean Water Act’s jurisdiction.

The Supreme Court opined that the EPA and Army Corps of Engineers must demonstrate a significant nexus between, among others, headwaters and downstream waters. EPA’s assessment, titled Connectivity of Streams and Wetlands to Downstream Waters, presents a review and synthesis of more than 1,000 pieces of scientific literature. This assessment was reviewed by the independent Science Advisory Board, or SAB...

The proposed rule will clarify the Clean Water Act’s jurisdiction, reduce uncertainty, and protect drinking water for millions of Americans whose source water originates in the West Virginia headwaters— including those who reside in West Virginia... (p. 1)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters.

Upper Mississippi, Illinois, & Missouri Rivers Association (Doc. #19563)

- 8.88 The agencies assert jurisdiction too broadly over tributaries.

The Proposed Rule classifies tributaries as jurisdictional by rule and, for the first time, defines the term. The agencies’ conclusion that all tributaries have a significant nexus to jurisdictional waters without any case-specific review to identify factors of significance exceeds the intended limits of *Rapanos*. Thus both the proposed assertion of jurisdiction over all tributaries without any analysis, as well as the definition of the term “tributary,” are excessively broad.

“Tributary” is defined in the Proposed Rule as “a water physically characterized by the presence of a bed and banks and ordinary high water mark....which contributes flow, either directly or through another [jurisdictional water],” and, additionally, “wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow.”³³⁰ The definition contains no reference to the volume or frequency of such flow, creating uncertainty and the potential for jurisdictional over-reaching. The definition could encompass impermanent waters that lack consistent flow,

³³⁰ Merriam-Webster Online Dictionary, <http://www.merriam-webster.com/dictionary/adjacent>.

clearly deviating from the standard articulated by Justice Scalia in the *Rapanos* plurality opinion³³¹ and, at the least, raising questions under the "significant nexus" test. (p. 9)

Agency Response: See summary response for "Relevance of Flow Regime" above, particularly subsections on jurisdiction over intermittent and ephemeral waters, the legality of asserting jurisdiction over ephemeral waters and the requirement of "contribute flow." Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion that all waters that meet the definition of "tributary" and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas.

Society for Freshwater Science (Doc. #11783)

- 8.89 We support the following general changes as both scientifically defensible and appropriate distinctions in the rule. First, the recognition that streams, regardless of flow status (ephemeral to perennial), strongly influence downstream physical, chemical, and biological integrity ("integrity"). This is consistent with the science developed by our members as detailed in the USEPA 2013 document showing the importance of headwater streams to the health of downstream waters. With protections extended to all tributaries, including ephemeral, the rule avoids the death by a thousand cuts of downstream waters when headwaters are not adequately protected. To be clear, this extends to tributaries above geomorphic barriers or process domains that may interrupt surface flow at times, but do not interrupt the longitudinal connectivity in time or in subsurface flows... (p. 2)

Agency Response: See summary response for "Relevance of Flow Regime" above, particularly subsection on jurisdiction over intermittent and ephemeral waters. Under the final rule, a water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break."

Consortium of Aquatic Scientific Societies (Doc. #14802)

- 8.90 We strongly support inclusion of headwater streams, including intermittent or temporary streams that do not have perennial flow. There is now ample scientific evidence (much of it cited in the proposed rule) that there are strong and varied physical, chemical, and biological connections between headwater streams, whether they have perennial flow or not, and downstream navigable or interstate waters. This clearly satisfies the requirement for "significant nexus". Furthermore, the proposed use of the presence of bed, banks, and an ordinary high-water mark to identify stream channels that should be included seems

³³¹ 79 Fed. Reg. at 22,263.

both practical to apply in the field and consistent with the scientific evidence regarding strong connections. (p. 1)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly subsection on jurisdiction over intermittent and ephemeral waters.

United States Senate (Doc. #19655)

- 8.91 5) Switching attention to the proposed "waters of the US" rule, many questions have been raised about intermittent streams and low-lying areas on fields. Some concerned stakeholders believe that flow and runoff from fields may be categorized as tributaries, and thus regulated under the proposed rule. To this point, the proposed rule states that ephemeral features located on agricultural lands that do not possess a bed and bank are not tributaries. We believe defining the term bed and bank will significantly help resolve confusion as to which agricultural features can be classified as tributaries. Does the agency have plans to define these terms? (p. 3)

Agency Response: The preamble of the final rule defines bed and banks to mean the substrate and sides of a channel between which flow is confined. The banks constitute a break in slope between the edge of the bed and the surrounding terrain, and may vary from steep to gradual. For a discussion of the agencies’ response to comments regarding clarity for definitions, see Compendium 14.3 and associated summary essay and individual responses. See also the summary response for “Relevance of Flow Regime” above. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an OHWM. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. To further emphasize this point, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not “waters of the United States.”.

United States House of Representatives (Doc. #17458)

- 8.92 Questions from the Honorable Rep. Napolitano, (D-CA)

1. How will the proposed rule apply to western streams which are ephemeral in nature and which may flow only one or two times a year? Will they have to go through the same permitting process as [...] (p. 4)

Agency Response: See summary response for “Relevance of Flow Regime” above, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The final rule, like the proposed rule, establishes categorical jurisdiction over all waters that meet the definition of “tributary” and that are not excluded in paragraph (b). Ephemeral streams with sufficient flow to create the physical characteristics of bed and banks and an OHWM meet the definition of tributary, and are thus considered waters of the United States. The agencies determined that such streams provide important functions for downstream waters, and in combination with other protected tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. However, the final rule expressly

indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not waters of the United States. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

8.1.2. Ordinary High Water Mark (OHWM)

Agency Summary Response

Previous definitions of “waters of the United States” regulated all tributaries without qualification. The final rule protects only waters that have a significant effect on the integrity of traditional navigable waters, interstate waters, or the territorial seas. Among these waters are “tributaries.” The rule establishes a definition of “tributary,” and provides that all waters meeting the definition of tributary, unless a water is excluded under paragraph (b), are “waters of the United States” without the need for a separate case-specific significant nexus evaluation. The rule defines “tributaries” as

...a water that contributes flow, either directly or through another water (including an impoundment identified in paragraph (a)(4) of this section), to a water identified in paragraphs (a)(1) through (3) of this section that is characterized by the presence of the physical indicators of a bed and banks and an ordinary high water mark...

Covered tributaries and the functions they provide, alone or in combination with other tributaries in the watershed, significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, or the territorial seas. See preamble section III.C. and the Technical Support Document.

Issue: Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features

Many commenters were uncomfortable with the use of OHWM in the definition of tributary due to a history of inconsistent identification of OHWM indicators regionally and among the agencies' field staff. Many commenters stated that methods for identifying the OHWM in ephemeral features are unreliable, confusing, and/or speculative, and highlighted questions raised during SAB review of the Science Report on Connectivity. Most believed that the use of OHWM in identifying jurisdictional tributaries will greatly increase the number of ephemeral features that are regulated under the CWA, compared to current practice and *Rapanos* Guidance.

Use of OHWM is not a new concept or practice. The OHWM is currently used to identify the lateral extent of jurisdictional waters of the U.S. Bed and banks and OHWM have been identified on the 2008 *Rapanos* Approved Jurisdictional Determination form as an indicator of tributary characteristics. The final rule does not propose a change to the existing guidance and practice of identifying the OHWM of streams. Instead, under the final rule the presence of an OHWM (along with bed and banks) will be used to identify “tributaries,” which the agencies determined categorically to have a significant nexus to downstream waters.

Many comments rested on the incorrect assertion that the agencies do not currently regulate ephemeral streams. Rather, under *Rapanos* Guidance, ephemeral and other streams are considered jurisdictional if they are a relatively permanent tributary to a traditionally navigable water (TNW), or a non-relatively permanent tributary with a significant nexus to a TNW. The

final rule will eliminate the need to identify a water as relatively-permanent, or conduct a significant nexus determination for each tributary; rather, the agencies have determined that tributaries as a class (i.e., waters meeting the final rule’s definition of “tributary”) have a significant nexus to downstream TNWs.

The final rule’s definition of “tributaries” includes waters with ephemeral flow where such ephemeral tributaries present the indicators of OHWM and bed and banks, indicating sufficient volume, frequency, and duration of flow to maintain these physical characteristics. The scientific literature supports that the view that these ephemeral tributaries have a significant nexus to (a)(1) through (a)(3) waters either individually or in aggregate, as discussed in the Science Report, which stresses that all tributaries, including ephemeral tributaries, have strong connections to downstream waters. Therefore, assuming ephemeral waters meet the definition of “tributary,” they are per-se jurisdictional under the final rule. See also the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

The SAB review of the Science Report on Connectivity concluded “the review and synthesis of the literature describing connectivity of streams to downstream waters reflects the pertinent literature and is well grounded in current science. The literature review provides strong scientific support for the conclusion that ephemeral, intermittent, and perennial streams exert a strong influence on the character and functioning of downstream waters and that tributary streams are connected to downstream waters.” In response to the SAB’s recommendation more literature regarding the importance of episodic connections between ephemeral and intermittent streams and downstream waters was added to Section B.5 and Section 3 of the Final Report. As some comments indicated, Walnut Gulch is a tributary to the San Pedro River and has an extensive data set and that has contributed greatly to the scientific understanding of the connections to and effects of small arid channels on larger downstream rivers. One of the coauthors of the Science Report conducts and publishes research from the Walnut Gulch USDA ARS facility. Many of the studies cited in Section B.5 (Southwestern Intermittent and Ephemeral Streams) and Section 3 (Streams: Physical, Chemical, and Biological Connections to Rivers) describe findings from Walnut Gulch, but also summarizes findings from other southwestern tributaries. These include intermittent and ephemeral tributaries to the Rio Grande, including ephemeral tributaries that drain Los Alamos National Laboratory, NM which was found to transport and store radionuclides that were directly discharged as effluent and indirectly as fallout from nuclear weapons testing into ephemeral channels and thus mediating the such contaminants in the Rio Grande and its downstream reservoirs (Graf 1994, Reneau et al. 2004).³³² See also the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

The agencies recognize that there is regional variation in hydrology, climate and other factors throughout the U.S. that must be taken into consideration when identifying the physical features of tributaries such as the Ordinary High Water Mark (OHWM). The indicators discussed in RGL

³³² Graf, W. L., S. L. Clark, M. T. Kammerer, T. Lehman, K. Randall, and R. Schroeder. 1991. *Geomorphology of heavy metals in the sediments of Queen Creek, Arizona, USA*. CATENA 18:567-582.
Reneau, S. L., P. G. Drakos, D. Katzman, D. V. Malmon, E. V. McDonald, and R. T. Rytí. 2004. *Geomorphic controls on contaminant distribution along an ephemeral stream*. Earth Surface Processes and Landforms 29:1209-1223.

05 – 05 have already been applied to the hydrologic and climatic circumstances found in the arid southwest and western mountains in field delineation manuals. The Arid West OHWM manual was developed to address these challenges in low-gradient, alluvial ephemeral/intermittent channel forms, by using other features associated with the limits of the active floodplain (channel), which are easily identified in the field, less variable over time, and statistically linked to the hydrologic and hydraulic parameters of ephemeral and intermittent arid channel forms, to support the traditional OHWM indicators. This method uses stream geomorphology and vegetation response to the dominant stream discharge and represents the most consistent and repeating pattern associated with “ordinary” events representing OHW in the arid west. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. The final rule will provide additional clarity on the meaning of OHWM for determining jurisdiction by continuing to use same OHWM indicators and tools and adding the OHWM definition to EPA regulations.

Several commenters noted that the Science Advisory Board (SAB) panel did not recommend the use of OHWM in the proposed rule as part of the “tributary” definition, due to regional variations in the use of OHWM. The SAB and these commenters were concerned that the use of OHWM in combination with bed and banks would not capture all ephemeral streams that function as tributaries, and thus lead to “under coverage” of such features. These commenters along with the SAB recommended using “other evidence of flow” instead of OHWM.

The agencies based their significant nexus determination for the covered tributaries in part on the amount of flow indicated where a tributary had both a bed and banks and an indicator of ordinary high water mark, so the rule continues to require both physical indicators – bed and banks and OHWM - with the preamble at IV(F) clarifying the means to conclude that those indicators exist. The agencies did not conclude that other evidence of flow would be sufficiently specific or identifiable in the field to establish tributaries as a category of waters that is similarly situated with a significant nexus to (a)(1) through (3) waters. On the other hand, the agencies have decades of experience with the identification of OHWM across the country and are familiar with functions streams with OHWM support and their importance to downstream waters while making relatively permanent and significant nexus determinations since 2008. The identification of OHWM across the country and especially in the west has been the focus of significant effort for more than a decade and resulted in the creation of several technical guides and background documents which have improved the accuracy and consistency of OHWM determinations while also expanding the agencies’ familiarity with the various indicators of flow and OHWM found in rivers and streams across the western U.S.

A number of commenters were concerned with how the use and application of OHWM would impact the regulatory status of MS4 systems, storm drains, stormwater systems, manmade channels and concrete conveyances.

The final rule includes several clarifications in the exclusions section, stating that the following are not waters of the U.S., including (b)(6) “Stormwater control features constructed to convey,

treat or store stormwater that are created in dry land.” The use of OHWM under the final rule does not change the agencies longstanding practice that stormwater control features created in dry land are not waters of the U.S. For a fuller discussion of this exclusion please see the summary response in section 7.4.4 of the response to comments document.

A number of commenters were concerned about how far upstream from a break they would have to look to determine the location of a bed and banks and OHWM for a feature. Such breaks in OHWM and the burden placed on landowners were identified as especially heavy on ranchland and farmland.

The presence of OHWM above and below a break in the OHWM indicates that a tributary does contribute flow to a downstream water, and the connectivity report suggests there is a more than insubstantial relationship with downstream TNWs. The upper limit of the tributary is the point where a bed and banks and another indicator of ordinary high water mark cease to be identifiable. The ordinary high water mark establishes the lateral limits of a water, and its absence generally determines when a tributary’s channel or bed and banks has ended, representing the upper limit of the tributary. However, a natural or constructed break in bed and banks or other indicator of ordinary high water mark does not constitute the upper limit of a tributary where bed and banks or other indicator ordinary high water mark can be found farther upstream. By looking to the presence of a bed and banks and an ordinary high water mark upstream, the rule ensures that a mere break in the ordinary high water mark does not render tributaries with a significant nexus to downstream waters not jurisdictional. The agencies will continue the existing practice of making case by case determinations of the length of break in OHWM that does not sever the connection to downstream waters. Site specific conditions will continue to determine the distance up valley that needs to be evaluated to see if the break in bed and banks and OHWM is temporary or the start of the stream system. These conditions include the size of the stream (larger streams require looking further up valley) and the nature of the break (look to see the up-valley end of manmade breaks, streams buried by colluvium and valley bottom alluvial fans). Conversely, where the bed and banks and OHWM simply fade away or abruptly end at a headcut and the substrate, land use and valley characteristics do not change above and below the break, minimal up-valley evaluation is necessary. The time it takes for water to make the connection between the waters above and below a break in OHWM will continue to be considered when evaluating breaks in OHWM and is largely dependent on the nature of the break. While there has never been a time limit on connections, times much longer than would occur if the break was not present point to the presence of distinct waterbodies instead of a single waterbody. Thus, the Agencies believe that under current practice, which is not changed by this final rule, a reasonable limit on the length of the break in OHWM exists.

This approach will simplify implementation of the final rule. The clarification and simplification provided by the final rule will make it easier – not harder – for farmers and ranchers to determine if bed and banks and OHWM can be detected upstream. If bed and banks and OHWM can be detected upstream, the water body continues to be a covered tributary. In addition, normal farming and ranching practices have always been exempt and continue to be exempt from 404 permitting which should alleviate much of the concern expressed by the commenters. With regard to the challenges faced by farmers and ranchers in finding the bed and banks and OHWM, the Agencies also note that certain ditches are excluded from the final rule under section (b). In

addition, some ditch maintenance work that is not exempted may be covered by non-reporting NWP 3.

Many commenters in the arid west/southwest were concerned that more ephemeral features would be regulated as jurisdictional tributaries compared to current practice, including ephemeral features that flow very irregularly and erosional features such as gullies and rills. These commenters stated that OHWM does not account for frequency or duration of flow, making it difficult to determine if a feature contributes flow.

The rule definition of “tributary” requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The commenters express concern that a feature that flowed very infrequently could meet the proposed definition of “tributary.” However, it is the agencies’ judgment that features which flow infrequently for their hydrologic and climatic conditions would likely not be a tributary under the rule because they would not flow frequently enough to form the physical indicators required under the definition of “tributary”: ordinary high water mark and bed & banks. To further emphasize this point, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not “waters of the United States.”

The rule includes ephemeral streams that meet the definition of tributary as “waters of the United States” because the agencies determined that such tributary streams (even if ephemeral) provide important functions for downstream waters, and in combination with other covered tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. As noted by the SAB, and consistent with the scientific literature, tributaries as a group exert strong influence on the chemical, physical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of chemical, physical, and biological processes. *See, e.g.,* SAB 2014b. These significant effects on traditional navigable waters, interstate waters and the territorial seas occur even when the tributary is small, intermittent, or ephemeral. *See also* the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments. The extent of ephemeral streams covered by the final rule is less than covered under the existing regulations, however it may not match up exactly with past practice under the 2008 guidance.

Issue: Need more guidance on determining OHWM and definitions of bed and banks and OHWM

Some commenters asked that the terms “Ordinary High Water Mark” and “bed and banks” be defined and explained in greater detail in the Final Rule. Some commenters recommended that the agencies develop additional regional guidance on identifying OHWM.

The agencies agree that regionally appropriate tools are needed for OHWM identification, and will continue to develop these tools to provide further clarity in identifying tributaries throughout the country. Corps regulations define the term “ordinary high water mark” for purposes of the CWA lateral jurisdiction at 33 CFR 328.3(e). In response to comments received and to increase

clarity, the final rule adds the Corps' existing regulatory ordinary high water mark definition to EPA's regulations. Also, to increase clarity and respond to comments, the preamble at IV.F.1. includes a definition of bed and banks adapted largely from longstanding agencies' practice as well as comments.

Many commenters stated that the breadth of OHWM indicators found in the Corps Regulatory Guidance Letter 05-05 allows an OHWM to be identified in any feature with a bed and banks, including some erosional features or features that are not representative of ordinary conditions in the arid west/southwest. Many commenters from the arid west/southwest region were also concerned with the use of OHWM as defined in the Arid West Field Manual because it results in regulation of a larger lateral extent of jurisdiction within the active floodplain adjacent to the tributary, as compared to other areas of the country.

The Field Guide to the Identification of OHWM in the Arid West provides additional, more specific guidance for identifying the OHWM within the arid west region. Due to concerns expressed regarding some traditional OHWM indicators that do not translate well to the arid west hydrologic and climatic conditions, the Corps worked within the framework of the regulation and Regulatory Guidance Letter 05-05 to develop a regionally appropriate delineation manual. The arid west OHWM delineation manual uses features associated with the limits of the active floodplain (more commonly known as the active channel) to support the traditional OHWM indicators. The active floodplain is easily identified in the field, relatively constant over time, and statistically linked to the hydrologic and hydraulic parameters of ephemeral/intermittent arid channel forms. In arid channel systems, the active floodplain functions in the same manner as the bankfull channel within a perennial channel form, in that most of the hydrological and fluvial dynamics produced by repeating effective discharges is confined within its boundaries. The approach in the arid west OHWM delineation manual is based on stream geomorphology and vegetation response to the dominant stream discharge and represents the most consistent and repeating pattern associated with "ordinary" events representing OHW.

Intermittent and ephemeral streams in the arid west are often much wider than intermittent and ephemeral streams in more humid climates due to their highly erodible soils, dramatic variation in precipitation and discharge among other factors. As a result, OHWM boundaries are often wider in the arid west than in more humid regions.

Many commenters recommended that OHWM guidance and field manuals undergo greater public review and allow the opportunity for the regulated community to provide input. Several commenters stated that use of OHWM does not promote clarity, and suggested a need for a national OHWM classification system.

The U.S. Army Corps of Engineers Regulatory Guidance Letter (RGL) 05-05 provides guidance in OHWM identification, and has been used in OHWM determinations in the field for a decade. Furthermore, the agencies have developed Field Guides for OHWM Identification in regions in which variations in physical conditions present challenges for OHWM identification and delineation. These manuals include the Field Guide to the Identification of OHWM in the Arid West, which has been implemented since 2008 and the Guide to OHWM Delineation of Non-perennial Streams in the Western Mountains, Valleys and Coast Region of the U.S., which has

been implemented since 2014. These OHWM delineation manuals were subject to extensive internal and external peer review in accordance with longstanding agency practice for such technical guides.

Some commenters encouraged the agencies to include wetlands, ponds and other waters without an OHWM in the definition of tributary, but most commented that including these waters caused a lack of clarity in the definition. This issue is further addressed in Section 8.2.

The final rule contains a definition of tributary which was modified in response to the majority of comments to provide increased clarity. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the final Rule, but may still be considered jurisdictional waters of the U.S. either as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. This is further discussed in Section 8.2.

The OHWM is currently used to identify the lateral extent of jurisdictional waters of the U.S. Bed and banks and OHWM have been identified on the 2008 *Rapanos* Approved Jurisdictional Determination form as an indicator of tributary characteristics. The rule does not propose a change to the existing guidance and practice of identifying OHWM of streams. Presence of an OHWM will be used to identify features that are classified as tributaries, which have now been determined to have a significant nexus to downstream waters.

Specific Comments

Washington State Department of Ecology et al. (Doc. #13957)

- 8.93 Washington supports the inclusion of the presence of a bed and bank and evidence of OHWM in the definition of tributary. Regional manuals on determining the Ordinary High Water Mark on tributaries will be important to ensure clarity. We recommend that the Corps and EPA work with states to develop regionally appropriate methods and tools for delineating tributaries. In response to EPA's request, we feel it is appropriate to include wetlands as tributaries rather than just as adjacent waters when they are part of a tributary system. (p. 3)

Agency Response: The final rule continues the longstanding use of OHWM to define the lateral extent of jurisdiction, however provides the additional clarity of explicitly stating the requirements for identifying the upstream extent of jurisdiction as well, see 33 CFR 328.3(c)(3). The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see

<http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

The final rule covers, as tributaries, only those features that science tells us function as a tributary and that meet the significant nexus test articulated by Justice Kennedy. The agencies have found that wetlands, lakes and similar waters are best considered as adjacent waters even when in line with the tributary network,

however the rule makes clear that tributaries may flow through such adjacent waters without losing their tributary status.

Alabama Department of Transportation (Doc. #14116)

- 8.94 ALDOT understands that the test to determine whether or not a water should be considered a tributary involves the existence of bed, banks, and an ordinary high water mark (OHWM). As has been acknowledged by EPA and the Corps, determination of OHWM can be challenging and subjective. ALDOT requests that clear guidance is provided in the rule for determination of OHWM. We request that OHWM clearly represent sustained and significant flows. (p. 2)

Agency Response: The final rule does not change the definition of or methods for identifying the OHWM. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see

<http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

The final rule covers, as tributaries, only those features that science tells us function as a tributary and that meet the significant nexus test articulated by Justice Kennedy. The agencies have determined that the presence of sufficient flow to form bed and banks and another indicator of OHWM is also sufficient to support status as a similarly situated class of waters with a significant nexus. Features not meeting the legal and scientific tests are not jurisdictional under this rule.

Commonwealth Pennsylvania Department of Agriculture (Doc. #14465)

- 8.95 ...uncertainty is created by:
...using the confusing concept of ordinary high water mark (OHWM) as the key identifier for tributaries,... (p. 4)

Agency Response: See summary response 8.1.2: Need more guidance on determining OHWM and definitions of bed and banks and OHWM above.

Alameda Corridor East Construction Authority et al. (Doc. #8534.1)

- 8.96 The requirement to include all ditches, channels, and other conveyances that are perennially wet, are adjacent to traditional navigable waters, or that have a biological connection to traditional navigable waters will be classified as tributaries and therefore Waters of the United States, is overreaching and inconsistent with how the United States Army Corps of Engineers (Corps) currently asserts jurisdiction. As such, the Corps will have no choice but to start taking jurisdiction of storm drains on every project. This will induce unnecessary additional workload on the Corps and additional cost to analyze and define these features, counter to the intent of the proposed rulemaking. We believe that Corps jurisdiction should be specifically limited to the surface expression of natural drainages that convey flows to downstream receiving waters that exhibit an ordinary high water mark (OHWM). (p. 1)

Agency Response: The final rule represents a narrowing of jurisdiction from the prior regulations. Along with a narrowing of jurisdiction, the rule also significantly reduces the uncertainty and number of case-specific determinations that will be required, reducing state and federal workload associated with jurisdictional determinations. As described in the summary responses 8.1 and 8.1.2, for a ditch or other feature to be jurisdictional as a tributary it must have bed and banks and an OHWM and flow directly or indirectly into a (a)(1) – (a)(3) water. However all tributaries, because they have these characteristics, have been found to have a significant nexus by rule, and are therefore jurisdictional, see the TSD and Connectivity report for further explanation. See summary response 6.0 for a explanation of ditches in the final rule. With respect to stormwater control features, whose specific exclusion is stated in the rule, please see the summary response at 7.4.4.

Kendall County Board, Illinois (Doc. #10965)

8.97 ...In natural systems, the OHWM is an indicator that can be readily identified and is typically a stable feature making it useful for delineation. Because the flow in man-made channels is often highly irregular and changes with maintenance, the OHWM is not a reliable indicator.

...Kendall County has the following objections to and concerns with the proposed rule *Definition of Waters of the US. Under the Clean Water Act, Docket No. EPA -HQ-OW-2011-0880*. ...

3. We object to the use of natural stream geomorphologic conditions, including bed and bank and the regulatory descriptor Ordinary High Water Mark, to establish federal jurisdiction of a manmade drainage feature... (p. 1, 2)

Agency Response: The final rule does not change the definition of or methods for identifying the OHWM. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications in natural and manmade features, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

The final rule covers, as tributaries, only those features that science tells us function as a tributary and that meet the significant nexus test articulated by Justice Kennedy. The agencies have determined that the presence of sufficient flow to form bed and banks and another indicator of OHWM is also sufficient to support status as a similarly situated class of waters with a significant nexus. Features not meeting the legal and scientific tests are not jurisdictional under this rule.

Board of County Commissioners, Churchill County, Nevada (Doc. #12260)

8.98 The following are some unique attributes of the Newlands project that may be adversely affected by the proposed rule:...

2. The definition of tributary for purposes of the proposed regulation is "a water physically characterized by the presence of a bed and banks and ordinary high water

mark which contributes flow to a jurisdictional water". The canals of the Newlands Project have a bed and banks but their flow travels to cropland, not directly to the Carson River, or a wetland. Their "ordinary" high water mark is dependent upon which agricultural producers are irrigating and what time of year it is. The water in the ditches can vary greatly from day to day and is not "ordinary". The proposed definition of a tributary does not provide any clarity; it adds uncertainty.

3. The Carson River is considered a part of the Newlands Project as it conveys water and it is also considered a navigable river and is under the jurisdiction of the Army Corps of Engineers. This is well understood in Churchill County and permits are requested when doing any work below the high water mark. Any further regulation pertaining to "navigable waters" may have a negative impact on the current conveyance of irrigated water. (p. 1-2)

Agency Response: Site-specific analysis of the Newlands project is beyond the scope of the rule. The preamble to the final rule and the Exclusion Compendium provide in depth discussion of each of the exclusions. The agencies have consistently regulated aqueducts and canals as "waters of the United States" where they serve as tributaries, removing water from one part of the tributary network and moving it to another. In order for these canals and aqueducts, to be considered "tributary" they must both contribute flow and have the bed bank and another indicator of ordinary high water mark .

Finally with regard to ditches, the rule provided additional clarity over the regulation of ditches by explicitly excluding certain categories of ditches, such as ditches that flow only after precipitation. See summary response 6.0.

Weld County, Colorado (Doc. #12343)

- 8.99 Another of the terms that requires better definition is "ordinary high water mark (OHWM)." The proposed rule relies heavily on the ability to determine whether a waterway has a bed, bank, and ordinary high water mark. The EPA notes that

indicators of an OHWM may vary from region to region across the country. Fed. Reg. Vol. 79 No. 76 at 22202.

This is especially true in the Western United states where the climactic conditions are so variable. The agencies acknowledge as much:

In many intermittent and ephemeral tributaries, including dry land systems in the arid and semi-arid west, ohwm can be discontinuous within an individual tributary due to the variability in hydrologic and climactic influences. Id.

This variability in water flow again makes it difficult to use Eastern definitions to impose rules on a Western landscape. The term ordinary high water mark assumes a level of regularity in flow that is often not present in the ditches and roadside borrow pits of the West. (p. 8)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. Where the physical characteristics of bed and banks and another indicator of ordinary high water mark no longer exist or are actively manipulated, the presence of bed and

banks and OHWM may be determined by using other appropriate means that consider the characteristics of the surrounding areas. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Brown County, Kansas (Doc. #13603)

- 8.100 The definition of a tributary is based on having a bed and bank plus an ordinary high water mark. On ephemeral channels there is rarely water in the channel so an ordinary high water mark is usually speculation. This matter is so confusing to Corps staff that the determination of ordinary high water is buried somewhere in regulatory guidance letters. Usually in first order ephemeral channels the ordinary high water mark cannot be determined and current practice is to say if the tributary (no matter how small) has banks that it has an ordinary high water mark. This bureaucratic isolated decision, that if a channel has banks it has an ordinary high water mark, greatly extended the upstream extent of ephemeral tributaries to what are basically gullies or erosion features. By current interpretation a 1 ft. wide and 1 ft. deep channel is considered waters of the United States by regulators, but what citizen would believe that the federal government claims jurisdiction to such a small featured. Since the ordinary high water mark is so important on determining if a channel is considered waters of the US that this definition should be open for public comment and peer review. (p. 2)

Agency Response: The final rule did not change the definition or methods for identification of the OHWM. The final rule covers, as tributaries, only those features that science tells us function as a tributary and that meet the significant nexus test articulated by Justice Kennedy. The agencies have determined that the presence of sufficient flow to form bed and banks and another indicator of OHWM is also sufficient to support status as a similarly situated class of waters with a significant nexus. Features not meeting the legal and scientific tests are not jurisdictional under this rule. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Board of Supervisors, San Joaquin County, California (Doc. #15017.1)

- 8.101 The agencies should provide assurances in a final rule that the definition of "tributary" will be limited to those with "bed and banks with an ordinary high water mark" that have formed over several decades, and that would not include temporary accumulations of sediment or hydraulic activity resulting from specific isolated precipitation or runoff

events. Definitions must be fleshed out for the terms "ordinary high water mark", "bed and banks", and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule.

Also, the SAB recently advised the EPA to reconsider the definition of tributaries in the proposed rule because the SAB maintains that not all tributaries may have ordinary high water marks. The SAB stated that "an ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark."³³³ The SAB advised the agency to "consider changing the wording in the definition to bed, bank, and other evidence of flow".³³⁴ We believe this would further broaden the jurisdiction of the CWA beyond what Congress intended, as any indication of surface water runoff from an isolated rain event in a field, dirt road or parking lot could meet this new expanded definition, becoming a "water of the U.S." subject to CWA regulation. (p. 3-4)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. Where the physical characteristics of bed and banks and another indicator of ordinary high water mark no longer exist or are actively manipulated, the presence of bed and banks and OHWM may be determined by using other appropriate means that consider the characteristics of the surrounding areas. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. See TSD section 2.A and 7.A for more information on the SAB review and rationale for using OHWM.

Painesville Township, Ohio (Doc. #15183)

8.102 Definitions must be fleshed out for the terms "ordinary high water mark", "bed and banks", and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule. (p. 2)

Agency Response: The final rule does not change the longstanding definition of OHWM nor change the commonly understood definition of bed and banks. The use of these commonly understood terms and additional clarity provided by the definition tributary and specific exclusions found in the final rule will reduce uncertainty.

Brady Township Supervisors, Clearfield County, Pennsylvania (Doc. #16480)

8.103 The agencies should provide assurances in a final rule that the definition of "tributary" will be limited to those with "bed and banks with an ordinary high water mark" that have formed over several years, and that would **not** include temporary accumulations of sediment or hydraulic activity resulting from specific isolated precipitation or runoff events. Definitions must be fleshed out for the terms "ordinary high water mark," "bed

and banks," and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule. Jurisdictional tributaries should meet a new "bright line" test related to size of bed and banks, amount of flow, or distance from the jurisdictional navigable water in order to be considered a "water of the U.S.", establishing a limit on just how small or how far upstream the CWA would apply from the jurisdictional navigable water. (p. 2-3)

Agency Response: For discussion of OHWM and bed and banks see response to comments 8.377 and 8.378 above. The final rule does not establish minimum requirements for the size of the bed and banks nor flow or distance to a navigable water for tributaries. The science and experience led the agencies to find that tributaries must flow directly or to another water or waters which eventually flow into a traditional navigable water, interstate water, or the territorial sea, but further restrictions based on distance or size are not warranted. For further discussion see the TSD and Connectivity report.

Sienna Plantation Levee Improvement District, Sugar Land, Texas (Doc. #17455)

- 8.104 2. The definition proposed for "tributary" creates uncertainty and relies on newly released Technical guidance for identifying tributaries. The proposed definition of "tributary" - which requires only a bed, banks and an ordinary high water mark ("OHWM") - will create uncertainty in many instances. While a bed, banks and OHWM can be easily identified in some locations, in others those features are not evident, especially an OHWM. The proposed rule would nevertheless make a tributary a "waters of the U.S." if, at any upstream location, a bed, banks and OHWM can be identified. Such a broad definition will potentially require examination of miles of upstream tributary features, quite possibly beyond areas that are accessible either due to legal or physical constraints. The proposed rule's reliance on being able to define and identify an OHWM to determine jurisdiction over tributaries does not provide clarity as there has not been established a reliable and repeatable means to identify an OHWM. Just shortly after the proposed rule was published in April 2014, the Corps of Engineers released new technical guidance (ERDC/CCREL TR-14-13, *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*) for delineating the OHWM in non-perennial streams in the Western U.S. The EPA has stated publicly that similar guidance is being developed for other regions. The Corps also released in August 2014, (ERDC/CCREL TR-14-12, *A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification*) a report with the objective of determining the "most appropriate factors to include in a national OHWM classification." As the factors to be used in identifying OHWM's have yet to be determined it is blatantly false to claim that the proposed rule provides clarification and does not expand jurisdiction. (p. 3)

Agency Response: The final rule continues the longstanding use of OHWM to define the lateral extent of jurisdiction, however provides the additional clarity of explicitly stating the requirements for identifying the upstream extent of jurisdiction as well, see 33 CFR 328.3(c)(3). The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see

<http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Recent Corps efforts to clarify the meaning of OHWA provide additional clarity. The final rule covers, as tributaries, only those features that science tells us function as a tributary and that meet the significant nexus test articulated by Justice Kennedy. The rule also significantly reduces the uncertainty and number of case-specific determinations that will be required, reducing uncertainty.

Butte County, California (Doc. #19593)

- 8.105 The agencies should provide assurances in a final rule that the definition of “tributary” will be limited to those with “bed and banks with an ordinary high water mark” that have formed over several years, and that would not include temporary accumulations of sediment or hydraulic activity resulting from specific isolated precipitation or runoff events. Definitions must be fleshed out for the terms “ordinary high water mark”, “bed and banks”, and other subjective terminology used in the proposed rule that can and will cause uncertainty in the implementation of a final rule.

Also, the SAB recently advised the EPA to reconsider the definition of tributaries in the proposed rule because the SAB maintains that not all tributaries may have ordinary high water marks. The SAB stated that “an ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark.”³³³ The SAB advised the agency to “consider changing the wording in the definition to ‘bed, bank, and other evidence of flow’.”³³⁴ We believe this would further broaden the jurisdiction of the CWA beyond what Congress intended, as any indication of surface water runoff from an isolated rain event in a field, dirt road or parking lot could meet this new expanded definition, becoming a “water of the U.S.” subject to CWA regulation. (p. 5)

Agency Response: For discussion of OHWM and bed and banks see response to comments 8.377 and 8.378 above. The final rule retains the requirement for both bed and banks and another indicator of OHWM. See TSD section 2.A and 7.A for more information on the SAB review and rationale for using OHWM.

Association of California Water Agencies (Doc. #12978)

- 8.106 ...Regulatory guidance and field manuals related to delineating the “ordinary high water mark” should be released for public review prior to use. (p. 2)

Agency Response: The Corps and EPA are committed to a transparent regulatory program. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254>

³³³ Ibid. [[EPA-SAB-14-007] Science Advisory Board letter to EPA Administrator Gina McCarthy dated September 30, 2014 re: Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA’s Proposed Rule titled “Definition of Waters of the United States under the Clean Water Act”]

³³⁴ Ibid.

</Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

8.107 **Ordinary High Water Mark Delineations Unnecessarily Broad**

...Currently, in the arid west, the methodology to be used to locate and identify the OHWM is described in the 2008 Lichvar Field Manual.³³⁵ (It should be noted that the methodology in the 2008 Lichvar Field Manual differs from the methodology prescribed in the 2005 Regulatory Guidance Letter 0505.)

The 2008 Lichvar Field Manual presents a method for ordinary high water delineations associated with the ephemeral/intermittent channel forms that dominate the arid west landscape. The method prescribed in this report for delineating the lateral extent of non-wetland waters in the arid west uses stream geomorphology and vegetation response to the dominant stream discharge. This approach is different and more expansive than that used in other regions of the U.S. The 2008 Lichvar Field Manual states, “In perennial channels, the bankfull zone is where the majority of the impact (via erosion and sedimentation) takes place owing to the presence of the dominant channel-forming discharge.” Conversely, “In ephemeral/intermittent channels, the bankfull zone is potentially a more transient, less discernable feature, and the dominant channel-forming discharge, which is similar in concept to the bankfull event of a perennial channel form, is conveyed by one or more low-flow features in the active floodplain zone.” Because of the intermittent and seasonal nature of flows through drainages in the arid west, the active floodplain zone can correspond to the ten-year floodplain or higher. Depending on the topography, the need to look for the OHWM at the edge of the ten-year floodplain, rather than at the location of the obvious channel, can add significant acreage to jurisdictional delineations, because it increases the scope of jurisdiction laterally away from the incised channel of the drainage. In other words, the size and reach of jurisdiction around tributaries in the arid west would be much broader than in other areas of the U.S. using the methodology in the 2008 Lichvar Field Manual. In situations where flows are infrequent, the additional area to be included may not be characterized by hydric soils, facultative plants, scour or other signs of the presence of water. This discrepancy would result in increased mitigation for impacts to “waters of the U.S.” in the arid west as compared to other regions of the U.S. (p. 11-12)

Agency Response: The final rule does not change the definition or alter the methods for identification of OHWM. The methodology found in the 2008 manual mentioned in the comment applies the indicators discussed in RGL 05 – 05 to the hydrologic and climatic circumstances found in the arid southwest. The Arid West OHWM manual was developed to address these challenges in low-gradient, alluvial ephemeral/intermittent channel forms, by using other features associated with the limits of the active floodplain (channel), which are easily identified in the field, less variable over time, and statistically linked to the hydrologic and hydraulic parameters of ephemeral and intermittent arid channel forms, to support the traditional OHWM indicators. This method uses stream geomorphology and

³³⁵ The proposed rule mentions the use of the 2008 Lichvar Field Manual on pages 22259 and 22260 of the Federal Register notice.

vegetation response to the dominant stream discharge and represents the most consistent and repeating pattern associated with “ordinary” events representing OHW.

Colorado Stormwater Council (Doc. #12981)

- 8.108 Ordinary High Water Mark. The Proposed Rule retains uncertainty regarding the identification of an Ordinary High Water Mark (OHWM) on features that have been fortified to prevent erosion. For example, certain stormwater ditches may not have a natural OHWM but have been armored with angular cobble to prevent head cutting. Based on conversations with EPA and USACE staff, the OHWM along fortified channels should be identified using water stains on the channel fortification. This guidance presents a dilemma for MS4 permittees when determining whether or not to fortify upland vegetated swales: they can either leave the swale unprotected (but retain its non-WOTUS status; they can fortify the swale but increase the potential that it will be WOTUS.

The CSC requests that the Proposed Rule clarify how OHWM should be identified in these situations. Further, CSC requests that the Agencies evaluate the advisability of imposing regulatory burden at locations that have been protected from future erosion and sediment transport events. (p. 3)

Agency Response: As discussed above in the summary response for this compendium, the final rule does not change the definition or indicators of Ordinary High Water Mark (OHWM). The final rule does provide additional clarity that all tributaries must contain both a bed and banks and an OHWM. Fortification of an upland flowpath may create bed and banks however the other OHWM indicators require the presence of flow.

Flood Control and Water Conservation District, Riverside County, California (Doc. #14581)

- 8.109 The District agrees that the definition of Tributary should consider natural bed and bank and ordinary high-water mark.

But that is not enough. The frequency and amount of flow, and the effect of infiltration, evaporation and transpiration should be considered, too. The District believes that those variables may preclude determining by rule that a feature is a "tributary". In the southeastern Californian desert, the amount of flows and the distance they must travel affect whether there can be an integrated ecological system with downstream traditional navigable waters, interstate waters, and territorial seas.

As we have discussed, in the southeastern California desert, rainfall events are infrequent, and on average, minimal in size, which means that existing bed and banks in the valleys may have been formed during very infrequent events. During common runoff events, the desert provides plenty of infiltration and distributary flow paths, and as a result ephemeral storm runoff may never reach jurisdictional waters and form the integrated ecological system that a "tributary" should be part of. Thus, the lengthy periods of time between storms large enough to cause runoff in a desert wash to reach jurisdictional waters makes the connection insubstantial. Truly, in the arid desert, it is as Justice Scalia remarked, the CWA jurisdiction evaporates with the water. (p. 4)

Agency Response: As discussed further in the summary response found at the beginning of this compendium and in the TSD and Connectivity report the science and agency experience support the decision to determine by rule that all waters meeting the definition of tributary are “waters of the United States.” The final rule further establishes that for a ditch or other feature to be jurisdictional as a tributary it must have bed and banks and an OHWM and flow directly or indirectly into a (a)(1) – (a)(3) water. The agencies have long recognized the unique hydrologic and climatic circumstances found in the arid west and have even developed a OHWM manual specifically to address these challenges. This method uses stream geomorphology and vegetation response to the dominant stream discharge and represents the most consistent and repeating pattern associated with “ordinary” events representing OHW in the arid west, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx>.

Western Urban Water Coalition (Doc. #15178.1)

- 8.110 Several physical characteristics distinguish ephemeral and intermittent drainages in the arid West in addition to the Corps’ definitions...The most obvious visible difference that frequently distinguishes ephemeral drainages in the arid West is the lack of difference in vegetation associated with the drainage compared with the surrounding landscape (Photos 1, 3, 4, and 6, Appendix A). Vegetation in the arid West responds dramatically to moisture. However, because there is rarely reliable moisture associated with ephemeral drainages in the arid West, there are typically no or few differences in species composition or plant density associated with ephemeral drainages. Differences in plant species composition and density in the arid uplands and along ephemeral drainages are typically more a function of differences in geology, soil type, aspect, and elevation rather than the location of vegetation in relation to the ephemeral drainage.

Beds and banks and OHWMs can be difficult to discern, are often discontinuous, and can be almost meaningless (e.g., an OHWM a few inches deep and a bed and banks along a drainage a few feet wide). The Corps manual on delineating the OHWM in the arid West (Lichvar and McColley 2008) notes that in the arid West region of the U.S., waters are variable and include ephemeral/intermittent and perennial channel forms. The most problematic OHWM delineations are associated with the commonly occurring ephemeral/intermittent channel forms that dominate the arid West landscape. Other than the topographic feature of the drainage, there is frequently little to distinguish an ephemeral drainage from the surrounding landscape in the arid West, particularly erosional features.

Intermittent drainages in the arid West have ground water levels that are shallow enough to support vegetation (e.g., phreatophytes) that differs from and/or occurs more densely than the surrounding landscape (Photos 9 and 10, Appendix A). However, other physical features can be similar to ephemeral drainages because ground water rarely contributes sufficient flow to form an OHWM and/or a bed and banks; therefore, as with ephemeral drainages, these features are still formed by infrequent precipitation events.

The concept of the OHWM determining if a stream is jurisdictional and the lateral limits of that jurisdiction is tied to the OHWM being formed by frequent flow events. This relationship has been determined on streams in the more humid regions of the U.S., but this relationship in the arid West is not supported by observations, studies and the literature. A simple relationship between a morphologic variable and discharge is successful only for streams with definable regular flows or some definable steady state; this is not the case for dryland streams (Graf 1988, p. 104). The OHWM for streams in regions outside of the arid West is associated with a bankfull flow typically considered to have a return interval of 1 to 2 years. In more humid regions of the country, streams will equal or exceed the mean annual flood once every 2.33 years. However, metrics like the mean annual flood and the return interval of bankfull flow have almost no practical or theoretical significance in dryland streams because of the extreme variability of flow in such streams (Graf 1988, p. 103). In arid areas channels may not have any flow for several years. Bankfull flows are difficult to determine in the field in dryland channels that are frequently incised, very broad or braided, or developed on bedrock. Bankfull flow in dry areas is not even the same within a single drainage basin. Extensive data collection show that the range of frequency of bankfull flows in dryland channels is from 1 to 32 years, a breadth too great to inspire confidence in the reliability of the measure (Graf 1988, p. 104).

The difficulty in transferring concepts of channel behavior from humid to dryland areas lies in the underlying assumptions of continuous system operation with well-defined feedback mechanisms, assumptions that are not met in the dryland process (Graf 1988, p. 197). Precipitation and runoff inputs to dryland channels are sporadic, so the difference between high and low flows is greater than in humid streams. These wide fluctuations prevent the development of a linkage between a particular flow magnitude and channel geometry related to bankfull conditions (Graf 1988, p. 296). The order of events of varying magnitudes may be more important in explaining the present observed geomorphic conditions than the exact nature of the flood frequency curve or the statistical properties of flood frequencies (Graf 1988, p. 104).

Clearly, the use of an OHWM (a morphologic variable or geomorphic condition) to determine that an ephemeral or intermittent channel in the arid West is a “tributary” and then making the assumption that the ephemeral or intermittent channel has a significant nexus to a TNW and is therefore jurisdictional, as the rule proposes, is not supported by observation, studies or the literature. (p. 17-19)

Agency Response: As discussed further in summary response 8.1 and 8.1.2 above and in the TSD and Connectivity report the science and agency experience support the decision to determine by rule that all waters meeting the definition of tributary are “waters of the United States.” The final rule further establishes that for a ditch or other feature to be jurisdictional as a tributary it must have bed and banks and an OHWM and flow directly or indirectly into a (a)(1) – (a)(3) water. The agencies have long recognized the unique hydrologic and climatic circumstances found in the arid west and have even developed a OHWM manual specifically to address these challenges. This method uses stream geomorphology and vegetation response to the dominant stream discharge and represents the most consistent and repeating pattern associated with “ordinary” events representing OHW in the arid west, see

<http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx>. See also the summary response 8.1.2: Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features above.

State of Nevada Department of Conservation et al. (Doc. #16932)

- 8.111 The categorical definitions presented in the Proposed Rule are problematic because they do not capture the intent of the CWA. Application of the proposed definitions under varied environmental conditions leads to inappropriate results, such as the inclusion of marginal waters or dry channels which obviously have no significant connection to jurisdictional waters.

The complexity involved in hydrologic definitions is highlighted by a recent attempt by the Corps to explain how to identify the location of an Ordinary High Water Mark (Occurrence and Distribution of Ordinary High Water Mark (OHWM) Indicators in Non-Perennial Streams in the Western Mountains, Valleys and Coast Region of the United States, August 2014). The document is 26 pages long and only applies to discrete portions scattered throughout the West, none however within the boundaries of Nevada. It demonstrates the complex dependence of a simple definition upon specific environmental conditions, which vary greatly from region to region. This can result in one definition having a number of interpretations even within a single state, which is confusing and counterproductive. (p. 4)

Agency Response: See response to comment from Flood Control and Water Conservation District, Riverside County, California (Doc. #14581) above regarding the importance of various channel types that qualify as tributaries. In addition, the Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Montana Association of Conservation Districts (Doc. #18628)

- 8.112 Waters that are regulated by dams or irrigation withdrawals and inputs will have a more variable flow than those based on less flashy or consistent hydrology and will be less likely to have a readily identifiable ordinary high water mark. Further, these ordinary high water marks may vary over time as conditions change, be identified differently by different people, or be erased by a 100 year flood. Will the area encompassed by an “ordinary high water mark” be subject to change over time? If water regimes alter due to drought and precipitation variations, which high water mark is the actual high water mark? (p. 1)

Agency Response: The final rule does not change the definition or alter the methods for identification of OHWM. Determinations of jurisdiction are done on a case by case basis based on the best information available and they are only valid for five years because, as the commenter points out, environmental conditions which can shape the outcome can change over time.

Water Advocacy Coalition (Doc. #7981)

8.113 In addition to releasing new information, the Agencies continue to revise and remove previous blog posts and statements released throughout the comment period... in discussing "ordinary high water mark" (OHWM), the June 30 Q&A document provided, "Features that .flow extremely rarely would not exhibit these characteristics and would not be jurisdictional." (emphasis added). Now, the document has been revised to state, "Water features that don't flow frequently enough or with enough volume to exhibit these characteristics would not be jurisdictional." (emphasis added). Not only are these sentences not accurate, but the meanings are different. Again, the Agencies are changing their story without explanation or notice. Have the Agencies changed their position on OHWM? How is the public to comment when the Agencies keep revising their stance on important issues without notice? (p. 3-4)

Agency Response: The agencies have requested public comments on the proposed rule and preamble, to inform development of the final rule. The final rule has not changed the definition or altered the long standing methods for identification of OHWM. The above difference in wording laid out above does not contradict each other nor represent a change to the agencies use of OHWM. The scientific literature, and the conclusions of the Connectivity Report supports the agencies' conclusion that bed and banks and another indicator of OHWM establish the presence of sufficient flow to for a ditch or other feature to have a significant nexus.

8.114 Moreover, a review of the OHWM guidance documents issued by the Corps demonstrates that, contrary to the Agencies' statements in the context of the "waters of the United States" rule, determination of the OHWM is anything but simple or clear. In various blog posts, stakeholder calls, and statements released by the Agencies during the comment period, the Agencies have touted the OHWM as "well-known" and "easy to observe and document."³³⁶ But the recent Corps statements and publications paint a different picture. In March 2014, the Corps recognized that OHWM is a "vague definition," leading to "inconsistent interpretation of [the] OHWM concept," and "inconsistent field indicators and delineation practices."³³⁷ Likewise, the Corps' Western Mountains OHWM Guidance states that "OHWM delineation in non-perennial (i.e. , intermittent and ephemeral) streams can be especially challenging" and notes that "it is often difficult to determine what constitutes ordinary high water and to interpret the physical and biological indicators established and maintained by ordinary high water flows."³³⁸ For these reasons, the Corps' National OHWM Review recognizes the "need for nationally consistent and defensible regulatory practices" and suggests that "a comprehensive framework is needed."³³⁹

In light of the confusion surrounding OHWM definition, it is difficult to understand why the Agencies would rely on OHWM as a determinative measure of CWA jurisdiction

³³⁶ See, e.g. , Tom Reynolds, Mapping the Truth, EPA Connect Blog (Aug. 28, 2014), <http://blog.epa.gov/epaconnect/2014/08/mapping-the-truth/>

³³⁷ Presentation by Matthew K. Mersel, U.S. Army Engineer Research and Development Center, Development of National OHWM Delineation Technical Guidance (March 4, 2014).

³³⁸ Corps Western Mountains OHWM Guidance at 1-2.

³³⁹ National OHWM Review at 1-2.

over tributaries.³⁴⁰ Indeed, the Science Advisory Board (SAB) panel questioned the proposed rule's use of OHWM as part of the "tributary" definition, and panel members were "concerned about the definition of tributary being anchored in something as regionally variable" as the OHWM concept.³⁴¹ There is a serious disconnect between the Agencies' statements that the OHWM is easy to determine and the Corps' guidance documents and recent statements to the contrary. These mixed messages from the Agencies make it difficult for the public to provide meaningful comment on the proposed rule. (p. 5)

Agency Response: The agencies have requested public comments on the proposed rule and preamble, to inform development of the final rule. The final rule has not changed the definition or alter the long standing methods for identification of OHWM. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, including the development of the guidebook the mentioned in the comment, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. See summary response 8.1.2 above and TSD section 2.A and 7.A for more information on the SAB review and rationale for using OHWM.

John Deere & Company (Doc. #14136.1)

8.115 The Proposed Definition For Tributary Sets Forth Poorly Defined and Optional Criteria Creating Confusion and Uncertainty

...

In this part of the definition the phrase "ordinary high water mark" lacks criteria making it susceptible to different interpretations by qualified professionals, thereby leading to confusion and uncertainty as identification occurs in the field. This confusion is further compounded by two factors: First, the term tributary includes within it water features, such as ponds and lakes, which do not have the characteristic inherent in the definition of tributaries. Second, other wet areas on land that do not possess a bed and a bank and an ordinary high water could have their jurisdictional status altered if a tributary runs through it. For example, a wet area, that did not otherwise meet the definition of a jurisdictional water, could now be captured and labeled as jurisdictional if a tributary ran through it and exited the other side.³⁴² (p. 8)

Agency Response: The final rule has not changed the definition or alter the long standing methods for identification of OHWM. The final rule has also responded to the comments concerning the potential confusion created by calling ponds and similar waters tributaries. In the rule ponds, lakes and similar waters fall under the

³⁴⁰ These concerns are not new. In *Rapanos*, Justice Kennedy criticized the Agencies' use of OHWM to determine whether tributaries are jurisdictional, because he was concerned that such a standard was overbroad and would leave room for the Agencies to assert jurisdiction over waters that do not have a significant nexus to traditional navigable waters. *Rapanos v. United States*, 547 U.S. 715, 781-82 (2006) (Kennedy, J., concurring).

³⁴¹ See Bridget DiCosmo, InsideEPA.com, EPA Appears to Reject SAB Calls to Clarify Controversial "Waters" Proposal (Aug. 22, 2014).

³⁴² 79 Fed. Reg. 22,274 (April 21, 2014).

adjacency standard (a)(6), see Section 3 of the Response to Comments for further discussion. Tributaries must have bed and banks and another indicator of OHWM and flow directly or indirectly into a (a)(1) – (a)(3) water. Once a water is determined to be a tributary and does not fall under one of the exclusions, it is jurisdictional.

Arizona Chamber of Commerce and Industry (Doc. #14639)

- 8.116 The use of the ordinary high water mark concept to define what waters may be subject to jurisdiction is problematic as applied to arid landscapes. What may be considered as an “ordinary” high water mark on ephemeral drainage features in the arid West may, in many instances, have been formed by a single storm event and does not relate in any way to where water may flow in the future. Indeed, the Corps’ own research demonstrates that the presence of an “ordinary” high water mark in arid landscapes has no relationship to present or future flows. Thus, rather than being an indicator of ordinary conditions or potential flows—as is the case in more humid environments—the “ordinary” high water mark will result in a broad regulatory overreach when used to define “waters” in the arid West. (p. 2)

Agency Response: See summary response 8.1.2 and response to comment from Flood Control and Water Conservation District, Riverside County, California (Doc. #14581) above.

Steel Manufacturers Association and Specialty Steel Industry of North America (Doc. #15416)

- 8.117 ...the definition of tributaries is ambiguous and, therefore, creates a great deal of confusion and jurisdictional uncertainty. The proposed rule defines tributaries as waterbodies that have beds, banks, and an ordinary high water mark. But stormwater structures and retention ponds often have a bed, banks, and an ordinary high water mark, thus potentially classifying them as "tributaries." Fully constructed stormwater measures, however, should clearly be part of the class of waters excluded from jurisdiction by rule, and any waterbodies EPA and the Army Corps wish to regulate could be specifically named as not being exempted by rule. This would decrease the number of waters that necessitate a case-by-case analysis, and promote green infrastructure projects like storm water retention and detention structures. (p. 8-9)

Agency Response: The agencies added exclusions for groundwater and erosional features, as well as exclusions for some waters that were identified in public comments as possibly being found jurisdictional under proposed rule language where this was never the agencies’ intent, such as stormwater control features constructed to convey, treat, or store stormwater, and cooling ponds that are created in dry land. These exclusions reflect current agencies’ practice, and their inclusion in the rule as specifically excluded furthers the agencies’ goal of providing greater clarity over what waters are and are not protected under the CWA.

GBMC & Associates (Doc. #15770)

- 8.118 ...Evidence of a true bed and bank in ephemeral streams may constitute a significant nexus; however, while indicators of other ordinary high water marks provide evidence of

water flow in an area, these other indicators do not necessarily provide evidence of a "measure of significance for connection to downstream water quality".

The rule should clarify that ordinary high water marks alone do not qualify a stream to be defined as a water of the United States. Regulation of the upper reaches of many of these ephemeral streams that primarily have the function of transporting storm water runoff (including constituents contained in the runoff) is beyond the scope of the original intent of the definition of waters of the United States. We request that in the USACE response to these comments that they clarify what qualifies as OHW features and bed and banks. Please include photos of small first order tributaries that qualify and some that do not. (p. 3)

Agency Response: The final rule has not changed the definition or altered the long standing methods for identification of OHWM. For a stream to be jurisdictional as a tributary it must have bed and banks and an OHWM and flow directly or indirectly into a (a)(1) – (a)(3) water. However all tributaries have been found to have a significant nexus by rule, and are therefore jurisdictional. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, including the development of the guidebook the mentioned in the comment, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Water Advocacy Coalition (Doc. #17921.1)

- 8.119 Bed, banks, and OHWM can be seen even in features without ordinary flow. Particularly in the desert and semi-arid regions of the United States, field indicators of an OHWM can develop very easily. Naturally sparse vegetation and erodible soils of the deserts combined with monsoon storms results in a significant number of small channels (often only a few feet in width) yet with a defined bed and bank. Many of these features would likely not develop in humid regions of the U.S. and would be representative of unregulated sheet flow or upland-vegetated swales in humid regions. Therefore, the arid States are unfairly burdened by the OHWM concept, compared to Eastern and humid states. Crossing the threshold from a non-jurisdictional erosion feature to an albeit small channel with an OHWM in the desert occurs easily and is a significant source of jurisdictional uncertainty. Many of these exceedingly small channels would now become *per se* jurisdictional tributaries, even with discontinuous surface connections to another water and a speculative nexus to traditional navigable waters, interstate waters, territorial seas, and/or impoundments. (p. 44)

Agency Response: See summary response 8.1.2 and response to comment from Flood Control and Water Conservation District, Riverside County, California (Doc. #14581) above.

- 8.120 **2. The tributary definition does not provide clarity, but creates confusion.**

In addition to its broad reach, the tributary definition is problematic because it relies on vague language and confusing concepts, including the following:

- **Ordinary high water mark:** OHWM is the lynchpin concept of the “tributary” definition. As recently as March 2014, Corps experts have said that the term OHWM is one of the most inconsistent and ambiguous terms in the CWA regulatory program.³⁴³ Inconsistent interpretations of the OHWM concept have led to inconsistent field indicators and delineation practices. *Id.* The agencies do not propose a new definition of OHWM in this rulemaking, but rely on the existing, imprecise regulatory definition, which is problematic because many of the OHWM physical indicators can occur wherever land may have water flowing across it, regardless of frequency or duration. These indicators (e.g., changes in character of the soil, destruction of native terrestrial vegetation, presence of litter and debris)³⁴⁴ can be observed in very small drainages and even in upland areas, especially in arid areas. The agencies’ proposed definition of “tributary” cannot possibly provide clarity when its fundamental concept is a well-known source of confusion for the regulators themselves.

Moreover, the standard for determining OHWM is currently in flux. Separate from the proposed rulemaking, the agencies are redefining OHWM without the required public notice and comment. In August 2014, the Corps Engineer and Research Development Center (ERDC) released three new guidance documents regarding OHWM, which indicate that the agencies are developing a new OHWM standard.³⁴⁵ These guidance documents essentially ignore the current regulatory definition at section 328.3(e) and the Corps’ RGL 05-05³⁴⁶ and create a new method for determining OHWM based on the delineation of an “active channel signature” through the use of three primary indicators – topographic break in slope, change in sediment characteristics, and change in vegetation characteristics. In effect, other physical indicators explicitly referenced in section 328.3(e) are superfluous under this new methodology. This is a clear change in regulatory practice and will have a substantial effect on how CWA jurisdiction is interpreted. What OHWM standard will be applied in the field? How will the Corps account for potential inconsistencies

³⁴³ Matthew K. Mersel, U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory, Development of National OHWM Delineation Technical Guidance (Mar. 4, 2014), available at http://insideepa.com/sites/insideepa.com/files/documents/apr2014/epa2014_0760.pdf.

³⁴⁴ Robert W. Lichvar and Shawn M. McColley, U.S. Army Corps of Engineers, A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, at 20 (Aug. 2008), available at http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf

³⁴⁵ Matthew K. Mersel and Robert W. Lichvar, U.S. Army Engineer Research and Development Center (ERDC), *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valley, and Coast Region of the United States* (Aug. 2014), <http://acwc.sdp.sirsi.net/client/search/asset/1036027>; Matthew K. Mersel, et al., *Occurrence and Distribution of Ordinary High Water Mark (OHWM) Indicators in Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (Aug. 2014), <http://acwc.sdp.sirsi.net/client/search/asset/1036025>; Matthew K. Mersel, Lindsey E. Lefebvre, and Robert W. Lichvar, U.S. Army Engineer Research and Development Center (ERDC), *A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification* (Aug. 2014), <http://acwc.sdp.sirsi.net/client/search/asset/1036026>.

³⁴⁶ See U.S. Army Corps of Engineers, Regulatory Guidance Letter No. 05-05, Ordinary High Water Mark Identification (Dec. 7, 2005), available at <http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-05.pdf>.

with section 328.3(e) and RGL 05-05? Why are the Corps' efforts to redefine OHWM, a key term in the agencies' proposed "waters of the United States" definition, not a part of this rulemaking?

... (p. 47-48)

Agency Response: The agencies have requested public comments on the proposed rule and preamble, to inform development of the final rule. The final rule has not changed the definition or alter the long standing methods for identification of OHWM, there are no inconsistencies between RGL 05-05 and the final rule. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, including the development of the guidebook the mentioned in the comment, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. The two existing regional OHWM delineation manuals and any future manuals developed do not mean the definition of OHWM is in flux. These manuals have not and will not change the definition of OHWM but simply help field staff more consistently apply the regulation and concepts from RGL 05-05 to the specific hydrologic, climatic, and landscape conditions of a given region. See also summary response 8.1.2 above.

National Association of Home Builders (Doc. #19540)

8.121 a. Identifying Geomorphic Features Needed to Meet the Tributary Definition, Particularly Ordinary High Water Mark, has Proven Difficult for the Agencies and will Increase Regulatory Uncertainty.

The proposed rule requires only the presence of a bed, a bank, and an OHWM, and the contribution of flow to a traditional navigable water, an interstate water, a territorial sea, or an impoundment for a water to meet the "tributary" definition. A bed, a bank, and an OHWM represent limited criteria to qualify water or - in instances when surface water is not present - *land* features as tributaries. Let's not forget that the CWA authorizes federal jurisdiction only over "water."³⁴⁷ While these three features appear to represent a simple approach to identifying tributaries, there is in fact great variability in channel form,³⁴⁸ and identifying certain tributary features can be challenging. This is particularly true with respect to OHWM .

In the absence of adjacent wetlands, OHWM is intended to determine the lateral limits of jurisdiction of non-tidal waters.³⁴⁹ A 2004 Government Accountability Office (GAO) report, however, noted significant inconsistencies among Corps districts in identifying waters of the United States, particularly with respect to identifying an OHWM.³⁵⁰ In "Channel Classification across Arid West Landscapes in Support of OHW[M] Delineation" the Corps states, "channel types have pronounced spatial and temporal

³⁴⁷ 33 USC S - C 6., 1362(7).

³⁴⁸ Dunne, T., and L.B. Leopold. Water in Environmental Planning. New York: W.H. Freeman and Co., 1978. Print.

³⁴⁹ 33 C.F.R 328.4(c)(a).

³⁵⁰ GAO-04-297, at 3-4.

variability in channel morphology," and "physical features found along a channel vary between types, along the length of any given stream, and through time at a single point."³⁵¹ The Corps continues, "because of the diversity and dynamic in channels, no single classification satisfies all needs or includes all channel types." OHWM, defined as 'that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas,'³⁵² has been referred to as "vague" and responsible for "inconsistent interpretation of the OHWM concept" and "inconsistent field indicators and delineation practices" in a recent Corps presentation (Fig. 3).³⁵³

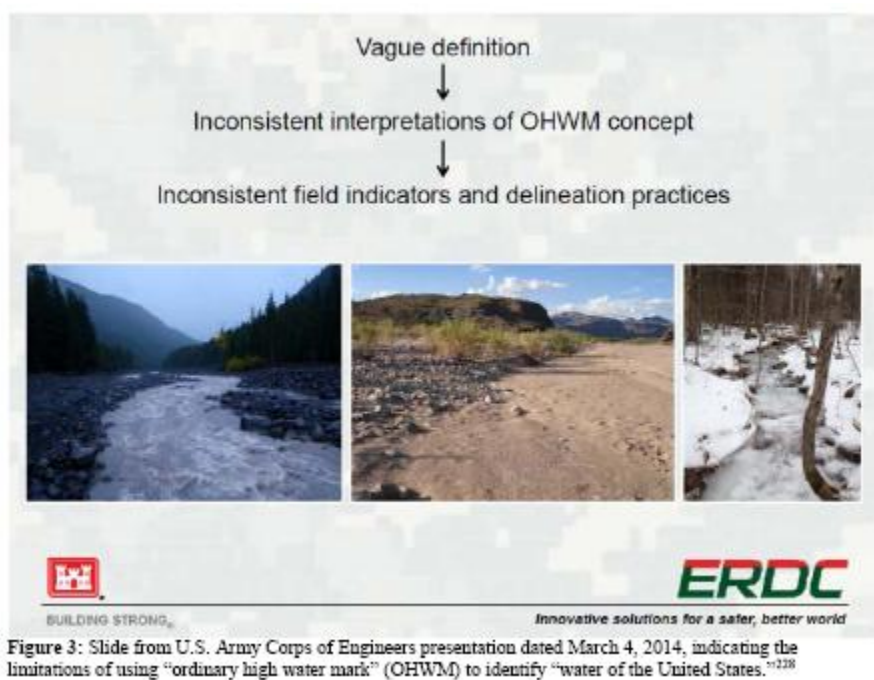


Figure 3: Slide from U.S. Army Corps of Engineers presentation dated March 4, 2014, indicating the limitations of using "ordinary high water mark" (OHWM) to identify "waters of the United States."²²⁸

The Corps has had a particularly difficult time identifying OHWM in the arid western United States, where xeric conditions generate innumerable ephemeral and intermittent streams. In these non-perennial reaches, the flashiness of storm events and the frequent shifting of the channel morphology make it challenging to identify the OHWM. limited data and changing flow conditions across these ephemeral and intermittent streams also increase the difficulty the Corps faces when identifying the magnitude and frequency of an ordinary high discharge at a site.³⁵⁴ Although the Corps states there is "extreme

³⁵¹ U.S. Army Corps of Engineers Engineer Research and Development Center. Channel Classification across Arid I West Landscapes in Support of OHW Delineation, Lefebvre L., R Lichvar, K. Curtis, J. Gillrich (Jan. 2013).

³⁵² 33 C.F.R. 9 328.3(e)

³⁵³ Presentation by Matthew K. Mersel, U.S. Army Corps of Engineers Engineer Research and Development Center. Development of National OHWM Delineation Technical Guidance (March 4,2014).

³⁵⁴ See *id.* at 60

variation” in ordinary high flows throughout the arid West region and OHWM is “highly variable,”³⁵⁵ today’s proposal nonetheless continues to rely on this problematic feature. With regard to ordinary high flow and OHWM, the Corps admits it is challenging to determine what is “ordinary” to a channel. A study by the Corps in the Arid West revealed a < 1 to 15.5 year range in flood frequency necessary to generate an OHWM in ephemeral streams.³⁵⁶ In that study, the Corps stated that this “large variation in recurrence intervals for the field OHWMs makes it impossible to define the frequency of the ordinary high flow from gage data because the OHW[M] event is unique to each channel.”³⁵⁷

Given the difficulty the Corps has had identifying OHWM under current regulatory guidance, there is substantial reason to believe the proposed rule will not clarify “waters of the United States” under the new tributary definition, and the current regulatory uncertainty surrounding the jurisdiction of the CWA will regrettably remain. (p. 60-62)

Agency Response: The final rule has not changed the definition or alter the long standing methods for identification of OHWM. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, including the development of the guidebook the mentioned in the comment, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. See also summary response 8.1.2 above.

Minnkota Power Cooperative, Inc. (Doc. #19607)

- 8.122 A main focus of the proposed tributary definition is having an ordinary high water mark (OHWM). This OHWM in the context of this Proposed Rule, and throughout much of the CWA is quite ambiguous and inconsistent, thereby making a determination as a tributary that much more erroneous. If the OHWM is to be used, it should be clearly defined or referenced to an existing science-based definition. This definition, if again proposed should be part of a new Proposed Rule that is subject to public review and comment. (p. 2)

Agency Response: The final rule has not changed the definition or alter the long standing methods for identification of OHWM. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

³⁵⁵ See *id.* at 3, 59.

³⁵⁶ See *id.* Table 4 at 24.

³⁵⁷ See *id.* at ii.

American Society of Civil Engineers (Doc. #19572)

- 8.123 **Ordinary High Water Mark:** While the definition of OHWM is relatively established in the proposed rule for naturalized streams we believe the definition is less clear for OHWM's found on concrete conveyances that may be considered jurisdictional. As we understand, staining is the primary indicator to determine the OHWM in concrete channels, however, our members provided examples of concrete conveyances that flow a few times a year, carrying only sheetflow, which does not leave stain lines. We urge EPA and USACE to revise the definition of OHWM as it relates to concrete conveyances and sheetflow. (p. 9)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. Where the physical characteristics of bed and banks and another indicator of ordinary high water mark no longer exist or are actively manipulated, the presence of bed and banks and OHWM may be determined by using other appropriate means that consider the characteristics of the surrounding areas. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Southpace Properties, Inc. (Doc. #6989)

- 8.124 The proposed rulemaking creates further complications due to its reliance on the confusing concept of ordinary high water mark (OHWM) as the key identifier for tributaries. (p. 1)

Agency Response: The final rule has not changed the definition or alter the longstanding methods for identification of OHWM. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Kerr Environmental Services Corp. (Doc. #7937.1)

- 8.125 The "Jurisdictional Determination Form Instructional Guidebook" prepared jointly by the USEPA and USACE (May 30, 2007) as a means of interpreting the Rapanos decision indicates that a:

"Tributary is a natural man-altered, or man-made water body. Examples include Rivers, streams and lakes that flow directly or indirectly into TNWs."

This definition should continue to be the regulatory definition and be reinforced by adding the phrase

"and in all cases possesses an ordinary high water mark." (p. 7)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. In the Final Rule, by definition tributaries must have bed and banks and an OHWM, as well as contribute flow to an (a)(1) through (3) water. Lakes, wetlands, and other features lacking these physical characteristics are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional waters of the U.S. as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

Portland Cement Association (Doc. #13271)

8.126 Given the breadth of the Agencies' understanding of the terms "bed and bank" and "ordinary high water mark," the breadth of this standard is well beyond the scope of the Act.

In their April 2011 draft guidance regarding Waters of the US,³⁵⁸ the Agencies stated that

A tributary is physically characterized by the presence of a channel with defined bed and bank. The bed of a stream is the bottom of the channel. The lateral constraints (channel margins) are the stream banks. Channels are formed, maintained, and altered by the water and sediment they carry, and the forms they take can vary greatly.

A means of identifying the lateral limits of a tributary, including where there are no contiguous wetlands, is the existence of an ordinary high water mark (OHWM).³⁵⁹

In other words, an OHWM can be used to show where the banks of the tributary lie. The Corps guidance identifying how to identify an ordinary high water mark." states that

The following physical characteristics should be considered when making an OHWM determination, to the extent that they can be identified and are deemed reasonably reliable:

Natural line impressed on the bank

Shelving

Changes in the character of soil

Destruction of terrestrial vegetation Presence of litter and debris Wracking

Vegetation matted down, bent, or absent

Sediment sorting

³⁵⁸ Available at http://www.epa.gov/tp/pdf/wous_guidance_4-2011.pdf. While this guidance document was a draft guidance and was not finalized in favor of publishing the proposed rule, the document specifically notes that it "clarifies how the EPA and the Corps understand existing requirements of the CWA and the agencies' implementing regulations in light of SWANCC and Rapanos. . . ." *Id.* at 1. In other words it "clarif[ies] their existing understandings. . . ." *Id.* Thus, it provides useful insight into the agencies' understanding of the regulatory scheme.

³⁵⁹ *Id.* at 11

Leaf litter disturbed or washed away

Scour

Deposition

Multiple observed flow events

Bed and banks

Water staining

Change in plant community³⁶⁰

These criteria cover almost every conceivable manner of proving that water has run off or through an area, including seeing water run in a place on more than one occasion (referred to as “multiple observed flow events”), bent vegetation and the washing away of leaves. This test is incredibly broad and well beyond the plain meaning of the CWA. It is certainly beyond the scope of the CWA as interpreted by the Supreme Court, which has confirmed that there must be some limits to CWA jurisdiction.

As such, the Agencies’ assertion that all ephemeral waters are always jurisdictional is without basis in the CWA and it must not adopt this part of the rule. (p. 13-14)

Agency Response: The final rule does not change the definition or alter the methods for identification of OHWM. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

El Dorado Holdings, Inc. (Doc. #14285)

8.127 5. *The significance of the “bed and banks” requirement, if any, should be explained:* The proposed definition of “tributary” in 33 C.F.R. § 328.3(c)(5) requires that the water possess a “bed and banks” as well as an ordinary high water mark. The phrase “bed and banks” is not defined, nor are the individual terms “bed” or “banks.” In the preamble, the agencies merely indicate that in “many” tributaries, the bed is that part of the channel below the OHWM, and the banks often extend above the OHWM. See 79 Fed. Reg. at 22202. The effect of requiring that a bed and banks be present along with an OHWM is unclear. Do bed and banks exist only in conjunction with an OHWM, or can the features exist independently (i.e., can an OHWM be present without bed and banks, or can bed and banks be present without an OHWM?)

Recommendation: The agencies need to explain the significance of the “bed and banks” requirement, and specifically whether it means that some channels that possess an

³⁶⁰ *Id.* at 3.

OHW (as interpreted by the agencies) would not be jurisdictional because they do not also possess a “bed and banks.” (p. 17)

Agency Response: The final rule clearly requires the presence of both bed and banks and another indicator of OHW, if one is not present then the water does not qualify as a tributary. Bed and banks can be naturally formed by repeated flow of water or artificially constructed out of rock, concrete, etc, however both bed and banks and another indicator of OHW must be found before a water can be called a tributary under the rule. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHW. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters.

NAIOP Commercial Real Estate Development Association (Doc. #14621)

8.128 This definition utilizes the term “Ordinary High Water Mark” (OHW). This phrase is inconsistently interpreted in the field. The lack of a manual instructing regulators and the regulated public as to what is an OHW is the cause of most debates over whether or not a defined channel is a gully, rill, non-wetland swale, or an ephemeral stream. For example, below is a picture of an “easy” OHW determination. Some regulators would say the OHW elevation is the yellow line; others would pick the white line (it is the lower, yellow line – the OHW is where that plane intersects the edge of the bank).



Some regulators would say the OHW elevation is the yellow line; others would pick the white line (it is the lower, yellow line – the OHW is where that plane intersects the edge of the bank).

It is critical for the Agencies to refine the field location protocols of OHW so that it is clear as to the extents of such regulatory authority because the lack of specificity on this term for decades simply continues to build angst amongst the regulated public.

We have learned that the Corps has unveiled guidance aimed at clarifying OHW. We recommend that these documents need to be developed for the U.S. before implementing a new regulation relying on a loosely defined term. (p. 6)

Agency Response: Site-specific analysis of a particular OHWM call is beyond the scope of the rule. The final rule does not change the definition of or methods for identifying the OHWM. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see

<http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. See also summary response 8.1.2 above.

South Carolina Forest Association (Doc. #6855)

- 8.129 We ask that EPA recognize that stream bank, bed, and OHW mark may be present with very low water flow, especially in areas with gullied and eroded channels from past land use. Some of these channels may flow less than 10% of the year. A discernable bed, banks, and OHW mark should not be used to define WOTUS. (p. 1)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. Where the physical characteristics of bed and banks and another indicator of ordinary high water mark no longer exist or are actively manipulated, the presence of bed and banks and OHWM may be determined by using other appropriate means that consider the characteristics of the surrounding areas. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The Final Rule contains exclusions for erosional features that do not meet the definition of tributary, such as gullies, rills, and non-wetlands swales. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters.

Kansas Independent Oil & Gas Association (Doc. #12249)

- 8.130 The definition of "tributary" includes terms such as "bed and banks" and "ordinary high water mark" which raise more questions about interpretation than provide clarity. Whether these physical characteristics are de facto evidence of significant nexus is a question of fact. (p. 14)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the

physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters.

Pennsylvania Coal Alliance (Doc. #13074)

8.131 ...Although not an exhaustive listing, the following types of questions would remain if the Proposed Rule is finalized, as currently written:

...d. OHWM – How should an OHWM be delineated and documented? OHWM limits can be influenced by uncharacteristically high rainfall events and are seasonably difficult to identify, opening the door to subjective interpretation and confusion. (p. 15)

Agency Response: The final rule does not change the definition of or methods for identifying the OHWM. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Enefit American Oil (Doc. #13438)

8.132 By USACE's own admission, "OHWM delineation in non-perennial (i.e., intermittent and ephemeral) streams can be especially challenging."³⁶¹ To conclude that any feature containing an OHWM and bed and banks is a WoUS and therefore subject to jurisdiction under the CWA is to potentially expand regulatory reach far and wide in the western U.S. Further, to include all parts of a tributary that contain a bed, banks, and OHWM regardless of breaks in the same is to reach far inland in these ephemeral systems, well beyond any intent of Congress or the courts to regulate waters under the CWA.

If it is "especially challenging" to even delineate an OHWM in non-perennial systems, and an OHWM is one of the key parts of the proposed definition of a tributary, the agencies cannot broadly include all tributaries as WoUS... (p. 3)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

³⁶¹ See Section 1. Introduction in Mersel and Lichvar. 2014. A guide to ordinary high water mark (OHWM) delineation for non-perennial streams in the western mountains, valleys, and coast region of the United States. ERDC/CRREL TR-14-13, prepared by the U.S. Army Engineer Research and Development Center.

Arizona Mining Association (Doc. #13951)

- 8.133 1. Wholesale regulation of dry desert washes in the arid West ignores the unique features of arid landscapes and exceeds the EPA and Corps authority under the CWA: According to a recent Corps' research study:

The Arid West is generally characterized by high temperatures, greater evaporation than precipitation rates, and flashy precipitation events. In the desert locations, evaporation rates can be as much as 15–20 times greater than precipitation because of the high temperatures, high wind velocity, and sparse cloud cover. Precipitation events throughout the region have large temporal and spatial variability. Often, the total rainfall for the year comes from a couple of thunderstorms; a single event may provide intense precipitation in one location and no precipitation a short distance away.

Ordinary High Flows and the Stage–Discharge Relationship in the Arid West Region, p. 19 (Corps 2011). Rainfall events in the arid West are infrequent and the average annual precipitation amounts are significantly less than other areas in the country. For example, in Arizona's lower desert lands, the average annual precipitation ranges from about 2 to 8 inches a year, and ranges from about 5 to 15 inches for Arizona's higher desert lands.³⁶²

The OHWM is an indicia of flow developed for and most defensible in humid climates. It cannot simply be adopted for and uniformly applied to arid systems. The Corps' own studies state as much (as discussed below). Due to soil type, high temperatures, high evaporation rate, and lack of vegetative cover, the soils in the arid West are highly erodible. Consequently, the soils are subject to extensive cutting during single storm events, creating dense, crisscrossing areas of dry arroyos, washes, and other similar erosional features. These dry desert erosional features have the potential to carry water only briefly in direct response to flashy, but infrequent, precipitation events, and are dry the vast majority of the time.³⁶³ In essence, such features are more similar in function to land or uplands than to a water feature.³⁶⁴

By relying primarily on the OHWM as evidence of flow, and failing to identify any defensible limits to EPA and Corps jurisdiction, the proposed rule defines tributaries in a way that will include all dry desert washes in the arid West as categorically jurisdictional. This approach ignores common sense. Under current agency guidance, ephemeral washes in the arid West are only jurisdictional if they have a "significant nexus" to a TNW after consideration of hydrologic factors including volume, duration, and frequency of flow,

³⁶² See, e.g., *Descriptions of Ecoregions of the United States*, (Bailey, U.S. Forest Service, 1995) (see description of Tropical/Subtropical Desert Division (consisting of the Chihuahuan Semidesert Province and the American Semidesert and Desert Province), available at <http://www.fs.fed.us/land/ecosysmgmt/colorimagemap/images/320.html>); Western Regional Climate Center, PRISM Precipitation Maps: 1961-90 at http://www.wrcc.dri.edu/pcpn/westus_precip.gif.

³⁶³ "In addition, [the processes of channelized flow, sheetfloods, or debris flows] are active during only a small percentage of time, with no flow occurring in many watersheds in the Southwest more than 95% of the time." Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States, p. 37 (Corps 2004).

³⁶⁴ In fact, the preamble to the proposed rule refers to such features in the arid West as "dry-land systems" (79 Fed. Reg. at 22202).

proximity to the TNW, average annual rainfall, historic record of water flow, etc. The proposed rule does away with this important limitation on CWA jurisdiction for ephemeral washes, as well as the associated consideration of relevant hydrologic factors. (p. 7-8)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see

<http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. The Arid West OHWM manual was developed to address the identified challenges in low-gradient, alluvial ephemeral/intermittent channel forms, by using other features associated with the limits of the active floodplain (channel), which are easily identified in the field, less variable over time, and statistically linked to the hydrologic and hydraulic parameters of ephemeral and intermittent arid channel forms, to support the traditional OHWM indicators. This method uses stream geomorphology and vegetation response to the dominant stream discharge and represents the most consistent and repeating pattern associated with “ordinary” events representing OHW. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. As described in the summary response 8.1, for a feature to be jurisdictional as a tributary it must have bed and banks and an OHWM and flow directly or indirectly into a (a)(1) – (a)(3) water. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1, 8.1.1, 8.1.2 and the TSD.

- 8.134 3. Not all features with bed and banks and OHWM in the arid West will contribute flow to a TNW: The proposed rule suggests that having a bed and banks, combined with an OHWM, are evidence of flow and would not be present without flow. Thus, the rule suggests that these indicia establish that flow occurs, and because the agencies have not set any further criteria as to amount, duration or frequency of flow, the claimed indicia of flow will be used to define a tributary. The assumptions regarding the presence of beds and banks along with OHWMs, however, do not work in arid systems. First, because of the high erosion potential of arid landscapes and the infrequent but flashy storms that occur in these areas, erosional channels or cuts can appear during a single storm event and persist on the landscape even in the absence of any further flows. These erosional channels or cuts often will appear to have a distinguishable bed and banks and may have OHWM indicators, but are not evidence that the channels actually contribute flow to TNWs. The Corps has described this phenomenon as follows: “commonly observed

physical features [in the arid West] are potentially the result of uncommon processes and ... the effects of the most common condition (channelized flow or no flow at all) do not persist on the landscape.” Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States, p. 37 (Corps 2004).

Consequently, in arid landscapes, what may appear to be ordinary physical characteristics on the land surface, such as the presence of an ephemeral wash, are not reliable indicators of a feature that will convey water in the future, but are solely an indicator that flow may have existed at one time in that discrete location.

In addition, because the presence of a bed and banks and OHWM indicators on a water feature in the arid West is typically the result of an unusual event, such physical characteristics are not representative of ordinary conditions. In fact, the Corps has recognized that because of the propensity for arid West erosional channels to respond to flashy storm events, “the actual location of the OHWM, the one that would be established if the [ephemeral feature] reached an equilibrium condition, should be considered to be at some point below the current position of the physical features normally associated with the OHWM.” Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States, p. 77 (Corps 2004). Consequently, not only is the use of OHWM indicators in the arid West not indicative of the potential to contribute flow, such use also overstates the extent of what actually may be considered as OHWM.

Further, the OHWM is a humid system concept, and the Corps on numerous occasions has noted the challenge of applying the OHWM concept to ephemeral features in the arid West:

- “These factors [high ratio of peak to average annual discharges, rapid responses to rainfall] coupled with the highly variable climate and intense precipitation events, make selection of reliable OHWM field indicators [in the arid West] challenging.” Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States, pp. 6-7 (Corps 2004).
- Precise location of the OHWM is especially difficult in arid regions where the morphological features present on the landscape are possibly the result of: flow events of various magnitude (e.g., high-flow and low-flow channels of compound channels); multiple processes (e.g., sheetfloods and streamflows on discontinuous ephemeral streams); or no longer active processes (e.g., channels abandoned by avulsion on alluvial fans and anastomosing streams). Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States, p. 74 (Corps 2004).
- “Unambiguous morphological features indicative of the OHWM are unlikely under these conditions since channel morphology is in a state of flux, with high water marks being constantly reworked.” Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States, p. 60 (Corps 2004).
- “In the arid West, channel morphology and, as a consequence, the physical features associated with OHWM are frequently the result of extreme floods or short-term, high intensity events.” Distribution of Ordinary High Water Mark

(OHWM) Indicators and Their Reliability in Identifying the Limits of “Waters of the United States” in Arid Southwestern Channels, p. 1 (Corps 2006).

- “OHWM indicators, originally intended to define the limits of OHW in tidal and navigable waters, are confounded by the drastic differences in the climate, geology, soil, and vegetation characteristics in which arid streams operate.” Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of “Waters of the United States” in Arid Southwestern Channels, p. 2 (Corps 2006).
- “With dominant, or effective, discharge in the arid west being “flashy”(intermittent and extreme), the overall response of the channel reflects these conditions. Likewise, the distribution of OHWM indicators follows a similar response to these regional conditions. There appears to be no direct correlation between the location of OHWM indicators and the inundation areas associated with specific recurrence interval flood events. The location of OHWM indicators seems to have two patterns: 1) 74% of the indicators are located within the bankfull and active floodplain channels and 2) the indicators are not associated with any return interval event or with physical channel features found in the field.” Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of “Waters of the United States” in Arid Southwestern Channels, p. 14 (Corps 2006).
- “The most problematic ordinary high water (OHW) delineations are associated with the commonly occurring ephemeral/intermittent channel forms that dominate the Arid West landscape. The climate of the region drastically influences the hydrology, channel-forming processes, and distribution of OHWM indicators such that delineations can be inconsistent (over space and time) and problematic.” A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, p. 1 (Corps 2008).
- “Establishing the extent of the OHWM is often difficult because of the variable conditions that the streams regularly endure. Arid streams are frequently impacted by short-term, high-intensity or “flashy” events that occur between periods of drought.” Vegetation and Channel Morphology Responses to Ordinary High Water Discharge Events in Arid West Stream Channels, p. 1 (Corps 2009). See also Ordinary High Flows and the Stage–Discharge Relationship in the Arid West Region, p. 1 (Corps 2011).
- “In this study we found no direct association between OHWM indicators and channel type or landscape position. These findings suggest that OHWM indicators are distributed randomly throughout the landscape and are not related to specific channel characteristics.” Survey of OHWM Indicator Distribution Patterns across Arid West Landscapes, p. 17 (Corps 2013).

Although application of the OHWM concept is likely a useful indicator in humid areas because it will represent equilibrium conditions and evidence of flow, application of the OHWM concept to ephemeral washes in the arid West is laced with uncertainty. Further, even if OHWM indicators can be identified for an ephemeral drainage, this does not mean that there is actual physical flow or evidence of any other type of potential

connection to potential downstream TNWs. Although presence of OHWM indicators may be one of many factors that could be considered in determining whether ephemeral drainages are jurisdictional, the agencies need to establish some bright lines as to magnitude, duration and frequency of flow, along with distance to a TNW, and other relevant factors such as potential chemical or biological connections. In the absence of such site-specific data demonstrating an actual meaningful connection between ephemeral drainages and the physical, chemical and biological integrity of TNWs, the agencies have no authority to attempt to apply their proposed definition of “tributary” to ephemeral drainages in the arid West. (p. 9-12)

Agency Response: See response to the above comment also from Arizona Mining Association (Doc. #13951) above, summary response 8.1.2 above, and TSD section 7.A.

Freeport-McMoRan Inc. (Doc. #14135, #14135.1 and #14135.2)

8.135 IV. Not all features in the arid west with a bed, banks, and ordinary high water mark will contribute flows to a traditional navigable water.

The Proposed Rule concludes that a bed, banks, and ordinary high water mark are the appropriate physical indicators of a tributary “because these features are generally physical indicators of flow.”³⁶⁵ Again, in the arid west, this conclusion is simply incorrect. In arid landscapes with highly erodible soils and minimal vegetation, such features can be formed by a single event and will be sustained for very long periods of time even if there is no additional flow.³⁶⁶ In general, the use of the ordinary high water mark is likely a sensible indicator because in humid landscapes it will represent an equilibrium condition.³⁶⁷ In contrast, in arid systems “what appear to be ‘ordinary’ conditions in fact most often reflect distant, historic events that neither represent contemporary conditions nor do they represent any sort of equilibrium conditions.”³⁶⁸ As detailed in the attached Technical Comments, the Corps’ own evaluations of the ordinary high water mark in the arid west demonstrates that there is no direct relationship between ordinary high water marks that exist on the landscape and the position and location of channels in response to rain events.³⁶⁹ Plainly, the “ordinary” high water marks on arid west lands do not convey any information about where stormwater will flow in the next rain event. Therefore, it is entirely possible that “ordinary” high water marks that exist today will not actually contribute flows to a traditional navigable water in a future storm event. In addition, even when flows may occur, these flows do not constitute “ordinary high water.”

The Science Advisory Board’s recent letter to EPA suggesting that the definition of tributary be modified to “bed, banks, and evidence of flow” offers no improvement in this

³⁶⁵ 79 Fed. Reg. at 22,202.

³⁶⁶ Technical Comments at 2.

³⁶⁷ Technical Comments at 7.

³⁶⁸ *Id.*

³⁶⁹ *Id.* at 7-10.

regard.³⁷⁰ According to the SAB, this revised definition is appropriate because “[a]n ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark.”³⁷¹ However, as the SAB correctly notes, “significant nexus” is a legal, not a technical term,³⁷² and this proposed definition disregards the possibility that these characteristics may be present in gullies and rills in the arid west landscape. Were the Agencies to adopt the SAB’s proposed definition of “tributary” there would be absolutely no means by which to distinguish between jurisdictional tributaries and non-jurisdictional gullies and rills, leading to an inevitable overreach beyond the Agencies’ statutory authority under the Clean Water Act.

Even those channels that do convey water may not have a sustained hydrologic connection that continues all the way to the traditional navigable water that gives rise to the Proposed Rule’s assertion of jurisdiction. As explained in the attached Technical Comments, the channels found in the arid west tend to be “losing streams.” This means that much of the water that flows in these channels is lost to infiltration and evaporation before it travels a great distance.³⁷³ For example, in the portion of the Santa Cruz River evaluated in the technical comments, groundwater is on average 400 feet below the surface.³⁷⁴ As a result, even if there is flow in headwater tributaries, it is unlikely that such flow makes it all the way to the downstream traditional navigable water: it is more likely lost to groundwater infiltration. As a result, there is no surface flow to create a continuous hydrologic connection to the traditional navigable water. Where this is the case, the Proposed Rule’s assertion of jurisdiction based on the fact that “tributaries” contribute flow to traditional navigable waters is flawed in many arid west systems.

Furthermore, the “case study” of the San Pedro River does not represent most arid west channel systems. As set forth in the attached technical comments, the San Pedro River cannot be assumed to be a typical arid river system.³⁷⁵ First, the San Pedro River has geologic characteristics that are distinct from other river systems in the arid west that cause it to experience more runoff than other systems.³⁷⁶ Second, an analysis of the San Pedro River and the nearby Santa Cruz River—which drains a watershed of similar size—shows significant differences in river flows.³⁷⁷ Examining data from 1997 to 2013, the San Pedro River averages 104 days per year with no flow while the Santa Cruz River experiences 326 days with no flow.³⁷⁸ This more than three-fold difference in the number of no-flow days means that the San Pedro River system cannot possibly be representative of the nearby Santa Cruz for the purposes of establishing connectivity. An analysis of U.S. gauge data from other rivers with similar drainage areas in Arizona shows that the

³⁷⁰ Letter from Dr. David T. Allen, Chair, Science Advisory Board, to Gina McCarthy, Administrator, U.S. EPA (Sept. 17, 2014), *available at* http://www.eenews.net/assets/2014/09/30/document_gw_03.pdf.

³⁷¹ *Id.* at 2.

³⁷² *Id.* at 4.

³⁷³ Technical Comments at 12.

³⁷⁴ *Id.* at 14.

³⁷⁵ *Id.* at 13.

³⁷⁶ *Id.* at 11.

³⁷⁷ *Id.* at 14.

³⁷⁸ *Id.* at 15.

number of no-flow days ranges from 0 to 347,³⁷⁹ suggesting that the one-system-fits-all approach advanced in the Proposed Rule’s near-exclusive reliance on the San Pedro River System cannot be adequate to establish a significant nexus for “tributaries” across the arid west.

As a result the Agencies cannot base their conclusion that arid west channels act as tributaries that contribute flow to traditional navigable waters on study of the San Pedro River alone. To do so would be to regulate these features as tributaries based on a speculative and potentially insubstantial connection, in violation of the scope of Clean Water Act jurisdiction as articulated by Justice Kennedy in *Rapanos*. (Doc. #14135, p. 5-6)

Agency Response: See response to the above comment from Arizona Mining Association (Doc. #13951) above, summary response 8.1.1 and 8.1.2 above, TSD section 7.A, and the final Connectivity Report sections 3 and B.5.

- 8.136 **1.2. High Water Marks Are Not “Ordinary” in Arid Landscapes:** Distinguishing between tributaries and gullies is, at best, imprecise. In humid landscapes, we may identify the starting point of a tributary based on the location on the landscape where unique, aquatic, lotic (i.e., flowing water) processes begin to occur and characteristic stream biotic communities begin to appear.¹ However, in arid landscapes, characteristic biotic communities and characteristic biochemical or other lotic processes are often lacking (discussed in detail below). Without characteristic biotic or chemical indicators, it is typical for regulatory agencies to use hydrologic and/or geomorphic indicators from which to estimate flow frequencies and durations. Again, this approach is useful in humid landscapes where the regularity of flows leaves “tell-tale” features on the landscape. However, as we will show below, in arid landscapes particularly at the upstream end of the channel network, flows are extremely variable and leave widely variable and difficult to discern features on the landscape. Developing hydrologic or geomorphic indicators from which to estimate flow regularity across the arid southwestern US is beyond the current state-of-the-science. As we will show below, arid channels are formed and bear the features of very infrequent hydrologic events; that is, channels are formed by non-normal events and the high water marks are often not left by ordinary flows. In the proposed rule, this reference level of flows for active channels is defined as the ordinary high water mark (OHWM). Quite simply, the OHWM is a snapshot feature that may be relevant for humid landscapes, but is not relevant in arid landscapes. It does not establish that flow occurs with a frequency or duration sufficient to support jurisdiction. (Doc. #14135.1, p. 2)

Agency Response: See response to the above comment from Arizona Mining Association (Doc. #13951) above, summary response 8.1.2 above, and TSD section 7.A.

- 8.137 The problem is that the regulatory assumption for how the OHWM will be used, and its reality in arid landscapes, are diametrically opposed. The OHWM is defined as “the line on the shore established by the fluctuations of water and indicated by physical

³⁷⁹ *Id.* at 12-13, 15.

characteristics such as a clear natural line impressed on the bank, shelving, changes in the character of the soil, disruption of terrestrial vegetation or the presence of litter and debris.”³⁸⁰ Over the past decade, the Corps’ research laboratories have reviewed the literature to develop potential OHWM indicators for arid regions,³⁸¹ developed a field guide for identifying OHWM in arid regions, and tested the viability of their OHWM indicators in the field.³⁸² This development of indicators and their testing in arid regions has shown the difficulty in actual application. In one study of OHWM indicators conducted at the reach scale, Corps researchers reported that OHWM indicators had no correlation with any recurrence interval of flood events, nor were they associated with any physical geomorphic channel feature at the reach scale.³⁸³ A subsequent study by the Corps conducted at a broader scale concluded that, “In this study we found no direct association between OHWM indicators and channel type or position location. These findings suggest that OHWM indicators are distributed randomly throughout the landscape and are not related to specific channel characteristics.”³⁸⁴

Even when (or if) a consistent, diagnostic OHWM can be identified, that indicator would in fact be of an unusual event much larger than could be reasonably considered “ordinary.” Because arid channels are shaped by rare events, and are not reshaped by subsequent smaller events, the morphological features of a landscape inevitably represent rare, large, unordinary conditions. Or, as stated by the Corps (emphasis added): “Given that arid-region rivers generally respond to large floods by dramatically widening their banks, the limits of the geomorphically effective event will likely be much more extensive than the limits of a low-flow channel inset into a compound channel. Consequently, if the OHWM is set at the outer limits of the extreme event, the designated “waters” will encompass a much greater area than is occupied by more ordinary flows.”³⁸⁵ Or more directly related to defining and identifying OHWM indicators: “Therefore, the actual location of the OHWM, the one that would be established if the river reached an equilibrium condition, should be considered to be at some point below the current position of the physical features normally associated with the OHWM.”³⁸⁶ The physical features associated with the OHWM in arid regions will, in fact, be the result of extreme events, and thus not represent ordinary conditions. Quite simply, if a set of consistent, defensible OHWM features could be identified, that would correspond to an area beyond the realistic extent of jurisdictional waters. With respect to the proposed rule, an OHWM in arid landscapes cannot be used to assert a tributary; rather a consistent OHWM would potentially be the most extreme upstream limit to potential jurisdiction and not representative of ‘ordinary’ conditions. (Doc. #14135.1, p. 8-9)

³⁸⁰ CFR Part 328.3

³⁸¹ See generally Lichvar and Wakeley, 2004

³⁸² See generally Lefebvre, L., R. Lichvar, and K. Curtis, 2013. Survey of OHWM Indicator Distribution Patterns across Arid West Landscapes. ERDC/CRREL TR-13-2.

³⁸³ See generally Lichvar, R.W., D. Finnegan, M. Ericsson and W. Ochs, 2006. Distribution of Ordinary High Water Mark (OHWM) Indicators and their Reliability in Identifying the Limits of “Waters of the United States” in Arid Southwestern Channels. ERDC/CRREL TR-06-5.

³⁸⁴ Page 17 in Lefebvre et al., 2013.

³⁸⁵ Page 74 in Lichvar, R.W., and J.S. Wakeley, 2004.

³⁸⁶ Page 77 in Lichvar and Wakeley, 2004.

Agency Response: See response to the above comment from Arizona Mining Association (Doc. #13951) above, summary response 8.1.2 above, and TSD section 7.A.

- 8.138 The Draft Proposed Rule defines jurisdictional "tributaries" using the Corps definition of "ordinary high water mark."³⁸⁷ That concept---created for waters that are "navigable-in-fact"---is excessively broad as applied to the arid southwest where the land is crisscrossed with lines or cuts on the ground caused by water flow during infrequent but high intensity storms. The mere presence of physical signs that water flows across desert lands from time to time is insufficient to establish CWA jurisdiction. (Doc. #14135.2, p. 2)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

Wyoming Mining Association (Doc. #14460)

- 8.139 ...Corps experts have said that the term OHWM is one of the most inconsistent and unclear terms in the CWA regulations.³⁸⁸ The proposed rule provides no further clarification regarding the term OHWM and as such will only lend further uncertainty in the delineation of tributaries. The current definition is problematic as many of the physical indicators used to define the OHWM may occur wherever land has water flowing across it, regardless of frequency or duration. Many of the indicators (e.g., changes in character of the soil, destruction of native terrestrial vegetation, presence of litter and debris) can be observed in very small drainages and even in upland areas far removed from actual waterways, especially in arid areas in Wyoming. (p. 5-6)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the

³⁸⁷ 33 C.F.R. § 328.3(e).

³⁸⁸ Mathew K. Mersel, U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory, Development of National OHWM Delineation Technical Guidance (Mar. 4, 2014)

physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see summary response 8.1 and 8.1.2 above and the TSD.

Devon Energy Corporation (Doc. #14916)

8.140 ...the Corps has been developing guidance on identifying an Ordinary High Water Mark (“OHWM”) that historically has defined the lateral extent of the federal jurisdiction in non-tidal WOTUS. OHWM is now used as criteria in defining a tributary in the Proposed Rule. While OHWM provides some degree of technical guidance, the Corps also recognizes that OHWM is a vague definition leading to inconsistent interpretations. Also as previously mentioned, an OHWM can be found in many ephemeral streams and therefore its use is inconsistent with the plurality imitation of jurisdiction to relatively permanent streams. So if OHWM remains as criteria to establish WOTUS, then it must be used in combination with the presence of both a define bed and bank to allow for a more correct application of the opinions in the *Rapanos* majority. In addition, Devon recommends that OHWM should generally be represented by a physical mark on the landscape. OHWM should be fairly stable over time and should have water in it at the high water mark level at a “1.5 or 2 year return interval as suggested by the Corps Engineer Research and Development Center³⁸⁹. (p. 5-6)

Agency Response: The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water cannot qualify as a tributary. The final rule also does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors.

National Mining Association (Doc. #15059)

8.141 To the extent the Agencies move forward with the current proposal, they must adopt the following changes in any final rule:

... 6) The Agencies should revise their approach to ephemeral waters by:

...

d. Making the August 2014 OHWM guidance documents³⁹⁰ part of the present rulemaking and providing the public with the opportunity for comment prior to the promulgation of any final “waters of the United States” rule in light of the potential implications those documents will have on the implementation of the rule and the scope of CWA jurisdiction.

... (p. 3, 5, 6)

³⁸⁹ Presentation by Matthew K. Mersel, U.S. Army Engineer Research and Development Center, Development of National OHWM Delineation Technical Guidance (March 4, 2014).

³⁹⁰ *Id.* and also Mersel K. Matthew, et al., August 2014, “A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification.”

Agency Response: The final rule also does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

National Sustainable Agriculture Coalition (Doc. #15403)

- 8.142 The proposed rule defines ordinary high water mark (OHWM) by reference only³⁹¹, directing readers to 33 CFR 328.3(e) and the following definition:

“The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”³⁹²

The EPA and the Corps should incorporate this definition into the proposed rule. Failing to include this definition in the rule requires readers to dig deeper for a term that is integral to the rule’s implementation—an unnecessary hoop through which the regulated community must jump. This simple solution reiterates and solidifies one of the criteria for the definition of tributary, and could help alleviate the regulated community’s concerns that temporary, precipitation-induced hydrologic features lacking an OHWM would be jurisdictional.

Recommendation: Include the definition of ordinary high water mark in the proposed rule to provide greater clarity and easier access to key terms. (p. 3-4)

Agency Response: As the commenter recommends, the final rule adds the definition of OHWM that existed in Corps regulations to EPA regulations.

Halliburton Energy Services, Inc. (Doc. #15509)

- 8.143 ...the notion that using the OHWM as a defining characteristic provides clarity is belied by the difficulty that actually exists in the field in defining features with an OHWM.³⁹³ Similarly, while an exemption for gullies, swales and other erosional features is provided, the challenges of distinguishing these features from ephemeral streams - challenges acknowledged by the Agencies - further support the position that ephemeral streams

³⁹¹ Proposed Rule at 77.

³⁹² 33 C.F.R. § 328.3(e).

³⁹³ See e.g., Matthew K. Mersel and Robert W. Lichvar, U.S. Army Engineer Research and Development Center, A Guide to Ordinary High Water Mark Delineation in Non-Perennial Streams in the Western Mountains, Valley and Coast Region of the United States (August 2014) at p. 1-2 (“OHWM delineation in non-perennial [i.e., intermittent and ephemeral] streams can be especially challenging.”).

should not automatically be jurisdictional. Moving a fuzzy line "upstream" to cover more landscape features under federal jurisdiction does nothing to provide greater clarity for the regulated community but does create more process and regulatory burden for landowners and businesses without any assurance of meaningful environmental benefit. (p. 4)

Agency Response: The final rule includes several changes to provide the additional clarity requested. The changes include identifying the specific functions to be accessed in a significant nexus evaluation, providing more exclusions as part of the rule text for the first time, and reducing the number of case-specific determinations of jurisdiction required. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water cannot qualify as a tributary. The final rule also does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

Pennsylvania Grade Crude Oil Coalition (Doc. #15773)

8.144 How will an OHWM be determined? Delineation of OHWM is open to subjective interpretation. The identification of the OHWM limits will be influenced by uncharacteristically high rainfall events and are seasonably difficult to identify. (p. 10)

Agency Response: The final rule also does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Dominion Resources Services, Inc. (Doc. #16338)

8.145 ...To the extent the agencies move forward with the proposal, we make the following recommendations:

...

- The proposed definition of “tributary” relies on the term “ordinary high water mark” (OHWM). The current definition of OHWM is unclear and has led to inconsistent interpretations in the field. While the Corps has recently issued guidance regarding the definition of OHWM questions remain regarding the consistency of this guidance with the regulatory definition of OHWM in 33 CFR 328.3(e). With the inclusion of all tributaries as WOTUS, the definition of OHWM must be further clarified in order to provide consistency and certainty.

We request that prior to completion of any rulemaking, the Corps finalize revised guidance regarding the determination of “ordinary high water mark” that is consistent with the regulatory definition in 33 CFR 328.3(e) and considers the term’s use in the definition of “tributary”. (p. 8)

Agency Response: The final rule also does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Washington Cattlemen’s Association (Doc. #3723)

- 8.146 The WCA disagrees with the EPA's definition of a "tributary". The WCA believes that the EPA should not have the ability or the authority to regulate a water body if EPA deems there is a "bed, bank and an ordinary high water mark. The CWA was never intended to allow the Federal Government to have authority over intermittent or ephemeral streams. (p. 3)

Agency Response: See the summary agency responses 8.1, 8.1.1, and 8.1.2 for details on the agencies long standing practices and authorities regulating intermittent and ephemeral streams.

Oregon Cattlemen’s Association (Doc. #5273.1)

- 8.147 By including the caveat that "tributaries" do not necessarily feature a bed, banks, and ordinary high water mark, the Agencies have extended its definition beyond its natural meaning. At a minimum, the Agencies should modify its proposed definition of "tributary" to reflect the natural definition of the word. (p. 4)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

National Farmers Union (Doc. #6249)

- 8.148 The proposed rule defines " tributary" as "a water physically characterized by the presence of a bed and banks and ordinary high water mark...which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(l) through (4) of this section." In order to provide more clarity to the regulated community, the

agencies should note in the final rule that these features take years to form. This should mitigate concern that temporary accumulations directly related to isolated rain events will be considered jurisdictional. The agencies should add further clarifying language, including but not limited to descriptive examples of water and events that are not considered tributaries, in the final rule in order to ensure these distinctions are well understood in the regulated community.

The preamble notes that existing Corps regulations define the ordinary high water mark (OHWM) "as the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the banks, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. 33 CFR 328.3(e)." The agencies should incorporate this definition within the final rule so that the regulated community can refer to one place for as much of the information that is needed to maintain compliance as possible.

These points should ensure that the definition of "tributary" in the proposed rule will not bring any water into jurisdiction that would not be found jurisdictional under the "significant nexus" test that is applied to "other waters." If incorporated, they would create regulatory certainty and lessen administrative burden by settling jurisdiction for waters that would have been subject to a case-by-case determination but ultimately found jurisdictional. (p. 3)

Agency Response: As the commenter recommends, the final rule adds the definition of OHWM that existed in Corps regulations to EPA regulations. The final rule also clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. The Final Rule also contains exclusions for erosional features that do not meet the definition of tributary, such as gullies, rills, and non-wetlands swales.

Alameda County Cattlewomen (Doc. #8674)

- 8.149 The agencies have excluded consideration of flow, making the definition completely dependent on land features, not actual water. And even with regard to the land features, the agencies contradict themselves. The agencies state that a tributary needs a bed, bank and OHWM but then turned around in the next sentence and contradicted themselves, saying that in fact a regulator does NOT need to find a bed, bank or OHWM to find a jurisdictional tributary. (Proposed Rule at 22241). Again, these contradictions only provide added confusion. (p. 8)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional "waters of the United States" as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

8.150 ...considering the confusion and inconsistent application of distinguishing an OHWM, as noted by Justice Kennedy in *Rapanos*, making this distinction is not helpful.³⁹⁴ The agencies cannot include an indicator like OHWM that is inconsistently applied and can change as a matter of policy without notice and comment. Most recently, the Corps released new guidance documents for determining OHWM.³⁹⁵ If the definition and determination can be so easily changed without public input, it provides little clarity and certainty to the regulated community. ACCW request the agencies recognize that OHWM is not an adequate indicator, ephemeral drainages can be recognized as gullies by many livestock producers and the agencies should include all such features in their definition of excluded gullies. (p. 11)

Agency Response: The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Bed and banks can be naturally formed by repeated flow of water or artificially constructed out of rock, concrete, etc, however both bed and banks and another indicator of OHWM must be found before a water can be called a tributary under the rule. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see

<http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. While the Rule does contain exclusions for ephemeral features that do not meet the definition of tributary, such as gullies, rills, and non-wetland swales, ephemeral waters that have the physical characteristics of a tributary, including bed and banks and OHWM, are not excluded from jurisdiction. The preamble to the final rule and the Compendium 7 provide in depth discussion of each of the exclusions.

³⁹⁴ Rapanos, J. Kennedy, at 24 (In describing the application of the Corps' OHWM criteria, "[a]ssuming it is subject to reasonably consistent application, but see U.S. General Accounting Office, Report to the Chairman, Subcommittee on Energy Policy, Natural Resources and Regulating Affairs, Committee on Reform, House of Representatives, Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction, GAO-04-297 pp. 3—4 (Feb. 2004), <http://www.gao.gov/new.internets/d04297.pdf> (noting variation in results among Corps district offices)").

³⁹⁵ U.S. Army Corps of Engineers, A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States, August 2014 (available at <http://acwc.sdp.sirsi.net/client/search/asset/1036027>; U.S. Army Engineers, A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification, August 2014 (available at <http://acwc.sdp.sirsi.net/client/search/asset/1036026>).

Glenn County Rangeland Association (Doc. #12724)

8.151 ...the proposed definition of "tributary" that includes anything connected to otherwise jurisdictional water that has a bed, bank and ordinary high water mark (OHWM) is so vague it can be interpreted just about any way one wishes on the ground in rangeland areas. On rangeland, there usually are no established OHWMs. Almost all water flow at best, are seasonal and intermittent. (p. 1)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Colorado Farm Bureau (Doc. #12829)

8.152 The Agencies have proposed an overly broad "tributary" definition focusing on the presence of a bed, bank, ordinary high water mark (OHWM) and any minimal amount of flow that eventually reaches (directly or through any number of other paths and channels) to a creek or stream that in turn ultimately flows to a traditional navigable water. See 79 Fed. Reg. at 22,263.³⁹⁶ The terms "bed" and "bank" simply mean land with lower elevation in between lands of higher elevation. This includes land with only subtle changes in elevation-any land where rainwater naturally channels as it flows downhill. All but the flattest terrain will have natural paths of lower elevations that water will follow. (p. 6)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above. In addition the terms bed and banks have been further explained in the preamble.

Bayless and Berkalew Co. (Doc. #12967)

8.153 **The rule is ambiguous with overly broad definitions which contradict the agricultural exemptions.**

The definition of "tributary" in the proposed rule is very broad to include any feature with a bed and bank and ordinary high water mark that contributes flow in any amount either directly or through ditches - the amount, frequency, or duration of flow does not limit the definition...The mere presence of gravity and slope results in every flood event in Arizona, no matter how significant, as likely to leave a high water mark and every "tributary" either connecting directly or indirectly to another water at some point in time. (p. 2-3)

Agency Response: The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet

³⁹⁶ The rule would provide: "The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section."

this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. While the Rule does contain exclusions for ephemeral features that do not meet the definition of tributary, such as gullies, rills, and non-wetland swales, ephemeral waters that have the physical characteristics of a tributary, including bed and banks and OHWM, are not excluded from jurisdiction. The preamble to the final rule and the Exclusion Compendium provide in depth discussion of each of the exclusions.

North American Meat Association and American Meat Institute (Doc. #13071)

- 8.154 The proposed definition of tributary is problematic because it relies on vague language and confusing concepts. Specifically, the definition is tied to the OHWM. Numerous experts, including some from the Corps, have stated that OHWM is an inconsistent and ambiguous term.³⁹⁷ Inconsistent interpretations have led to varying indicators and delineation practices in the field.³⁹⁸ The proposed rule offers nothing new regarding OHWM, which is problematic because many OHWM physical indicators can occur wherever land may have water flowing across it, regardless of frequency or duration. OHWM indicators can be found in small drainages and upland areas, especially in arid areas.³⁹⁹ The proposed definition of "tributary" cannot provide the clarity the agencies assert when the OHWM concept is a well-known source of confusion for regulators. (p. 6)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

National Chicken Council, National Turkey Federation, and U.S. Poultry & Egg Association (Doc. #14469)

- 8.155 In defining a tributary as a drainage feature having a bed, bank and an ordinary high water mark (OHWM), the agencies want the public to believe that the assertion of CWA authority over “tributaries” is appropriate. This assertion fails to recognize the unnecessary inclusion of numerous other land features that fall within the definition of “tributary,” such as those areas with drainage features that do not resemble any stream, brook or creek. Instead, the agencies advance new jurisdictional authority by introducing ambiguity and vague concepts of connectivity. The agencies justify this effort to broaden the boundaries of what the agencies consider a tributary because in “some regions of the

³⁹⁷ Matthew K. Mersel, U.S. Army Corps of Engineers, Cold Regions Research and Engineering Laboratory, Development of National OHWM Delineation Technical Guidance (Mar. 4, 2014), available at http://insideepa.com/index.php?option=com_iwfile&file=apr2014/epa2014_0760.pdf.

³⁹⁸ The OHWM standard is so confusing that the agencies are planning to issue guidance to redefine OHWM metrics and standardize the concept’s implementation. Bridget DiCosmo, InsideEPA.com, Agencies’ Workgroup Eyes Changes to Key Delineation Guides (Apr. 30, 2014). But revision of OHWM—a fundamental term for the proposed tributary definition—should be part of this proposed rulemaking, not done as part of a separate guidance without public involvement.

³⁹⁹ U.S. Army Corps of Engineers, A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, at 20 (Lichvar and McColley 2008), available at <http://www.dtic.mil/dtic/tr/fulltext/u2/a486603.pdf>.

country where there is a very low gradient, the banks of a tributary may be very low or may even disappear at times.” 79 Fed. Reg. at 22202. This appears to be a thinly veiled justification to protect human health and the environment, without first demonstrating any harm that must be eliminated or prevented. (p. 5)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Minnesota Farm Bureau (Doc. #14653)

8.156 Minnesota Farm Bureau has significant concerns with the limitless jurisdiction the proposed rule provides the Agencies. Specifically,

...

- ...the rule uses the unclear concept of ordinary high water mark, as well as bed and bank, as the key identifiers for tributaries. This would include land with only subtle changes in elevation, where any land where rainwater naturally channels as it flows downhill;... (p. 2)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Irvine Ranch Water District (Doc. #14774)

8.157 The proposed rule, in making all adjacent waters jurisdictional by rule, will have the unintended consequence of greatly expanding federal jurisdiction and result in widely varied applications of the rule. The term "neighboring" defines adjacent waters to include riparian areas, bed and bank, and/or floodplains. This differs substantially from the Corps' traditional jurisdiction of an ordinary high water mark. **IRWD asks that the Corps' jurisdiction of an ordinary high water mark specifically be retained to determine what features are or are not jurisdictional instead of a broad definition that covers multiple types of features that may or may not have an ordinary high water mark. The rule notes that uplands within floodplains are never WOTUS, but without requiring the physical presence of a defined ordinary high water mark, jurisdictional areas could easily be expanded.**

Furthermore, the entire structure of the Corps' permitting process is based on the concept of an ordinary high water mark. IRWD cautions that to the extent CWA jurisdiction is broadened, either by rule or by practice, the Nationwide Permit Program could be rendered useless. We are also concerned that the proposed rule's changes could expand the limit of the Corps' jurisdiction to include the bed and bank of a channel, tributaries that do not have an ordinary high water mark, neighboring waters that do not have an ordinary high water mark, areas with adjacent riparian vegetation, and areas within a mapped floodplain. The Corps' traditional jurisdiction should be retained, which was the goal of the proposed rule. The proposed rule should be amended to ensure that it will not unintentionally broaden federal jurisdiction. (p. 5-6)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if

one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

California Association of Winegrape Growers (Doc. #14593)

8.158 B. Improper Expansive Interpretation of the Tributaries Standard

The Proposed Rule categorically asserts jurisdiction broadly over all tributaries with no site-specific analysis required. By rule, anything with a bed, bank, and ordinary high water mark which may directly or indirectly contribute flow to a jurisdictional water, without regard to its impact on downstream waters. Further, again by rule, wetlands, lakes, and ponds are tributaries even if they lack beds, banks, or ordinary high water marks. (79 Fed. Reg. 22201 (April 21, 2014).) The Agencies’ decision to use the presence of an ordinary high water mark as one of the factors for considering a water to be a tributary under Kennedy’s standard is directly counter to Kennedy’s clear directive. Kennedy clearly stated:

As noted earlier, the Corps deems a water a tributary if it feeds into a traditional navigable water (or a tributary thereof) and possesses an ordinary high-water mark, defined as a “line on the shore established by the fluctuations of water and indicated by [certain] physical characteristics,” § 328.3(e). This standard presumably provides a rough measure of the volume and regularity of flow. Assuming it is subject to reasonably consistent application, it may well provide a reasonable measure of whether specific minor tributaries bear a sufficient nexus with other regulated waters to constitute “navigable waters” under the Act. *Yet the breadth of this standard--which seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carrying only minor water volumes toward it--precludes its adoption as the determinative measure of whether adjacent wetlands are likely to play an important role in the integrity of an aquatic system comprising navigable waters as traditionally understood.* Indeed, in many cases wetlands adjacent to tributaries covered by this standard might appear little more related to navigable-in-fact waters than were the isolated ponds held to fall beyond the Act's scope in SWANCC. (*Rapanos, supra*, at 780-782, citations omitted, emphasis added.)

As evidenced in the above language, Kennedy determined that the inconsistent application of the ordinary high-water mark *precludes* its use as a factor for determining if a waterbody meets the definition of a tributary. (*Ibid.*) By disregarding the directive, the Proposed Rule’s reliance on the ordinary high-water mark is not a reasonable measure of whether a tributary processes a significant nexus with a traditional navigable water. (p. 10-11)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer

defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary response 8.1 at the start of this compendium and the TSD.

Monarch-Chesterfield Levee District, St. Louis, Missouri (Doc. #14904)

8.159 **b. The definition proposed for "tributary" creates uncertainty and relies on newly released Technical guidance for identifying tributaries.**

The proposed definition of "tributary" — which requires only a bed, banks and an ordinary high water mark ("OHWM") — will create uncertainty in many instances. While a bed, banks and OHWM can be easily identified in some locations, in others those features are not evident, especially an OHWM. The proposed rule would nevertheless make a tributary a "waters of the U.S." if, at any upstream location, a bed, banks and OHWM can be identified. Such a broad definition will potentially require examination of miles of upstream tributary features, quite possibly beyond areas that are accessible either due to legal or physical constraints. The proposed rule's reliance on being able to define and identify an OHWM to determine jurisdiction over tributaries does not provide clarity as there has not been established a reliable and repeatable means to identify an OHWM. Just shortly after the proposed rule was published in April 2014, the Corps of Engineers released new technical guidance (ERDC/CCREL TR-14-13, *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*) for delineating the OHWM in non-perennial streams in the Western U.S. The EPA has stated publicly that similar guidance is being developed for other regions. The Corps also released in August 2014, (ERDC/CCREL TR-14- 12, *A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification*) a report with the objective of determining the "most appropriate factors to include in a national OHWM classification." As the factors to be used in identifying OHWM's have yet to be determined it is blatantly false to claim that the proposed rule provides clarification and does not expand jurisdiction. (p. 3-4)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The final rule does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. The documents identified in the comment were developed to help the public and field staff understand location site conditions and consistently

identify the OHWM. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters.

North Carolina Farm Bureau Federation (Doc. #15078)

8.160 The terms "bed" and "bank" simply mean land with lower elevation in between lands of higher elevation. This includes land with only subtle changes in elevation-any land where rainwater naturally channels as it flows downhill. All but the flattest terrain will have natural paths of lower elevations where water will follow. The Agencies further state that the upper limit of a tributary "is established where the channel begins" which is difficult enough for the Corps itself to discern-let alone a typical farmer. In addition, if the "upper limit" of a tributary is "where the channel begins," then each farmer or rancher with any "channels" on his lands (land with lower elevation in between lands of higher elevations) presumably must investigate the entire length of that channel, both up-gradient and down-gradient, even beyond his own property lines, to determine whether an OHWM can be found.

Equally obtuse is the Agencies' statement that "a tributary is a longitudinal surface feature that results from directional surface water movement and sediment dynamics demonstrated by the presence of bed and banks, bottom and lateral boundaries, or other indicators of [ordinary high water mark]." (See 79 Fed. Reg. at 22,202.) Even a bed and bank have become unnecessary to call water a "tributary"-later in the proposal, the Agencies announce that "in some regions of the country where there is a very low gradient, the banks of a tributary may be very low or may even disappear at times." This example, and countless others, demonstrate the extreme breadth and subjectivity inherent in the proposed "tributary" definition. The proposed rule would regulate activities on land on which water channels and flows when it rains, so long as the flowing water leaves a mark on the land. It may even regulate land where there is no visible channel. If the concept of bed, bank and OHWM is retained, under no circumstances should waters that do not have all three of these features be considered as tributaries. (p. 7)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional "waters of the United States" as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the

limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

- 8.161 Furthermore, "ordinary high water mark" is a term that encompasses any physical sign of water flow, such as changes in the soil, vegetation or debris. When rainwater flows through any path on the land, it tends to leave some sort of mark, even if flows are infrequent. The definition of OHWM is vague, ambiguous and inconsistently applied. Because there are inconsistent interpretations of the OHWM concept, as well as inconsistent field indicators and delineation practices, identifying precisely where the OHWM ends is simply a matter of judgment. Therefore, reliance on this term provides neither certainty nor clarity to the regulated public and unreasonable discretion to the regulators.

The Agencies claim the proposal is faithful to key Supreme Court decisions, yet the Supreme Court admonished the Agencies' for using the OHWM indicator. The plurality opinion in *Rapanos v. United States* criticized the use of the OHWM as an indicator of jurisdiction because it "extended the waters of the United States to virtually any land feature over which rainwater or drainage passes and leaves a visible mark-even if only the presence of litter and debris." 547 U.S. 715, 725 (2006) (internal quotations omitted). Justice Kennedy disparaged the OHWM as providing "no such assurance" of a reliable standard for determining a significant nexus. *Id.* at 780-81 (Kennedy, J., concurring in the judgment). If a determination that a particular channel has an OHWM is so broad and subjective, how can a farmer know whether a particular low area across his land is simply land or instead is a regulated ephemeral tributary? (p. 8)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above, TSD sections 1.C, 2D, and 7.A, and summary response 8.1.2 above.

Snell & Wilmer L.L.P. (Doc. #15206)

- 8.162 ...the Proposed Rule defines "tributaries" as "a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water. . . ." In Arizona, however, "water marks" are anything but "ordinary." The Corps of Engineers' publications even acknowledge as much. One such publication, the "Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of 'Waters of the United States' in Arid Southwestern channels" (Corps 2006) states :

OHWM indicators, originally intended to define the limits of the OHWM in tidal and navigable waters, are confounded by the drastic differences in the climate, geology, soil, and vegetation characteristics in which arid streams operate.

Similarly, the "Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States" (Corps 2008) states :

The most problematic ordinary high water (OHW) delineations are associated with the commonly occurring ephemeral/intermittent channel forms that dominate the Arid West landscape. The climate of the region drastically influences the

hydrology, channel-forming processes, and distribution of OHWM indicators such that delineations can be inconsistent (over space and time) and problematic.

The Corps acknowledges that OHMW indicators were intended for "tidal and navigable" waters, and are not well-suited for the "drastically" different climate in the West. The Corps even concludes that use of these delineations in the "Arid West Landscape" is "inconsistent" and "problematic." EPA does not have authority to regulate all tributaries where there is a clear lack of a "significant nexus" because random and "problematic" identification markers may or may not have any relationship to ordinary water flow in arid landscapes. (p. 4)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Missouri Farm Bureau Federation (Doc. #15224)

8.163 The Agencies' focus on the presence of a bed, bank and ordinary high water mark (OHWM) and any minimal amount of flow that eventually reaches a navigable water (directly or through any number of other paths and channels) for identifying tributaries is problematic for several reasons. First, the terms "bed" and "bank" simply mean land with lower elevation in between lands of higher elevation. Using these terms, any land where rainwater naturally channels as it flows downhill could be classified as a tributary—and all but the flattest terrain will have natural paths of lower elevations that water will follow. Secondly, OHWM encompasses any physical sign of water flow, such as changes in the soil, vegetation or debris. Even when flows are infrequent, rainwater tends to leave a mark when it moves through any path on land. Use of OHWM as an indicator of jurisdiction will result in many ephemeral features being deemed "waters of the U.S.," which was a concern noted in the plurality opinion of the Supreme Court in *Rapanos v. United States*.⁴⁰⁰ (p. 2-3)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Weyerhaeuser Company (Doc. #15392)

8.164 Countless features on otherwise dry land with no significant nexus to downstream navigable-in-fact waters would be deemed jurisdictional under the new definition of tributary. The presence of a bed and banks and an ordinary high water mark can be established merely by occasional storm events where rainwater channels as it runs from higher elevation lands to lower elevation lands. Such events and the resulting indications of a "high water mark" are common in forested landscapes, which are almost by definition associated with wetter climates. Almost all forest landscapes will have low-lying paths through which water will naturally flow after it rains, leading to endless consternation and confusion over whether such paths are jurisdictional "waters."

⁴⁰⁰ 547 U.S. 715, 725 (2006).

Moreover, the ordinary high water mark concept, which the Agencies have previously acknowledged is vague and confusing,⁴⁰¹ is not a reliable basis upon which to distinguish between jurisdictional streams and non-jurisdictional erosional features.⁴⁰² As an example of the unreliability, the proposed rule acknowledges that portions of a “tributary” might not have a visible ordinary high water mark. Yet, if one can be identified at any point upstream, the entire length of the “tributary” is jurisdictional.⁴⁰³ The proposed rule’s reliance on the ordinary high water mark as a means to define what features are jurisdictional tributaries would not just “extend[] the waters of the United States to virtually any land feature over which rainwater or drainage passes and leaves a visible mark—even if only the presence of litter and debris.”⁴⁰⁴ It would also result in the extension of CWA jurisdiction to some lands over which rainwater or drainage passes without even leaving a mark.

...Moreover, forest owners will face tremendous difficulty determining whether water features on their lands fall within the definition of tributary or whether they are non-jurisdictional. For example, given that the ordinary high water mark concept is seemingly incapable of consistent application even by agency staff, private forest owners cannot reasonably be expected to determine whether channels on their lands are unregulated features or whether they are jurisdictional ephemeral tributaries. (p. 4-6)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the

⁴⁰¹ See GAO, “Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction,” (Feb. 2004).

⁴⁰² See, e.g., U.S. Army Engineer Research and Development Center, “A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States,” ERDC/CRREL TR-14-13, at 4 (Aug. 2014) (“OHWM delineation is not a precise practice. The OHWM can take on a variety of appearances and characteristics and may change over time due to natural or anthropogenic causes. Best professional judgment and consideration of the unique characteristics of each project site are always required.”); U.S. Army Engineer Research and Development Center, “A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification,” ERDC/CRREL TR-14-12, at 1 (Aug. 2014) (explaining that spatial and temporal variation in indicators of the OHWM poses “challenges to accurate and consistent delineation of the OHWM in rivers and streams throughout the U.S.,” and noting that “the spatial and temporal variability of OHWM indicators remains unexplored for most stream types in most regions of the U.S.”).

⁴⁰³ See 79 Fed. Reg. at 22,202.

⁴⁰⁴ *Rapanos*, 547 U.S. at 725 (plurality); see also *id.* at 780-81 (Justice Kennedy’s finding that the ordinary high water mark concept provides “no such assurance” of a reliable test for determining significant nexus).

limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 above and the TSD.

Utah Farm Bureau Federation (Doc. #16542.1)

- 8.165 For farmers and ranchers, uncertainty is increased through overly broad or nebulous terms in the proposed rule including:

...

- using the confusing and SCOTUS-panned concept of ordinary high water mark (OHWM) as the key identifier for tributaries,

... (p. 7)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

- 8.166 The agencies have proposed an overly broad definition of “tributary” focusing on the presence of a bed, bank, ordinary high water mark (OHWM) and any minimum amount of flow that eventually reaches directly or through a number of potential pathways to a creek or stream that in turn ultimately reaches a traditional navigable water. The agencies assert that the upper limit of the tributary “is established where the channel begins.” This concept is difficult for the Corps to determine, let alone a typical farmer or rancher.

In Utah, with heavy springtime melting snow packs and occasional torrential summer rainstorms the agencies using erosion and OHWM as an indicator of regulatory reach is simply outrageous! The “ordinary high water mark” is a term that encompasses any physical sign of water flow, such as changes in soil, vegetation or debris. Whenever snowmelt or rainwater flows through any path on the land, it leaves a mark – even if the flows are infrequent.

It is instructive that the agencies claim the proposed rules are faithful to SCOTUS and its decisions – however SCOTUS chastised the agencies for using the OHWM indicator. The plurality opinion in *Rapanos vs. United States* criticized use of the OHWM as an indicator of jurisdiction because it “extended the waters of the United States to virtually any land feature over which rainwater or drainage passes and leaves a visible mark – even if only the presence of litter or debris.” 547 U.S. 715, 725 (2006)

Even Justice Kennedy in his concurring judgment disparaged the OHWM as providing “no such assurance” of a reliable standard for determining a significant nexus. With such uncertainty, how can a farmer or rancher know if a particular channel is an unregulated erosional feature or a jurisdictional regulated ephemeral tributary? (p. 8)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Iowa Farm Bureau Federation (Doc. #15633.1)

- 8.167 A national OHWM classification system does not currently exist, and according to a recent Army Corps of Engineers report, this is needed for nationally consistent and

defensible OHWM delineation practices.⁴⁰⁵ The report describes that OHWM varies spatially and temporally making it difficult to have an accurate and consistent determination. It also acknowledges that altered landscapes will present problematic circumstances that will not explicitly be included in the OHWM classification.⁴⁰⁶ As most of the landscape in Iowa has been altered by land use activities and climatic variables, the minimal explanation in the preamble does not clarify whether a landscape feature is a water of the U.S. If it is difficult for Army Corps of Engineers scientists to have an accurate and consistent determination of an OHWM, a key factor in whether something is a tributary or a gully, how can ordinary citizens be expected to figure this out? Currently, whether a landscape feature is a stream is well understood by the public. The proposal adds uncertainty and confusion to a previously understood concept of “tributary.”

The preamble to the rule undercuts the regulatory definitions by essentially saying the Agencies can disregard the regulatory definition requirements when convenient to designate a water as jurisdictional. The preamble says, “the upper limit of the tributary is established where the channel begins.”⁴⁰⁷ It also says that “in some regions of the country where there is a very low gradient, the banks of a tributary may be very low or even disappear at times,” and that “OHWM indicators can be discontinuous within an individual tributary due to the variability in hydrologic and climatic influences.”⁴⁰⁸ The rule’s explanation leaves open the ability of the Agencies to ignore the requirements for a bed and banks and OHWM, and declare land to be a tributary. With all of this ambiguity and case-specific discretion, how is a private property owner to know if his or her land is a tributary? (p. 6)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Riverport Levee District (Doc. #15655)

8.168 b. The definition proposed for "tributary" creates uncertainty and relies on newly released Technical guidance for identifying tributaries.

The proposed definition of "tributary" — which requires only a bed, banks and an ordinary high water mark ("OHWM") — will create uncertainty in many instances. While a bed, banks and OHWM can be easily identified in some locations, in others those features are not evident, especially an OHWM. The proposed rule would nevertheless make a tributary a "waters of the U.S." if, at any upstream location, a bed, banks and OHWM can be identified. Such a broad definition will potentially require examination of miles of upstream tributary features, quite possibly beyond areas that are accessible either due to legal or physical constraints. The proposed rule's reliance on being able to define and identify an OHWM to determine jurisdiction over tributaries does not provide clarity as there has not been established a reliable and repeatable means to identify an OHWM.

⁴⁰⁵ “A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification, U.S. Army Corp of Engineers, ERDC/CREL TR-14-12, August 2014 at 1.

⁴⁰⁶ *Id.* at 36.

⁴⁰⁷ 69 Fed. Reg. 22202.

⁴⁰⁸ *Id.*

Just shortly after the proposed rule was published in April 2014, the Corps of Engineers released new technical guidance (ERDC/CCREL TR-14-13, *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*) for delineating the OHWM in non-perennial streams in the Western U.S. The EPA has stated publicly that similar guidance is being developed for other regions. The Corps also released in August 2014, (ERDC/CCREL TR-14-12, *A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification*) a report with the objective of determining the "most appropriate factors to include in a national OHWM classification." As the factors to be used in identifying OHWM's have yet to be determined it is blatantly false to claim that the proposed rule provides clarification and does not expand jurisdiction. (p. 3)

Agency Response: See response to comment from California Association of Winegrape Growers (Doc. #14593) above.

Greene County Farm Bureau (Doc. #17007)

8.169 We are concerned that the new definition of a tributary may be used to justify the regulation of features which are not considered a "tributary" in any common sense of the word. We understand that the features must have a bed, bank and ordinary high water mark. Based upon recent apparent implementation of this definition in Indiana, it appears that features which are completely ephemeral and drain few acres are going to be considered tributaries. Those features provide no base flow and thus would not normally be considered a tributary as it is commonly understood or as it would appear to have been historically interpreted by the agencies. (p. 2)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Agribusiness Association of Kentucky et al. (Doc. #18005)

8.170 The Agencies have proposed an overly broad "tributary" definition focusing on the presence of a bed, bank, ordinary high water mark (OHWM) and any minimal amount of flow that eventually reaches (directly or through any number of other paths and channels) to a creek or stream that in turn ultimately flows to a traditional navigable water. See 79 Fed. Reg. at 22,263.⁴⁰⁹ The terms "bed" and "bank" simply mean land with lower elevation in between lands of higher elevation. This includes land with only subtle changes in elevation—any land where rainwater naturally channels as it flows downhill. All but the flattest terrain will have natural paths of lower elevations that water will follow. The Agencies further state that the upper limit of a tributary "is established where the channel begins" which is difficult enough for the Corps itself to discern—let alone a typical farmer or rancher.⁴¹⁰ *Id.* at 22,202. In addition, if the "upper limit" of a tributary is

⁴⁰⁹ The rule would provide: "The term *tributary* means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR § 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section."

⁴¹⁰ Presentation by Matthew K. Mersel, USACE, "Development of National OHWM Delineation Technical Guidance," March 4, 2014. Attached hereto as Appendix F.

"where the channel begins," then each farmer or rancher with any "channels" on his lands (land with lower elevation in between lands of higher elevations) presumably must investigate the entire length of that channel, both up-gradient and down-gradient, even beyond his own property lines, to determine whether an OHWM can be found.

Equally obtuse is the Agencies' statement that "a tributary is a longitudinal surface feature that results from directional surface water movement and sediment dynamics demonstrated by the presence of bed and banks, bottom and lateral boundaries, or other indicators of [ordinary high water mark]." *Id.* at 22,202. Even a bed and bank have become unnecessary to call water a "tributary"—later in the proposal, the Agencies announce that "in some regions of the country where there is a very low gradient, the banks of a tributary may be very low or may even disappear at times." *Id.* This example, and countless others, demonstrate the extreme breadth and subjectivity inherent in the proposed "tributary" definition. The proposed rule would regulate activities on *land* on which water channels and flows when it rains, so long as the flowing water leaves a mark on the land. It may even regulate land where there is no visible channel.

...

Furthermore, "ordinary high water mark" is a term that encompasses any physical sign of water flow, such as changes in the soil, vegetation or debris. When rainwater flows through any path on the land, it tends to leave some sort of mark, even if flows are infrequent. The Agencies themselves recognize that the definition of OHWM is vague, ambiguous and inconsistently applied.⁴¹¹ In fact, an official from the Corps' Philadelphia District has observed that, due to inconsistent interpretations of the OHWM concept, as well as inconsistent field indicators and delineation practices, identifying precisely where the OHWM ends is simply a matter of judgment,⁴¹² so reliance on this term provides neither certainty nor clarity. Moreover, we understand that the Corps is in the process of redefining how it determines an OHWM, yet nowhere in the proposal do the Agencies signal to the public that this behind-the-scenes change is occurring, placing a key term in the proposed rule beyond public comment.⁴¹³ (p. 6-8)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Wilkin County Farm Bureau (Doc. #19489)

8.171 Wilkin County Farm Bureau has significant concerns with the limitless jurisdiction the proposed rule provides the agencies.

⁴¹¹ GAO Report, "Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction," February 2004.

⁴¹² Presentation by Matthew K. Mersel, USACE, "Development of National OHWM Delineation Technical Guidance," March 4, 2014. See Appendix F.

⁴¹³ Wetlands Regulatory Assistance Program (WRAP), "A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification" by, Matthew K. Mersel, Lindsey E. Lefebvre, and Robert W. Lichvar (August 2014), <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx>. Attached at Appendix G.

...

- In addition, the rule uses the unclear concept of ordinary high water mark, as well as bed and bank, as the key identifiers for tributaries. This would include land with only subtle changes in elevation, where any land where rainwater naturally channels as it flows downhill.

... (p. 2)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

American Water Company (Doc. #6935.1)

- 8.172 The definition proposed for "tributary" is overbroad and would create uncertainty for water distribution systems.

American Water Company, like most water companies, has a distribution system which crosses under or, less frequently, above tributaries. We estimate that hundreds of thousands of such crossings are currently in place, nationwide. Urban development requires the placement of new water mains to meet customer needs and the relocation of existing mains for many reasons, such as urban redevelopment or for roadway modifications. The proposed definition of "tributary" - which requires only a bed, banks and an ordinary high water mark ("OHWM") - will create uncertainty in many instances for water companies. More specifically, although these required features - a bed, banks and OHWM - can be identified in some locations, those features are often not present in locations proposed for a water main. The proposed rule would nevertheless make a tributary a WOTUS if, at any upstream location, a bed, banks and OHWM could be identified. Adopting such an overly broad definition would require water companies to examine miles of upstream tributary features, quite possibly outside the footprint of their distribution system or even the county in which they operate, in order to guess whether an otherwise dry creek with no apparent bed and/or/bank and/or OHWM at the crossing location might be a jurisdictional WOTUS.

To eliminate this uncertainty, American Water Company proposes that the Agencies exempt portions of tributaries from permitting where the area to be crossed by a water main does not exhibit the features of a bed, a bank and an OHWM. (p. 1-2)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Northwest Colorado Council of Governments Water Quality/Quantity Committee (Doc. #10187)

- 8.173 Some waters may qualify as a tributary under the proposed rule because they have banks, a bed, and an ordinary high water mark. However, the same drainage systems may exist wholly in uplands, drain only uplands, and contribute a minimal amount of flow only during significant rain events. Under the proposed rule, it appears that a natural drainage system with a bed, bank, and ordinary high water mark would be automatically jurisdictional even if it may exist wholly in uplands, drain only uplands, and contribute a minimal amount of flow only during significant rain events. With such waters, a

significant nexus may not exist with traditionally navigable water. The rule should clarify how the agencies would treat such natural drainage systems. (p. 4)

Agency Response: See response to comment from California Association of Winegrape Growers (Doc. #14593) above

Duke Energy (Doc. #13029)

8.174 ... uncertainty is created by:

... using the confusing concept of ordinary high water mark (OHWM) as the key identifier for tributaries;... (p. 10)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The final rule does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

8.175 One of the fundamental aspects of this definition relies on how you determine an OHWM, which is regionally variable.

The definition of OHWM currently in use by the Corps is “that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”⁴¹⁴ However, inconsistent interpretations of the OHWM concept have led to inconsistent field indicators and delineation practices among the different Corps districts.

This definition is problematic because many of the OHWM physical indicators can occur wherever water is flowing over land, regardless of frequency or duration. With this OHWM definition in use, it becomes difficult to distinguish between small streams or drainages and erosional features such as gullies. In most cases, erosional features would not exhibit an OHWM. However, this is a subjective interpretation left to the “best professional judgment” of the individual making the determination.

The Corps indicated in April 2014 that they were planning to issue guidance, with technical support from EPA, to redefine the OHWM metrics and standardize the concept’s implementation with the intent to identify “a more uniform approach to assessing ordinary high water mark (OHWM).”⁴¹⁵ And just recently, in August 2014, the Corps released a report that reviews existing land and stream classifications and assesses

⁴¹⁴ 33 CFR § 328.3(e)

⁴¹⁵ Bridget DiCosmo, InsideEPA.com, Agencies’ Workgroup Eyes Changes to Key Delineation Guides (Apr. 30, 2014). (See Appendix C)

the benefits and limitations of each approach for the purpose of developing a national OHWM classification. It also presents a preliminary version of a national OHWM classification.⁴¹⁶ While it is admirable that the agencies are trying to achieve standardization for implementing this metric across the various Corps Districts, it is greatly concerning that this is being conducted outside of this rulemaking, offering no opportunity for public input. (p. 24-25)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Murray Energy Corporation (Doc. #13954)

8.176 ...the Agencies' new definition of "tributary" is clearly at odds with a fair and accurate reading of *Rapanos*... To compound this error, the Agencies jettison even the barest and minimal requirements of OHWM and bed and bank, well-established features of the historical definition of tributaries under the CWA, by proposing to expand the definition of tributaries to water features, such as wetlands, that lack bed and bank and OHWM... (p. 10)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

8.177 The use of OHWM as the primary physical indicator in determining the lateral limits of jurisdiction has been the Corps' practice for many years.⁴¹⁷ To abandon its use and redefine a jurisdictional tributary as any feature that "drains" to a traditional navigable water, regardless of the volume of flow or presence of an OHWM, creates even greater confusion and uncertainty regarding the lateral limits of a tributary. (p. 11)

Agency Response: The final rule has retained the requirement for OHWM for tributaries as the commenter recommends. For further discussion see responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Department of Public Works, City of Northglenn, Colorado (Doc. #14990)

8.178 **3. Ordinary High Water Mark.** The Proposed Rule retains uncertainty regarding the identification of an Ordinary High Water Mark (OHWM) on features that have been fortified to prevent erosion. For example, certain stormwater ditches may not have a natural OHWM but have been armored with angular cobble to prevent headcutting. Based on conversations with EPA and USACE staff, the OHWM along fortified channels should be identified using water stains on the channel fortification. This guidance presents a dilemma to MS4 permittees when determining whether or not to fortify upland

⁴¹⁶ A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification, August 2014 (ERDC/CRREL TR-14-12)

⁴¹⁷ See Corps RGL 05-05, *Ordinary High Water Mark Identification*, located at http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/cwa_guide/app_h_rgl05-05.pdf; See also GAO-04-297 Report, *Waters and Wetlands, Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction*, located at <http://www.gao.gov/assets/250/241520.pdf>.

vegetated swales: they can either leave the swale unprotected (but retain its non-WOTUS status; or they can fortify the swale but increase the potential that it will be WOTUS.

The City of Northglenn requests that the Proposed Rule clarify how OHWM should be identified in these situations. Further, we request that the Agencies evaluate the advisability of imposing regulatory burden at locations that have been protected from future erosion and sediment transport events. (p. 2-3)

Agency Response: As discussed above in the summary response for this compendium, the final rule does not change the definition or indicators of Ordinary High Water Mark (OHWM). The final rule does provide additional clarity that all tributaries must contain both a bed and banks and an OHWM. Fortification of an upland flowpath may create bed and banks however the other OHWM indicators require the presence of flow.

Arizona Public Service Company (Doc. #15162)

8.179 ...SAB advises reconsideration of the definition of tributaries since, in its opinion, not all tributaries have ordinary high water marks, and there are other features that are questionable for this proposed definition.⁴¹⁸ SAB recommends replacing “ordinary high water marks” in the tributaries definition with “and other evidence of flow.”⁴¹⁹ The Agencies have noted that the goal of this proposed rule is to clarify the WOTUS definition to provide consistency and program predictability⁴²⁰; however, even their own technical advisor panel has brought forth comments that must be evaluated and presented to the regulated community and general public for review and consideration. The addition of “and other evidence of flow” simply adds yet another term which, if used by the Agencies, would require a definition with an opportunity to review and comment on such definition. Thus, APS strongly recommends the Agencies consider withdrawing this proposed rule so a meaningful discussion with all interested parties can occur. Such communication will aide in a more widely-accepted proposed rule to clarify the WOTUS definition. The additional time needed to conduct this additional outreach and to re-propose the WOTUS definition could very likely be less than that needed to litigate a final rule that defines WOTUS far too broadly. (p. 10)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Louisville and Jefferson County Metropolitan Sewer District (Doc. #15413)

8.180 Ordinary High Water Mark (OHWM): Although the definition is clear for naturalized streams, it is less clear for OHWM's found on concrete conveyances that may be considered jurisdictional. Staining is the primarily indicator to determine the OHWM in concrete channels, however , in a municipal system there may be concrete conveyances that flow a few times a year, carrying only sheetflow, which do not leaving stain lines.

⁴¹⁸ SAB *Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of Waters of the United States under the Clean Water Act"* (Sept. 30, 2014).

⁴¹⁹ *Id.*

⁴²⁰ 79 Fed. Reg. at 22188.

Accordingly, MSD requests that the definition of OHWM be revised and clarified as it relates to concrete conveyances. (p. 2)

Agency Response: See response to comment from American Society of Civil Engineers (Doc. #19572) and summary response 8.1.2 above.

West Bay Sanitary District, Novato Sanitary District, West County Wastewater District, Union Sanitary District and West Valley Sanitation District, California (Doc. #16610)

8.181 ... the SAB has suggested that the definition of "tributary" should be expanded to include those areas with "bed, bank and other evidence of flow." (SAB Draft Report (09/17/14) at pg. 2, lines 37-38.) This suggested expansion is more inclusive than the currently proposed language about requiring an ordinary high water mark, and could be argued to extend to every street, every gutter, and every swale or storm drain channel draining neighborhoods in the country would potentially fall under this expanded criterion, which is well beyond the realm of reasonableness. (p. 8)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Southern Company (Doc. #14134)

8.182 **I. The New Definition of “Tributary” Extends to Waters that Historically Have Not Been Regulated and that Have, at Best, an Insubstantial Connection with TNWs**

The agencies propose a new definition for “tributary” that is extremely broad. It would make all tributaries of TNWs jurisdictional, without regard to a “significant nexus” evaluation. This would include all perennial, intermittent, and ephemeral features. That is, under the proposal as written, all tributaries would be deemed by rule to have a significant nexus to TNWs. In several respects, this aspect of the proposal far exceeds the scope of tributaries historically deemed jurisdictional and is not supported by science or law.

...

D. The Agencies Should Not Categorically Include Features Without a Bed, Bank and OHWM in the Definition of “Tributary”

In so far as the proposal treats wetlands and other “waters” that do not contain clear and discernible features such as bed and bank and OHWM as categorically jurisdictional, the agencies’ proposed approach to defining “tributaries” is inconsistent with their own stated goal of providing consistency, clarity, and certainty. The definition is also at odds with the agencies’ description of a tributary elsewhere in the proposal, where the agencies seem to acknowledge the necessary presence of bed and bank and OHWM. 79 Fed. Reg. at 22202 (“A tributary is a longitudinal surface feature that results from directional surface water movement and sediment dynamics demonstrated by the presence of bed and banks, bottom and lateral boundaries, or other indicators of OHWM.”). SAB panelists also criticized the confusion created by agencies’ treatment of tributaries.

The use of OHWM as the primary physical indicator in determining the lateral limits of jurisdiction has been the Corps’ practice for many years. To abandon its use and redefine a jurisdictional tributary as any feature that “drains” to a TNW, regardless of the volume

of flow or presence of an OHWM, creates unacceptable confusion and uncertainty regarding the lateral limits of a tributary. Moreover, wetlands and other water bodies lacking an OHWM should not be analyzed under the tributary framework. SAB Panel Memo at 29 (“I recommend that wetlands be removed from the definition of tributaries . . . basing their jurisdiction on adjacency is more clear, and removes ambiguity . . .”) (Dr. Fennessy Comments).

For these reasons, Southern Company would support elements of the agencies’ suggested alternative to their definition of “tributary” where (1) wetlands that connect tributary segments would be deemed to be “adjacent” wetlands; (2) tributary would, among other things, be limited to features having a bed and bank and OHWM, consistent with historical practice, and the upper limit of the tributary would be defined by the point where these features cease to be identifiable; and (3) wetlands would not be considered tributaries, and would be assessed based on adjacency principles to determine whether they are jurisdictional. We do not support all aspects of this alternative approach (e.g., it would retain the man-made or natural breaks provisions), but if greater clarity and consistency—rather than expansion of jurisdiction—is an important goal, then it presents a far more appropriate alternative over the agencies proposed approach to treatment of wetlands and other waters in the context of defining “tributary.” (p. 30, 34-35)

Agency Response: The final rule reflects the recommendations made in the above comment regarding wetlands and other waters being called tributaries. Wetlands and other features without an OHWM and bed and bank are evaluated as adjacent waters under the final rule.

The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see summary response 8.1 and 8.1.2 and the TSD.

Metropolitan Water District of Southern California (Doc. #14637)

8.183 **b. The Agencies should consider regional conditions when establishing mitigation requirements**

The term "ordinary high water mark" is defined in the rule to mean that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. In practice, this definition does not address the implications for jurisdictional scope inherent in the methodology for a tributary. OHWM will continue to be used in identification of the OHWM in the arid southwest.

Currently, in the arid west, the methodology used to locate and to identify the OHWM is described in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* ERDC/CRREL TR-08-12 (2008) (2008 Lichvar Field Manual) issued by the Corps. (It should be noted that the methodology in the 2008 Lichvar Field Manual differs from the methodology prescribed in the 2005 Regulatory Guidance Letter 0505.) Within this geographic region the following water bodies are located: dry arroyos and washes that flow only after infrequent storm events, isolated ponds, and intermittent and ephemeral streams with an indeterminate connection to jurisdictional tributaries under the Final Rule, and determine their lateral extent. However, a tributary, by definition, must also contribute flow to a downstream navigable waters. Due to the intermittent and seasonal nature of flows through drainages in the arid west, the active floodplain zone can correspond to the ten-year floodplain or higher. Depending on the topography, locating the OHWM at the edge of the ten-year floodplain rather than at the location of the bankfull channel can add significant acreage to jurisdictional delineations as it increases the scope of jurisdiction laterally away from the incised channel of the drainage.

This approach is different from and more expansive than that used in other regions of the U.S. In other words, the size and reach of jurisdiction around tributaries in the arid west will be much broader than in other areas of the U.S. using the methodology in the 2008 Lichvar Field Manual. This discrepancy will result in increased mitigation for impacts to waters of the U.S. in the arid west as compared to other regions of the U.S. For this reason, Metropolitan requests that the Agencies rectify the bias toward increased mitigation in the arid west arising from this methodological discrepancy in the proposed rule. For instance, the Agencies could issue guidance that the bankfull channel should be used as the feature for determining acreage of jurisdiction. Furthermore, Metropolitan requests that all guidance and field manuals related to determining jurisdiction in practice be distributed for public review and comment prior to their use and before the proposed rule is finalized. (p. 8-9)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see <http://www.erd.c.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. The methodology found in the arid west manual mentioned in the comment applies the indicators discussed in RGL 05 – 05 to the hydrologic and climatic circumstances found in the arid southwest. The Arid West OHWM manual was developed to address the identified challenges in low-gradient, alluvial ephemeral/intermittent channel forms, by using other features associated with the limits of the active floodplain (channel), which are easily identified in the field, less variable over time, and statistically linked to the hydrologic and hydraulic parameters of ephemeral and intermittent arid channel forms, to support the

traditional OHWM indicators. This method uses stream geomorphology and vegetation response to the dominant stream discharge and represents the most consistent and repeating pattern associated with “ordinary” events representing OHW. Mitigation requirements are outside the scope of this rulemaking.

Nucor Corp. (Doc. #14963)

- 8.184 The Proposed Rule Fails to Appropriately Define Ordinary High Water Mark The proposed rule establishes a definition for jurisdictional tributaries which provides that a tributary "means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e) ... " 79 Fed. Reg. 22263. One of the chief elements of being characterized as a tributary is whether a waterbody has an ordinary high water mark (OHWM). The definition of the term is so vague and ambiguous that it has historically been problematic and lead to inconsistent interpretation and application, resulting in inconsistent delineation practices. Recognizing this flaw, the Army Corps of Engineers resorted to issuing guidance on the identification of the OHWM in 2005. U.S. Army Corps of Engineers, Regulatory Guidance Letter No. 05-05 (December 7, 2005). Like the definition, this guidance is so ambiguous that the Agencies appear to be developing a new OHWM standard. *See, e.g.*, U.S. Army Engineers Research and Development Center, A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valley and Coast Region of the United States (August, 2014); U.S. Army Engineers Research and Development Center, A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification (August, 2014). Because the definition of "tributary" hinges on the definition of OHWM, any changes impacting that definition will impact the definition of "tributary" and must, under the Administrative Procedure Act (APA), be made in this rulemaking, and not in guidance. (p. 11-12)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The final rule does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates. The documents identified in the comment were developed to help the public and field staff understand location site conditions and consistently identify the OHWM. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters.

Pennsylvania Independent Oil and Gas Association (Doc. #15167)

8.185 How will an OHWM be determined? Delineation of OHWM is open to subjective interpretation. The identification of the OHWM limits will be influenced by uncharacteristically high rainfall events and are seasonably difficult to identify. (p. 17)

Agency Response: See response to comment from Nucor Corp. (Doc. #14963 and summary response 8.1.2 above.

Lower Colorado River Authority (Doc. #16332)

8.186 The terms used by the Agencies to define “tributaries” should be clarified. The terms “bed” and “bank” can include any land at lower elevation that lies between lands at higher elevation. All but the flattest terrain will feature some natural areas of lower elevations that water will follow. The term “OHWM” is similarly broad, and can encompass any physical sign of water flow, such as changes in the soil, vegetation, or debris. The Agencies themselves have admitted that their definition of OHWM is vague, ambiguous, and inconsistently applied.⁴²¹ The Agencies should revise the rule to clarify how field staff will determine the presence of a bed, bank, and OHWM. The Agencies should also revise the rule to clarify how they intend to treat and define “breaks” in the OHWM. (p. 15)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above.

Tri-State Generation and Transmission Association, Inc. (Doc. #16392)

8.187 Several comments of the SAB (Dr. Pausch; Dr. Aldous; Dr. Sullivan) also indicate that the concept of the ordinary high water mark (OHWM) should not be a required attribute of a tributary. The SAB panel recommends an alternative definition as presence of “bed, bank and other evidence of flow”.⁴²² In particular the “other evidence of flow” language would substantially expand what is currently encompassed by the OHWM to delineate tributary boundaries. For example, “other evidence of flow” could occur at locations distant from the active channel and in floodplains which are better regulated by the Federal Emergency Management Agency and local floodplain administrators. Similarly “other evidence of flow” could be broadened to include sheet flow and erosion which, as the Agencies propose, should not fall within the definition of WOTUS.

⁴²¹ U.S. General Accounting Office, Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction (Feb. 2004), *available at* <http://www.gao.gov/new.items/d04297.pdf>. See also, Potential Impacts of Proposed Changes to the Clean Water Act Jurisdiction Rule: Testimony Before the House Transportation and Infrastructure Committee Subcommittee on Water Resources and Environment 3 (June 11, 2014), *available at* http://www.fb.org/newsroom/nr/nr2014/06-11-14/WOTUS_testimony_6-11-14.pdf (statement of Bob Stallman, President, American Farm Bureau Federation) [hereinafter, Farm Bureau Testimony] (“the [Army] Corps’ Philadelphia District has observed that, due to inconsistent interpretations of the OHWM concept, as well as inconsistent field indicators and delineation practices, identifying precisely where the OHWM ends is nothing more than a judgment call.”).

⁴²² Comments to the chartered SAB on the Adequacy of the Scientific and Technical Basis of the Proposed Rule Titled “Definition of ‘Waters of the United States’ Under the Clean Water Act”. at page 2.

The current definition of the OHWM already includes the phrase "or other appropriate means that consider the characteristics of the surrounding areas" which allows for other factors to be considered. Therefore, Tri-State does not agree with the SAB panelists that the OHWM concept should be removed from the definition of tributaries or expanded to include "other evidence of flow". Though problematic in arid regions, the OHWM concept is a long-standing definition used to establish the lateral limits of CWA jurisdiction absent the presence of adjacent wetlands. Tri-State recommends the Agencies consider further improvements to the ordinary high water mark either (a)(1) through additional field guidance, such as the recently issued guidance, or through a separate future rulemaking process. In many ways the existing problems with decisions on CWA jurisdiction for tributaries lies in the difficulties and subjectivity of the OHWM concept, rather than the proposal to regulate all tributaries by rule. Since the OHWM determines the presence and limits of a tributary, it is a problem area that deserves further consideration than it is being given under the proposed rule. (p. 13)(a)(3) water to be considered per se jurisdictional.

Agency Response: The final rule retains the requirement for bed and banks and another indicator of OHWM for tributaries as suggested in the comment above. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Northern California Association (Doc. #17444)

8.188 ...the SAB recently advised the EPA to reconsider the definition of tributaries in the proposed rule because the SAB maintains that not all tributaries may have ordinary high water marks. The SAB stated that "an ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark.,,"⁴²³ The SAB advised the agency to "consider changing the wording in the definition to 'bed, bank, and other evidence of flow'."⁴²⁴ We believe this would further broaden the jurisdiction of the CWA beyond what Congress intended, as any indication of surface water runoff from an isolated rain event in a field, dirt road or parking lot could meet this new expanded definition, becoming a "water of the U.S." subject to CWA regulation. (p. 6)

Agency Response: The final rule retains the requirement for bed and banks and another indicator of OHWM for tributaries as suggested in the comment above.

Ducks Unlimited (Doc. #11014)

8.189 ...related to the definition of tributaries, we agree with the recommendation contained in the EPA's Science Advisory Board's (SAB) letter to the Administrator (9/30/14)

⁴²³ [EPA-SAB-14-007] Science Advisory Board letter to EPA Administrator Gina McCarthy dated September 30, 2014 reo Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of Waters of the United States under the Clean Water Act."

⁴²⁴ *Ibid.*

regarding the adequacy of the scientific and technical basis for the proposed rule as it relates to the definition of tributaries. The SAB's draft report "advises the EPA to reconsider the definition of tributaries because not all tributaries have ordinary high water marks [OHWM]," and that "an OHWM may be absent in ephemeral streams within arid and semi-arid environments or low gradient landscapes where the flow of water is unlikely to cause an OHWM." Noting the difficulty that has been experienced in some areas with application of the OHWM criterion, we agree with the SAB's recommendation that the wording of the definition of tributary be changed to "bed, bank, and other evidence of flow." In other respects, we generally support the definition of tributaries and find it to be in keeping with the related science. (p. 13-14)

Agency Response: The final rule requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. The agencies continue to address regional concerns about the identification of the OHWM through the development of regional manuals that apply the indicators discussed in the regulation and RGL 05-05 to the regional hydrologic and climatic circumstances.

8.190 We summarize our primary conclusions and recommendations below, and provide the page numbers for other, related findings and recommendations, and a more complete articulation of the rationale and technical information in support of our comments.

- ...we also agree with the Science Advisory Board's recommendation regarding reconsideration of the use of the "ordinary high water mark" as a part of the definition of "tributary" ... (p. 75)

Agency Response: See response to the prior comment from Ducks Unlimited (Doc. #11014) above and TSD sections 2.A and 7.A.

Southern Environmental Law Center et al. (Doc. #13610)

8.191 **Agency Comment Request:** *The agencies' request comment on . . . the definition of tributaries and provide a clear explanation of their lateral and upstream extent.*

Comment: It is confusing to define tributaries as including an ordinary high water mark and then almost immediately carve out exceptions to that rule for wetlands and other waters that may lack an ordinary high water mark. We suggest the following definition instead:

For the purposes of the rule, the term "tributary" means:

- 1) a water (such as a stream, creek, or river) that has a bed and bank and ordinary high water mark and that contributes flow to other jurisdictional waters either directly or through another water or a discrete conveyance; or
- 2) a nonlinear water (such as a wetland, lake, or pond) even if it does not possess a bed or bank or ordinary high water mark as long as it contributes flow to other jurisdictional waters either directly or through another water or a discrete conveyance. (p. 13)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. As described in the summary responses 8.1 and 8.1.2, the final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

- 8.192 The ordinary high water mark (OHWM) has long been a measure to define a stream, indicating volume and flow. OHWM demonstrates a continuous channel providing a clear linkage between a tributary and downstream waters in many places. However, the traditional approach to measuring OHWM has relied on physical characteristics alone, neglecting hydrologic measures.⁴²⁵ In the arid Southwest, for instance, typical OHWM indicators have not been found to be a reliable determination of a stream given the vast difference in “ordinary” flood patterns, and as a result it is suggested that the floodplain itself be used as the OHWM.⁴²⁶ EPA already recommends a suite of factors to determine headwater streams, which may be described as “dynamic zones within stream networks.”⁴²⁷ While a traditional OHWM is certainly a positive indicator of a tributary, it is not a prerequisite. Moreover, because small headwater streams are the most susceptible to changes in size,⁴²⁸ the OHWM is more variable and more difficult to ascertain. Thus, we recommend that the proposed rule make clear that tributaries can be defined by the presence of an OHWM or more broadly by hydrologic, geomorphic, ecological and physical factors to ensure that tributaries across a range of regional and climatic variations are protected. (p. 47-48)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. As described in the summary response responses 8.1 and 8.1.2, the final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. The agencies continue to address regional concerns about the identification of the OHWM through the development of regional manuals that apply the indicators discussed in the regulation and RGL 05-05 to the regional hydrologic and climatic circumstances.

The Wildlife Society (Doc. #14899)

- 8.193 While we applaud the EPA's inclusion of all tributaries within the jurisdiction of the Clean Water Act, we recommend reconsidering the use of the phrase "ordinary high

⁴²⁵ U.S. Army Corps of Engineers, *Review of Ordinary High Water Mark Indications for Delineating Arid Streams in the Southwestern United States* (Robert L. Lichvar and James S. Wakeley eds. 2004).

⁴²⁶ U.S. Army Corps of Engineers, *Distribution of Ordinary High Water Mark Indicators and Their Reliability for Delineating the Limits of “Waters of the U.S.” in Southwestern Arid Channels* (Lichvar et al., 2006).

⁴²⁷ U.S. Environmental Protection Agency, *Field Operations Manual for Assessing the Hydrologic Permanence and Ecological Condition of Headwater* (2006).

⁴²⁸ Emily H. Stanley et al., *Ecosystem Expansion and Contraction in Streams*. 47 *BioScience* 427, 427-435 (1997).

water mark" (OHWM). By their nature, ephemeral streams, especially those within arid and semi-arid environments, and streams in low-gradient landscapes may not have an OHWM that is readily apparent. The lack of a clearly-apparent OHWM should not exclude these tributaries from jurisdictional status, as the connectivity these tributaries provide to downstream waters may be brief, but crucial to the physical, chemical, and biological integrity of the system. Furthermore, while these waters may not provide a perennial surface connection, they often provide a "shallow subsurface hydrologic connection" as used in the "neighboring" definition. Therefore, we suggest replacing OHWM with the phrase "other evidence of flow". (p. 3)

Agency Response: See response to comments from Southern Environmental Law Center et al. (Doc. #13610) above. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

Potomac Riverkeeper, Inc. (Doc. #15013)

- 8.194 1. Protect non-wetland, lake or pond tributaries that lack OHWMs. The proposed rule only protects tributaries to the extent that they (1) have an ordinary high water mark (OHWM); or (2) are wetlands, lakes or ponds. Proposed rule at (u)(5). However, in our work, we encounter tributaries-especially in the headwaters of the Shenandoah and Potomac-that lack an OHWM. The absence of an OHWM does not in any way diminish their importance to safeguarding downstream water quality. (p. 3)

Agency Response: See response to comments from Southern Environmental Law Center et al. (Doc. #13610) above. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

National Wildlife Federation (Doc. #15020)

- 8.195 1. The agencies' use of the existing OHWM definition helps clarify the definition of tributary and tributary boundaries.

The tributary definition also provides constructive and consistent clarification by incorporating and explaining the Corps' longstanding Ordinary High Water Mark (OHWM) as an indicator of channel boundaries. We support the agencies' use of the existing Corps definition of OHWM:

The term "ordinary high water mark" means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

33 CFR 328.3(e).

The proposed rule preamble explains that the bed and banks and OHWM requirement is important because "these features generally are physical indicators of flow" and thus indicative of "a tributary's ability to transport pollutants to downstream traditionally navigable waters, interstate waters, and the territorial seas, and thereby have a significant

effect on the chemical, physical, and biological integrity of a water identified in paragraphs (a)(1) through (a)(4).” See 79 Fed. Reg. at 22202. Importantly, the preamble notes that these bed and banks and OHWM indicators of flow “can be created by ephemeral, intermittent, and perennial flows.” Id.

As the agencies explain, the OHWM “generally defines the lateral limits of a water, and its absence generally determines whether a tributary’s channel such that the upper limit of the jurisdictional tributary is identified. However, as noted above, we strongly support the agencies’ recognition that channel characteristics are variable and those variations must be taken into account in evaluating the presence and continuity of the channel bed and bank and OHWM. (p. 33)

Agency Response: See response to the comments from Ducks Unlimited (Doc. #11014) above and TSD sections 2.A and 7.A.

- 8.196 2. Any further clarifications of the tributary definition must respect connectivity science and the goals of the Clean Water Act, and must not exclude wetlands, lakes, and ponds that function as tributaries and are integral elements of the tributary system.

We recognize that the agencies are being asked to further clarify and define the OHWM and bed and banks terms in order to provide more consistency and certainty in identifying tributaries in the field. At the same time, the SAB is cautioning the agencies to recognize that channel characteristics are variable and those variations must be taken into account in evaluating the presence and continuity of the channel bed and bank and OHWM. Indeed, the SAB is urging EPA to “reconsider the definition of tributaries because not all tributaries have ordinary high water marks.” SAB Rule Letter at 2.

As the preamble explains, the Corps has been working to address this variability, providing additional technical assistance on this front. See, e.g., 79 Fed. Reg. 22259-10 citing R.W. Lichvar and S.M. McColley, U.S. Army Corps of Engineers, *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual*, ERDC/CRREL TR-08-12 (2008). In order to provide additional clarity in applying these terms in the field that is also scientifically sound, we recommend that the agencies finalize the definition of tributary and the definition of waters of the United States and then continue to develop, adopt, and implement regionally-specific OHWM and tributary delineation manuals along the lines of the agencies’ regionally-tailored wetland delineation manuals that have been in use for decades.

We *do not* support changes in the tributary definition that sacrifice sound science in an effort to draw bright lines. In particular, we oppose the “alternate approach” of disqualifying wetlands, lakes, and ponds that are functioning as tributaries simply because, by their very nature (their waters do not flow through a defined channel), they do not necessarily have a bed and bank and OHWM. See, 79 Fed. Reg. 22203. Just as linearly flowing tributaries are defined by bed, bank, and OHWM, wetlands are defined, through an established wetland delineation methodology, by the “3-parameter test:” the presence of hydric soils (which take years to develop), the presence of hydrology during the growing season, and the presence (under normal circumstances) of hydrophytic vegetation. Similarly, lakes and ponds are characterized by the relatively permanent presence of a lake or pond bed and open water. These established, relatively permanent

water bodies are critical elements of the tributary system and must continue to be recognized as such and found to be jurisdictional on that basis. (p. 33-34)

Agency Response: See response to comment from California Association of Winegrape Growers (Doc. #14593) above.

American Rivers (Doc. #15372)

8.197 1. Clarify the Definition of Tributary

We believe that the definition of “tributary” should be further clarified. In order to ensure a protective and comprehensive application of the proposed rule, the definition of “tributary” and subsequent interpretations throughout the proposed rule should not primarily rely upon the presence of bed, banks, and ordinary high water mark (“OHWM”). Although the existence of bed and banks and OHWM can assist in demonstrating the presence of a tributary, these physical features should not be a prerequisite for the determination that a surface water feature is a tributary and therefore jurisdictional.

The proposed rule defines a tributary, in part, using physical characteristics, including those waters physically characterized by “the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4).”⁴²⁹ While presenting these physical determinants of a tributary, the proposed rule simultaneously recognizes “wetland, lakes, and ponds, are tributaries (even if they lack a bed and banks and OHWM), if they contribute flow.”⁴³⁰ The proposed rule also recognizes that a water continues to qualify as a tributary if, for any length, there are natural or manmade breaks “so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.”⁴³¹ While we agree that these waters should be protected, these statements create confusion as to the importance of the identified physical features of bed and banks and OHWM in the determination of whether or not a waterway is a tributary. The first deemphasizes these physical characteristics, while the latter accentuates their importance. Additionally, the proposed rule notes that the “OHWM generally defines the lateral limits of water, and its absence generally determines whether a tributary’s channel or bed and banks has ended such that the upper limit of the jurisdictional tributary has ended.”⁴³² The use of the term “generally” brings ambiguity without further specification of when the OHWM does and does not denote a tributary. The lack of clarity regarding the importance of defining physical features will make determinations of whether or not a water is a tributary, and therefore jurisdictional by rule, difficult in practice in the arid west.

Of most concern are potential cases where a water would not meet the definition of a tributary based on the absence of bed and banks and OHWM, but could reasonably be considered one based on contributing perennial, intermittent, or ephemeral flow and

⁴²⁹ *Definition of WOTUS*, 79 Fed. Reg. at 22201.

⁴³⁰ *Id.*

⁴³¹ *Id.*

⁴³² *Id.* at 22202 (emphasis added).

presence of physical, chemical, or biological characteristics indicative of flow and connectivity.⁴³³ For example, and as noted by the Agencies in the proposed rule, in low gradient systems and dry-land systems, the presence of an OHWM or bed and banks may be difficult to observe or discontinuous.⁴³⁴ Intermittent and ephemeral streams will not always have an obvious OHWM because, “the climate of the region drastically influences the hydrology, channel-forming processes, and distribution of OHWM indicators such that delineations can be inconsistent (over space and time) and problematic.”⁴³⁵ The Corps notes that the, “OHWM delineation in non-perennial streams (i.e., intermittent and ephemeral) can be especially challenging.”⁴³⁶ Despite the potential lack of these physical features, intermittent and ephemeral streams impact the physical, biological, and chemical integrity of downstream waters and should be jurisdictional.⁴³⁷

We propose that the Agencies revise this definition to ensure that, while bed, banks, and OHWM are physical features that aid in the identification of a tributary, they are not attributes necessary to the determination that a waterway is a tributary. We recommend the Agencies use the following definition, which is used in the proposed rule as a clarifying statement, that a tributary is a “longitudinal surface feature that results from directional surface water movement and sediment dynamics.”⁴³⁸ The Agencies should further add that bed, banks, and OHWM can be indicators of directional surface water movement and sediment dynamics. This revised definition would deemphasize the mandatory presence of certain physical features and focus on whether or not the water body contributes downstream flow and how it functions within the watershed.

⁴³³ The Scientific Advisory Board has a similar concern. *SAB review of the proposed rule*, *supra* note 89 at 2.

⁴³⁴ *Definition of WOTUS*, 79 Fed. Reg. at 22202.

⁴³⁵ Robert W. Lichvar and Shawn M. McColley, U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, ERDC/CRREL TR-08-12, *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Army Engineer Research and Development Center, 2008), available at http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf.

⁴³⁶ Matthew K. Mersel, Robert W. Lichvar, Jennifer J. Gillich, and Lindsey E. Lefebvre, U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, ERDC/CRREL TR-14-11, *Occurrence and Distribution of Ordinary High Water Mark (OHWM) Indicators in Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (U.S. Army Engineer Research and Development Center, Aug. 2014), available at <http://acwc.sdp.sirsi.net/client/search/asset/103602>. American Rivers recognizes the guidance documents that the Corps issued in August 2014 to help delineate OHWMs, however these documents do not adequately address our concerns and we still believe that tributaries should not be defined by whether they have an OHWM or not. For example, the report “Occurrence and Distribution of Ordinary High Water Mark (OHWM) Indicators in Non-Perennial Streams in the Western Mountains, Valley, and Coast Region of the United States,” is focused in the Western part of the U.S. and the findings may not be applicable to other regions. As noted in the report, “How the OHWM and its physical indicators vary spatially and temporally in the rest of the United States remains largely unexplored.” See also, Matthew K. Mersel, Robert W. Lichvar, and Lindsey E. Lefebvre, U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, ERDC/CRREL TR-14-12, *A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification* (U.S. Army Engineer Research and Development Center, Aug. 2014) available at <http://acwc.sdp.sirsi.net/client/search/asset/1036026>.

⁴³⁷ U.S. EPA, Office of Research and Development, EPA/600/R-11/098B, *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (U.S. EPA, Office of Research and Development, 2013).

⁴³⁸ *Definition of WOTUS*, 79 Fed. Reg. at 22202.

Additionally, in making these determinations, the best available information should always be used. The proposed rule states that these determinations can be made using “direct observation or U.S. Geological Survey maps, aerial photography, or other reliable remote sensing information, or other appropriate information.”⁴³⁹ While these are important sources of information, the proposed rule should include language that requires the Agencies to use the best available information to ensure the most accurate determinations of CWA jurisdiction are made. (p. 18-20)

Agency Response: The agencies are committed to using the best information available to make decisions. See response to comment from California Association of Winegrape Growers (Doc. #14593) above for discussion of the definition of tributary in the final rule.

Western Resource Advocates (Doc. #16460)

8.198 *Tributaries (including ditches) without an Ordinary High Water Mark*

The proposed rule would, for the most part, consider only tributaries with an ordinary high water mark (OHWM) as jurisdictional. In the headwaters of the states where WRA works, there are often wetlands and lakes at the extreme headwaters of watersheds that contribute high quality water to their systems and require protection. Rocky Mountain National Park in Colorado has many examples of tarns, beaver meadows and other features that lack an OHWM but whose waters are substantially connected to, and therefore their quality must be protected to maintain the chemical, biological and physical integrity of our nation’s waters.

The proposed rule seeks public comment as to whether these waters should be jurisdictional as tributaries or as adjacent waters. WRA does not advocate one approach over the other, provided that the outcome keeps these waters jurisdictional without the need for a case-by-case review. (p. 15-16)

Agency Response: See response to comment from California Association of Winegrape Growers (Doc. #14593) above.

National Waterways Conference, Inc. (Doc. #12979)

8.199 While a bed, banks and OHWM can be easily identified in some locations, in others those features are not evident, especially an OHWM. Despite that difficulty, the proposed rule would deem any area with those features to be jurisdictional. Realistically, that has the potential to require examination of miles of upstream tributary features both at the project site and between there and a traditionally navigable waterway. The applicant may not even have access to the entire area due to legal or physical constraints.

The agencies themselves do not yet fully understand the potential reach associated with extending jurisdiction based on these features. In August 2014, well into the comment period for this rulemaking, the Corps released two new documents pertaining to OHWM determinations, one of which readily acknowledges a "need for nationally consistent and

⁴³⁹ *Id.*

defensible regulatory practices.”⁴⁴⁰ That can only mean that the Corps' own experts in this area would concede that today's practices have not proven to be nationally consistent and defensible. In fact, the Corps has produced an entire report with the stated objective of determining "the most appropriate factors to include in a national OHWM classification.”⁴⁴¹ As the factors to be used in identifying OHWM have yet to be determined, the agencies may not credibly claim that the proposed rule provides clarification or that it does not expand jurisdiction. (p. 9-10)

Agency Response: See response to comment from Nucor Corp. (Doc. #14963 and summary response 8.1.2 above.

Earthjustice (Doc. #14564)

8.200 Subsection (s)(5) must be read in conjunction with the definition of tributaries in subsection (u)(5). While the definition is a good start, as noted in EPA’s Connectivity Report and by a number of the individual members of the SAB review panel, it is too limiting and therefore not fully in keeping with the science of tributaries and how/when they affect downstream waters. See USEPA Office of Research and Development, “Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence,” External Review Draft (Sept. 2013) at 1-6 (“All tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associated alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported”) and 1-7 to 1-8 (and related chapters) (hereinafter “Connectivity Report”). In particular, the limitation requiring bed, banks and an ordinary high water mark (unless it is a wetland, lake or pond) may exclude some waters from protection that plainly affect downstream waters and that could then result in pollutants to downstream waters. One SAB member comment suggests, for stream (lotic) tributaries, that it should state “bed and bank, and sometimes an [ordinary high water mark]” in order to capture groundwater fed streams that are temporally stable. Member Comments, Aldous at 3. See also, Member Comments Kolm at 31 and 32; Rosi-Marshall at 81 (“Indeed, scientific research has shown that flows that occur intermittently, e.g. during a flood or spring snowmelt, can exert a strong influence on downstream systems. A definition of tributary that includes these small but extremely important systems.....is necessary” and “These chains of aquatic habitats can be thought of as beads on a string that can act in concert to influence the biological integrity of downstream waters”); and Sullivan at 85. (p. 6)

Agency Response: See response to comment from California Association of Winegrape Growers (Doc. #14593) above.

⁴⁴⁰ Matthew K. Mersel, Lindsey E. Lefebvre, and Robert W. Lichvar, U.S. Army Engineer Research and Development Center (ERDC), A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark Classification, at 1-2 (August 2014) (hereinafter "OHWM Classification Review"); see also Matthew K. Mersel and Robert W. Lichvar, U.S. Army Engineer Research and Development Center (ERDC), A Guide to Ordinary High Water Mark (OHWM)

⁴⁴¹ OHWM Classification Review, supra note 36, at 3.

Center for Rural Affairs (Doc. #15029)

- 8.201 The proposed rule defines ordinary high water mark (OHWM) by reference only, directing readers to 33 CFR 328.3(e) and the following definition: “The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.”

The EPA and the Corps should incorporate this definition into the proposed rule. Failing to include this definition in the rule requires readers to dig deeper for a term that is integral to the rule’s implementation—an unnecessary hoop through which the regulated community must jump. This simple solution reiterates and solidifies one of the criteria for the definition of tributary, and could help alleviate the regulated community’s concerns that temporary, precipitation-induced hydrologic features lacking an OHWM would be jurisdictional.

Recommendation: Include the definition of ordinary high water mark in the proposed rule to provide greater clarity and easier access to key terms. (p. 3)

Agency Response: The final rule incorporates the long standing definition of OHWM as suggested.

Texas Wildlife Association (Doc. #12251)

- 8.202 The Proposed Rule Fails to Provide Clarity or Predictability

...using the confusing concept of ordinary high water mark (OHWM) as the key identifier for tributaries... (p. 3)

Agency Response: See response to comment from California Association of Winegrape Growers (Doc. #14593) above.

Protect Americans Now (Doc. #12726)

- 8.203 ... Because tributary is identified by the presence of "a bed and banks and ordinary high water mark" and its contribution of "flow, either directly or through another water," it may capture an untold number of ephemeral streams and similar conveyances caused by erosion. These features are common in the west. Accordingly, jurisdiction will be extended to *lands* that possess waters only a few times during the year, and *lands* that may or may not actually contain a connection, significant or otherwise, to (a)(I) through (a)(4) waters. The impact of automatically including these waters could be dramatic to the farmers and ranchers who work the ranges of the western United States. Because the determination is automatic, the costs of complying with permitting and restrictions should be more properly analyzed. Ephemeral and intermittent waters and erosional features that lack permanent surface water connections should be exempted from any proposed definition of "tributary." (p. 14)

Agency Response: See responses to the two comments from Alameda County Cattlewomen (Doc. #8674) above and summary response 8.1.2 above for discussion

of tributaries and response to comments compendium 11 on Costs and Benefits for discussion of the economic analysis.

Citizens Committee to Complete the Refuge (Doc. #14738.1)

- 8.204 We do take issue with the proposed reliance on the presence of an Ordinary High Water Mark (OHWM) as an indicator of the extent of Corps jurisdiction within tributaries. A September 30, 2014 letter from Dr. David T. Allen, Chair of the Science Advisory Board (SAB) to EPA, expressed the SAB recommendation that EPA:

"...reconsider the definition of tributaries because not all tributaries have ordinary high water marks. An ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark. The Board advises the agency to consider changing the wording in the definition to "bed, bank, and other evidence of flow."

We urge EPA to adopt the recommendations of the SAB, and to replace OHWM with "bed, bank, and other evidence of flow." (p. 2)

Agency Response: See response to comment from California Association of Winegrape Growers (Doc. #14593) above.

Los Angeles Waterkeepers (Doc. #15060)

- 8.205 ...we urge EPA and the Corps to carefully reconsider all implications of the Proposed Rule's language, in particular its effect on jurisdictional waterbodies that the EPA and the Corps have historically protected and intend to regulate under the Proposed Rule, as indicated in the preamble.⁴⁴² Specifically, we urge EPA and the Corps to amend the Proposed Rule's "ordinary high water mark" requirement for tributaries.

Due to its arid environment and extensive network of heavily engineered, channelized waterways, the Los Angeles region is home to many tributaries that are at risk of losing regulatory protections as a result of the Proposed Rule's definition of "tributary." Although the science supports the conclusion that all tributaries are physically, chemically, and biologically connected to downstream rivers,⁴⁴³ it could be prohibitively burdensome, if not impossible, to demonstrate an "ordinary high water mark" in some tributaries, as is required by the Proposed Rule's definition of tributary. In fact, the SAB has explicitly informed EPA that ordinary high water marks may be absent in ephemeral streams within arid and semi-arid environments or in low gradient landscapes.⁴⁴⁴ **Thus,**

⁴⁴² See Proposed Rule, 79 Fed.Reg. 22,188, 22,202 (proposed April 21, 2014) ("The agencies identified these tributary characteristics as indicative that the water is the type of hydrologic feature protected under the CWA because, for example, of a tributary's ability to transport pollutants to downstream traditional navigable waters, interstate waters, and the territorial seas, and thereby have a significant effect on the chemical, physical, or biological integrity of a water identified in paragraphs (a)(1) through (a)(4)."); see also *id.* at 22,202 ("Longstanding agency practice has identified tributaries as including "natural, man-altered or manmade" water bodies.") 4

Connectivity Report, Executive Summary, 1-3.

⁴⁴³ Connectivity Report, Executive Summary, 1-3.

⁴⁴⁴ U.S. Environmental Protection Agency, Science Advisory Board, Consideration of the Adequacy of the Scientific

the finalized rule should incorporate the Scientific Advisory Board’s (“SAB”) recommendation that tributaries be defined by “bed, bank, and other evidence of flow.”

To illustrate, many tributaries to the Los Angeles River and other local jurisdictional waters are characterized by wide, low-gradient concrete beds and steep concrete banks with varying degrees of low-level flows throughout most of the year and intermittent heavy flows during periods of rainfall.⁴⁴⁵ Those tributaries’ characteristics prevent the formation of “[a] clear, natural line impressed on the bank, [formation of] shelving, changes in the character of soil, [or] destruction of terrestrial vegetation” and possibly prevent any other means of demonstrating a high water line.⁴⁴⁶ Nonetheless, the scientific literature available to EPA and the Corps support the conclusion that such tributaries to the Los Angeles River and other local jurisdictional waters have the requisite impact on the chemical, physical, and biological integrity of the waters into which they eventually flow⁴⁴⁷ to necessitate protection under the Clean Water Act.⁴⁴⁸

Therefore, in light of the scientific literature available to the agencies, EPA and the Corps should incorporate the SAB’s recommendation that the agencies revise the Proposed Rule’s “tributary” definition.¹⁰ Specifically, to ensure the Proposed Rule’s effect is consistent with the available science and the agencies’ intent, the Proposed Rule’s definition of the term tributary must be revised to read “a water physically characterized by the presence of a bed and banks and other evidence of flow . . .” (p. 3-4)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

Delaware Riverkeeper Network (Doc. #15383)

- 8.206 Science supports making all tributaries jurisdictional under the CWA. For this reason, the definition of a tributary should not include the requirement of an ordinary high water mark as not all tributaries have high water marks.⁴⁴⁹ Instead, the definition of a tributary

and Technical Basis of the EPA’s Proposed Rule titled “Definition of Waters of the United States under the Clean Water Act, EPA-SAB-14-007 (Sept. 30, 2014), 2.

⁴⁴⁵ Compton Creek and Dominguez Channel and prime examples of such waterbodies. See Attachment A.

⁴⁴⁶ See 33 CFR § 328.3(e).

⁴⁴⁷ See Proposed Rule, 79 Fed.Reg. 22,188, 22,201 (proposed April 21, 2014) (“Tributaries have a significant impact on the chemical, physical, and biological integrity of waters into which they eventually flow . . .”); *see also id.* at 22202 (“A tributary . . . can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (b)(3) or (4).”).

⁴⁴⁸ Connectivity Report, Executive Summary, 1-3.

⁴⁴⁹ Letter from the Science Advisory Board to The Honorable Gina McCarthy, Administrator of the EPA (Sept. 30, 2013).

should include “bed, bank, or other evidence of flow” in place of “high water mark”. (p. 3)

Agency Response: See response to comment from Los Angeles Waterkeepers (Doc. #15060) above.

Missouri and Associated Rivers Coalition (Doc. #15528)

- 8.207 2. The definition proposed for "tributary" creates uncertainty and relies on newly released Technical guidance for identifying tributaries.

The proposed definition of "tributary" - which requires only a bed, banks and an ordinary high water mark ("OHWM") - will create uncertainty in many instances. While a bed, banks and OHWM can be easily identified in some locations, in others those features are not evident, especially an OHWM. The proposed rule would nevertheless make a tributary a "waters of the U.S." if, at any upstream location, a bed, banks and OHWM can be identified. Such a broad definition will potentially require examination of miles of upstream tributary features, quite possibly beyond areas that are accessible either due to legal or physical constraints. The proposed rule's reliance on being able to define and identify an OHWM to determine jurisdiction over tributaries does not provide clarity as there has not been established a reliable and repeatable means to identify an OHWM. Just shortly after the proposed rule was published in April 2014, the Corps of Engineers released new technical guidance (ERDC/CCREL TR-14-13, *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*) for delineating the OHWM in non-perennial streams in the Western U.S. The EPA has stated publicly that similar guidance is being developed for other regions. The Corps also released in August 2014, (ERDC/CCREL TR-14-12, *A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification*) a report with the objective of determining the "most appropriate factors to include in a national OHWM classification." As the factors to be used in identifying OHWM's have yet to be determined it is blatantly false to claim that the proposed rule provides clarification and does not expand jurisdiction. (p. 3)

Agency Response: See response to comment from Nucor Corp. (Doc. #14963 and summary response 8.1.2 above.

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

- 8.208 Although the inclusion of tributaries in the proposed definition of “waters of the U.S.” is scientifically sound and consistent with the purpose and intent of the Clean Water Act, we also note that the definition is too limiting. In particular, the limitation to tributaries with ordinary high water marks excludes some tributaries that will affect waters downstream. Eliminating this limitation would be consistent with SAB’s recommendation. “The Board advises the EPA to reconsider the definition of tributaries because not all tributaries have ordinary high water marks. An ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an ordinary water mark. The Board advises the agency to consider changing the wording in the definition to ‘bed, bank, and other evidence of flow.’” SAB letter at 2. In the California Desert, the stream

banks of a waterway can be slight or nearly imperceptible, and hence the degree of channel confinement can vary along the line of flow. According to the California Department of Fish and Wildlife in a review of Dryland Water ways, “[w]hile the hydrologic controls are fundamentally the same in dryland regions as those of temperate and humid areas the pronounced distribution and temporal intensity and discontinuities in runoff volumes and durations for dryland streams lead to a much less ordered pattern of processes and stream forms (Thornes 2009). As a consequence, dryland streams are often outside the normal range of the hydrologic and morphologic characteristics of their temperate and humid region counterparts, and their hydrology, sediment transport characteristics, and resultant channel forms characteristics, and resultant channel forms.” A Review of Stream Processes and Forms in Dryland Watersheds, California Department of Fish and Game, Prepared by Kris Vyverberg, Senior Engineering Geologist Conservation Engineering, December 2010, at p. 5.

In addition, the physical characteristics – scour lines, flood debris, etc. – used to delimit waters are left by frequently recurring floods, whereas riparian functions can be supported by less frequent floods. In the East, this is unimportant because seasonal and annual flow variations are muted. For example, the increase in flow between the one-year and 50-year flood in a Pennsylvania watershed is 2.5 times (i.e., the 50-year flood carries 2.5 times as much water as the one-year flood). Western dryland systems, however, are much more variable. The same figure in a dryland stream is 280, and in small southern California dryland basins the 50-year flood may carry 400 times as much water as the one-year flood. Western riparian vegetation has adapted to establish and survive in portions of the floodplain inundated relatively infrequently, beyond the boundary of physical characteristics left by the frequent flood events and hence outside of Clean Water Act jurisdiction. Aaron Allen and D. Malanchuk, Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest, June 2001, USACOE, South Pacific Division; and Allen, A., remarks at 5th Annual California Regulatory Coordination Conference, USCOE South Pacific Division, Sacramento, California, December 18, 2002. These dynamic hydrologic regimes should also be subject to Clean Water Act protection. (p. 7)

Agency Response: See response to comments from Southern Environmental Law Center et al. (Doc. #13610) above. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

Waterkeeper Alliance et al. (Doc. #16413)

- 8.209 ...the agencies should not narrow jurisdiction over tributaries through the adoption of a mandatory requirement for tributaries to possess a bed, bank, and Ordinary High Water Mark ("OHWM"). The existence of an OHWM should not be a requirement for asserting jurisdiction over tributaries, as it is not supported by law and science. As noted in the Connectivity Report and the Member Comments, the requirement of an OHWM improperly limits jurisdiction, and is not consistent with the science regarding how tributaries are affected by pollution or how tributaries impact downstream waters.

The Proposed Definition incorporates the definition of OHWM from existing' regulations developed for the CWA Section 404 Program into the definition of tributary. The definition is taken from 33 C.F.R. 328.3(e) which provides:

The term ordinary high water mark means that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

While this definition may have some reasonable meaning in the context of determining the boundaries of waters where dredge and fill activities are proposed, it has nothing to do with the extent of "waters of the United States" in the context of regulating and responding to the discharge of pollutants. As the Corps noted in 1977:

Prior to enactment of the FWPCA, the mean tide line or (mean higher tide line on the West Coast) was used to delineate the shoreward extent of jurisdiction over the regulation of most activities in tidal waters under the 1899 Act as well as for mapping, delineation of property boundaries, and other related purposes. In freshwater lakes, rivers and streams that are navigable waters of the United States, the landward limit of Jurisdiction has been traditionally established at the ordinary high water mark. The regulation of activities that cause water pollution cannot rely on these artificial lines, however, but must focus on all waters that together form the entire aquatic system. Water moves in hydrologic cycles, and the pollution of this part of the aquatic system, regardless of whether it is above or below an ordinary high water mark, or mean high tide line, will affect the water quality of the other waters within that aquatic system.⁴⁵⁰

Thus, the concept of an OHWM or High Water line was utilized in the context of the Rivers and Harbors Act of 1899 and jurisdictional consideration related to traditional navigability where "[t]he need to protect navigable capacity of a waterway above the mean high water line was obviously minimal."⁴⁵¹ The inapplicability of this limitation to the CWA was addressed in the *Holland* case which outlined both the authority and need to regulate waters beyond the reach of the traditional navigability tests and stated that "to recognize this and yet hold that pollution does not affect interstate commerce unless committed in navigable waters below the mean high water line would be contrary to reason."⁴⁵²

These long-held views as to the inapplicability of the OHWM to the meaning of "waters of the United States" under the CWA are confirmed by the Connectivity Report which further provides that "[a]ll tributary streams, including perennial, intermittent, and ephemeral streams, are physically, chemically, and biologically connected to downstream rivers via channels and associates alluvial deposits where water and other materials are concentrated, mixed, transformed, and transported."⁴⁵³ There is nothing in the

⁴⁵⁰ 42 Fed. Reg. 37122, 37128 (July 19, 1977).

⁴⁵¹ *Holland*, 373 F. Supp. at 670-673.

⁴⁵² *Id.*

⁴⁵³ Connectivity Report, supra note 3, at 1-3, and related Chapters.

Connectivity Report to support the idea that these connections are limited to tributaries with OHWMs or that OHWMs are the sole indicator of connectivity. Individual SAB members also expressed disagreement or concern with the addition of a requirement for an OHWM for tributaries. For example, one member stated that:

The definition of the lotic-type tributary is appropriately comprehensive because it inherently includes ephemeral and intermittent streams (as well as perennial) streams. The former types are often overlooked but ecologically important, particularly in arid landscapes with seasonal patterns of precipitation. However, there may be some types of tributaries, such as spring-fed streams, that lack an obvious OHWM because their groundwater sources dominate the water budget, are temporally stable, and so there is no fluctuation in the hydrograph to generate a 'line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear line on the banks .. .' Therefore the definition should be 'bed and bank, and sometimes an OHWM.'⁴⁵⁴ (p. 30-32)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. As described in the summary responses 8.1 and 8.1.2, the final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. The agencies continue to address regional concerns about the identification of the OHWM through the development of regional manuals that apply the indicators discussed in the regulation and RGL 05-05 to the regional hydrologic and climatic circumstances. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the summary responses 8.1 and 8.1.2 and the TSD.

Congress of the United States, Senate Committee on Environment and Public Works et al. (Doc. #16564)

8.210 The proposed "waters of the United States" rule designates "tributaries" as jurisdictional per se.⁴⁵⁵ "Tributary," however, does not mean "a stream feeding a larger stream or a lake," as one would understand this term in normal parlance.⁴⁵⁶ Instead, EPA and the Corps have proposed a sweeping definition for "tributary"⁴⁵⁷:

...

- Landowners will face a significant challenge in determining whether a water is "physically characterized by the presence of a bed and a banks and [OHWM]." In making this determination, they must keep in mind that the Corps' prior OHWM assessments have "extended ' the waters of the United States' to virtually any land

⁴⁵⁴ Member Comments, *supra* note 72, Aldous at 2-3 (internal citations omitted).

⁴⁵⁵ Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22 188, 22262-22263 (proposed April 21, 20 14) (hereinafter, " Proposed Rule") .

⁴⁵⁶ See Webster's New Collegiate Dictionary 1238 (Merriam-Webster 1979).

⁴⁵⁷ See Proposed Rule, 79 Fed. Reg. at 22263.

feature over which rainwater or drainage passes and leaves a visible mark even if only the presence of litter and debris."⁴⁵⁸

- If water can be traced from a TNW upstream to a local wetland, lake, or pond, that alone is sufficient to bring these water features within the definition of "tributary," even if they lack a bed and banks or OHWM. This standard puts those who own land containing wetlands, lakes, or a pond on notice that their property will likely constitute "waters of the United States" if the proposed rule is finalized.

... (p. 3, 4)

Agency Response: See response to comment from California Association of Winegrape Growers (Doc. #14593) above.

O'Neil LLP (Doc. #16559)

8.211 The Proposed Rule needs to clarify the term "*Ordinary High Water Mark*" to be clear to the public that this term, as used in the Rule, is not being expanded by the Agencies. On the bottom of page 22259 and then on page 22260, the Proposed Rule references "technical assistance for problematic OHWM delineations" and references the document R.W. Lichvar and S.M. McColley, U.S. Army Corps of Engineers, *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* ERDC/CRREL TR-08-12 (2008) as official guidance. This manual has not been subject to notice and comment rulemaking, but it expands jurisdiction in the Arid West to the ten-year area of the floodplain. Any such expansion of jurisdiction should be identified first to the public and considered only after the public has had an opportunity to review and comment on the merits of such an expansion. Furthermore, no such expansion ought to be allowed by the agencies which would go beyond the boundaries established by Congress in the definition of "waters" regulated by the terms of the CWA. (p. 5)

Agency Response: See response to comment from Nucor Corp. (Doc. #14963 and summary response 8.1.2 above.

8.2. INCLUSION OF WETLANDS, LAKES, DITCHES AS TRIBUTARIES

Agency Summary Response

The proposed definition of "tributary" indicated that a water must have a bed, banks, and ordinary high water mark (OHWM), and also provided that wetlands, lakes, and other waters without these physical characteristics could nonetheless be considered a tributary so long as they contributed flow to a TNW, interstate water, or territorial sea. Wetlands typically lack bed and banks and OHWM, while lakes and ponds typically have an ordinary high water mark and a bed but may lack banks. The proposed rule expressly sought comment on whether wetlands, ponds,

⁴⁵⁸ *Rapanos v. United States*, 547 U.S. 715, 725 (Scalia, J., plurality opinion) (internal quotations and citation omitted).

and lakes should be considered tributary, or alternatively such waters should be evaluated as adjacent waters.

Issue: Wetlands, Lakes, and Ponds

A majority of commenters called for wetlands to be excluded from the tributary definition because they generally do not have a bed, banks, and OHWM. If the tributary definition included such waters, several argued, the definition would contradict itself by defining tributary using physical requirements while simultaneously waiving those physical requirements for some waters. Inclusion of wetlands, several commenters asserted, would effectively rescind any clarity provided by the bed, banks, and OHWM criteria. Other commenters emphasized that “tributary” by many is considered to mean moving water and treating wetlands, ponds, or lakes as tributaries could create confusion for regulated communities. Some commenters noted that under the proposed definition of tributary, lakes and ponds may be jurisdictional even if they only contain water when there is nearby rain or snowmelt. This could create confusion because, unlike wetlands which contain specialized vegetation even when dry, ponds and lakes need not have such vegetation. As a result, a definition of tributary that included ponds and lakes would have uncertain limits and potentially substantially increase the scope of jurisdiction. Some commenters noted that a “connection” to downstream waters should not lead to a wetland, lake, or pond being tributary, since all wetlands, lakes, and ponds at full retention capacity within their basin will overtop upland and contribute flow. These commenters recommended any evaluation consider the water’s connectivity under normal circumstances.

Many commenters called instead for wetlands, lakes and ponds that lack bed and banks, or OHWM, to be evaluated as an adjacent water. Several indicated that such lentic-type (not flowing; still) waters are more appropriately considered as adjacent. Some recommended that such waters need a case-specific significant nexus analysis in order to be jurisdictional, even if evaluated as adjacent. Others noted that adjacency was the appropriate way to protect headwater wetlands, without indicating whether such protection should be *per se* or after an affirmative significant nexus evaluation.

Some commenters supported the inclusion of wetlands in the definition of tributary, noting that requiring bed and banks would exclude important headwater areas that provide flow but also are important as headwater wetlands.

The final rule does not consider ponds, lakes, and wetlands to be tributaries. Instead, the final rule defines adjacent waters to include wetlands, lakes, and ponds that connect segments of tributaries or at the head of the tributary system. The proposed rule expressly sought comment on whether wetlands, lakes, and ponds should be considered tributary or as adjacent waters, recognizing that it might add an element of uncertainty to the definition of “tributary” to include such waters that lacked the physical features called for by the definition. As summarized above, public comments overwhelmingly indicated that it was confusing to consider wetlands, lakes, and ponds as tributary. In addition, the Science Advisory Board commented that tributaries are not typically defined to include lentic systems, and suggested that the agencies reconsider including ponds, lakes, and wetlands as adjacent waters instead of tributaries. For more discussion, see Compendium 3 on Adjacency, and the Technical Support Document.

Issue: Ditches as Tributary

Several commenters discussed ditches as part of their discussion of whether wetlands, lakes, and ponds should be considered as tributaries. Many noted that ditches should be excluded from the definition of tributary altogether, because they might or might not be hydrologically connected to another feature and so cannot always be presumed to have a significant nexus. A number of commenters also would exclude manmade and man-altered features from the definition of tributary because their inclusion would subject water management facilities to full CWA jurisdiction.

The final rule does not distinguish among natural, modified, and constructed features in the definition of “tributary.” If a water meets the definition of “tributary” and is not excluded under paragraph (b), the water is considered jurisdictional. The rationale for this approach is based on the fact that modified and constructed tributaries perform many of the same functions as natural tributaries, especially the conveyance of water that carries nutrients, pollutants, and other constituents, both good and bad, to traditional navigable waters, interstate waters, and the territorial seas. Modified and constructed covered tributaries also provide corridors for movement of organisms between headwaters and traditional navigable waters, interstate waters, and the territorial seas. The important effect – and thus the significant nexus – between a tributary and a traditional navigable water, interstate water, and the territorial sea is not broken where the tributary flows through a culvert or other structure. The scientific literature recognizes that features that convey water, whether they are natural, modified, or constructed, provide substantial connectivity between streams and downstream waters. For example, ditches that meet the definition of “tributary” quickly move water downstream to traditional navigable waters, interstate waters, and the territorial seas due to their often straightened and channelized nature, transporting downstream sediment, nutrients, and other materials.

Note that in order to be considered tributary, under the final rule a stream or ditch must not only have the physical characteristics called for under the definition (i.e., bed, banks, and ordinary high water mark), the water must also contribute flow to a traditional navigable water, interstate water, or territorial sea either directly or indirectly through another water. In addition, paragraph (b) of the final rule excludes ditches that do not contribute flow to a traditional navigable water, interstate water, or territorial sea. Thus, the final rule is responsive to some commenters’ concern that a ditch might be considered a jurisdictional tributary even where not hydrologically connected.

While the final rule does exclude several types of constructed waters from jurisdiction, it continues to consider constructed tributaries as jurisdictional unless expressly excluded in paragraph (b) for the reasons described in summary essays in this Tributary Compendium, the final rule preamble, and the Technical Support Document. The agencies also note that current practice regulates many modified and constructed features as waters of the United States; see, for example, the 2008 *Rapanos* Guidance discussed earlier.

The issue of ditches as tributary is discussed further in this compendium under “Summary of Comments and Responses for “Tributaries – Definition,” which contains comments addressing ditches outside the sub-issue of whether wetlands, lakes, and ponds should be considered tributary. In addition, another compendium addresses the issue of excluded ditches specifically, and responds to concerns similar to those raised by comments excerpted below.

Specific Comments

Region 10 Tribal Caucus (Doc. #14927)

8.212 The Tribal Caucus supports the broad definition of Waters of the U.S. (“WOTUS”) to include:

...all other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters: Which are or could be used by interstate or foreign travelers for recreational or other purposes; from which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or which are used or could be used for industrial purposes by industries in interstate commerce.

In particular, the Tribal Caucus strongly supports the proposed rule for the clear protections it restores to headwaters, intermittent and ephemeral streams, and to wetlands and other waters located near or within the floodplain of these tributaries and the [...] (p. 2)

Agency Response: Under the final rule, an interstate commerce connection is not sufficient to meet the definition of “waters of the United States.” The agencies’ conclusions in the final rule that certain categories of waters are jurisdictional are based on careful examinations of the science and the law that particular categories of waters significantly affect the chemical, physical, and biological integrity of a traditional navigable water, interstate water, or the territorial seas. In reference to headwaters, intermittent and ephemeral streams, the final rule provides that all features meeting the definition of “tributary” at paragraph (c) of the rule are waters of the United States unless they are specifically excluded in paragraph (b). The jurisdictional status of “wetlands and other waters located near or within the floodplain of these tributaries” is addressed in the adjacency provisions of the final rule, which are described in Section IV(G) of the preamble and section VIII of the Technical Support Document.

Pueblo of Sandia (Doc. #2729)

8.213 The Pueblo also supports the definition of tributary and the importance of defining ditches as “waters of the US” where they function as tributaries conveying water flows and pollutants downstream. Scientific evidence has shown that these waters have an important biological, hydrological and chemical connection to downstream waters and their protection is paramount. (p. 2)

Agency Response: Under the final rule, ditches that meet the definition of “tributary” at paragraph (c) of the rule are waters of the United States unless they are specifically excluded in paragraph (b).

8.214 Wetlands store and filter flood flows, protect water quality, provide essential fish and wildlife habitat and reduce flood flow that can threaten communities and community infrastructure. Wetlands, even so-called isolated wetlands that are not adjacent to streams

provide important biological and hydrological functions and should be protected. The Pueblo asks that the final rule recognize these non-adjacent wetlands. (p. 2)

Agency Response: The final rule reflects the agencies careful integration of science with policy judgment and legal interpretation to determine which waters have a “significant nexus” to traditional navigable waters, interstate waters, or the territorial seas. Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters,” and Section IV(H) of the preamble and section IX of the Technical Support Document discuss “case-specific waters of the United States.”

Missouri Department of Transportation (Doc. #3313)

8.215 3. Comments relating to the inclusion of wetlands under the definition of tributary

Proposed Requirement or Section Addressed: The requirement that we are addressing is the intent of the proposal to include wetlands in the tributary definition (as referenced on page 22206 of the federal register).

Comment: Again, for the sake of regulatory clarity, MoDOT supports the exclusion wetlands from the tributary definition because they generally do not possess a defined bed, bank and OHWM.

Recommendation: For the purposes of clarity, capturing jurisdiction of headwater wetlands and wetlands in connecting tributaries in the “adjacent” definition (through use of the terms neighboring, floodplain, and riparian zone), seems to be a much better way to address this issue. (p. 2-3)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Virginia Department of Transportation (Doc. #12756)

8.216 On p. 22263, second column, paragraph (c)(5), Tributaries are defined to include ponds that contribute flow directly or indirectly to a WOUS. This definition creates another potential point of confusion, as upland ponds could discharge surplus waters either via overland flow or through an excavated channel into other tributaries (that are truly jurisdictional). This definition, then, appears to exert jurisdiction over those impoundments as well and does not clearly exempt them from regulation. We recommend that the reference to ponds be stricken throughout this proposed regulation. (p. 6)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. While such features may be waters of the United States under other provisions of the final rule, for example as “adjacent” waters, paragraph (b) of the final rule includes a number of exclusions under which certain ponds would not be considered waters of the United States. Examples of “upland ponds” that would not be waters of the United States include artificial lakes and

ponds created in dry land and used primarily for uses such as stock watering, irrigation, settling basins, rice growing, or cooling ponds.

North Carolina Forest Service, North Carolina Department of Agriculture (Doc. #14122)

8.217 COMMENT 3

Change a portion of the proposed definition of the term "tributary" to remove the reference to ditches, and clarify the intent of the definition, as we suggest below:

Current Proposed Text We Suggest Replacing:

..... .. A tributary, including wetlands, can be a natural, man altered, or man-made waters and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraphs (b)(3) or (4) of this section.

Suggested Change:

..... . "A tributary, Impoundments can be regulated

- features which may also include wetlands, is a naturally occurring or human-altered body of water such as a stream, creek, river, lake, pond, permanent impoundment, or commercially navigable canal. For the purposes of this rule, ditches shall not be considered to be a tributary."

Justification for Comment 3:

Our contention is that ditches, including those excavated for minor drainage in wetlands as allowed under Section 404 (40CFR 232.3), are not appropriate to be considered as waters of the U.S. Ditches may or may not be hydrologically-connected to another water feature, and therefore cannot always be presumed to influence the biological, chemical, or physical quality of nearby or downstream receiving waters; either waters in close proximity or waters that are adjacent, to the ditch. Many ditches only collect or transport surface water immediately following rainfall events, and therefore do not contribute perennial flow. (p. 2-3)

Agency Response: The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of "tributary" and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction. Section IV(F) of the preamble to the final rule discusses tributaries and section IV(I) discusses "Waters and Features that Are Not Waters of the United States." See also the summary response for "Relevance of Flow Regime" in Section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams."

Texas Commission on Environmental Quality (Doc. #14279)

8.218 Defining boundaries and limits for explicit categories of waters of the U. S. [33 CFR §328.3(a)(1)-(5)]

The TCEQ requests that wetlands not be defined as part of a tributary system. The proposed rule states that wetlands, lakes, and ponds which contribute flow to (a)(i)-(3) waters will be considered tributaries 133 CFR §328.3(c)(5)]. However, in the preamble, EPA requests comments on whether wetlands should be considered adjacent waters rather than tributaries or potentially addressed through other considerations of connectivity (pages 22203 and 22208). EPA and the Corps should address wetlands as either adjacent waters or other waters depending on the case-specific facts. (p. 6)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

North Dakota Office of the Governor et al. (Doc. #15365)

8.219 **8. The proposed rule’s treatment of wetlands is inconsistent and overly broad, making virtually all wetlands jurisdictional.**

Connectivity of wetlands under federal jurisdiction should be limited to those immediate or proximate to major flowing water bodies that are navigable in the traditional sense. Extended connections should be exempted.

a. When defined as tributaries with ephemeral flow, the widely varying climactic regimes in North Dakota will inevitably make almost all wetlands jurisdictional.

The proposed expansive definition of tributaries includes anything with a bed and banks and ordinary high water mark that ever sends any flow, and waters that contribute flow – either directly or through another water – even if the flow is ephemeral.⁴⁵⁹ The chain of waters included under the tributary definition⁴⁶⁰ is expanded even further by including adjacent waters and including other waters⁴⁶¹ by situation. This expansive definition means that almost all surface waters will be jurisdictional under various climactic scenarios. Under these proposed definitions, few wetlands would be exempt in a realistic field setting.

Depending on the year, climactic changes allow wetlands to overtop and connect with waters that would be tributaries or are completely dry. There are many large prairie potholes that in the 1930s were mostly dry and disconnected from any outlet. During the half century following the 1930s multi-decadal drought, many wetlands remained isolated. Following the wet shift in the 1990s, these wetlands have increasingly coalesced

⁴⁵⁹ 79 Fed. Reg. 22188, 22263.

⁴⁶⁰ 79 Fed. Reg. 22188, 22198 (“All waters, including wetlands, adjacent to a traditional navigable water, interstate water, the territorial seas, impoundment, or tributary.”).

⁴⁶¹ Id. (“d.1. 79, No. 76/Monday, April 21, 2014/Proposed Rules, impoundment, impoundmenttate water, the territorial seas, impoundment including wetlands, located in the same region, have a significant nexus to a traditional navigable water, interstate water or the territorial seas”).

or connected with other wetlands and to larger water bodies. Which waters are connected varies depending on time and the current climate regime.

Under EPA's proposed rule, recent climatic events would authorize broad federal authority over depressional areas that are often isolated from the navigable water or even dry, but periodically connected. As above, it would be one thing to regulate a water quality component at the point of entry to a clearly navigable water during the time of physical connection. To use that temporary connection as a pretense to redefine that waterbody itself permanently as WOTUS represents a massive inflation of federal jurisdictional claims. (p. 7-8)

Agency Response: See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document further discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion that all waters that meet the definition of “tributary” and that are not excluded in paragraph (b), have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. The final rule reflects the agencies careful integration of science with policy judgment and legal interpretation to determine which waters, including wetlands, have a “significant nexus” to traditional navigable waters, interstate waters, or the territorial seas. Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters,” and Section IV(H) of the preamble and section IX of the Technical Support Document discuss “case-specific waters of the United States.”

Ohio Department of Natural Resources et al. (Doc. #15421)

- 8.220 As proposed, the definition of "tributary" would include water resources "such as rivers, streams, lakes, impoundments, canals, and ditches" as well as wetlands when they directly or indirectly contribute flow to a water body included in (a)(1) to (a)(3) of the proposed rule water that are not otherwise excluded by (b)(1) to (b)(5) of the rule. The multitude of reasons for this were provided in the discussions accompanying the proposed rule, but the practical reason for including these resources into the term "tributary" was to allow the Corps and EPA to more easily take jurisdiction on the waters without having to complete a case-specific significant nexus determination.

The USEPA and USACE may feel that the reason to do so may well be justified, but there will be additional implications to inclusion of many types of aquatic resources into the proposed definition of "tributary." While the definition for "wetlands" was also included in the proposed rule, no definitions were added for the other aquatic resource types (rivers, streams, lakes, impoundments, canals, and ditches) that would be included in the overall encompassing term of "tributary." It is important that these aquatic resources also be clearly defined in the rule. If this is not done, it will result in the continued confusion of how to regulate these resources. While water resources such as rivers, streams, lakes, impoundments, canals, and ditches are all proposed to be included under the term "tributary", these resources do not possess the same defining physical

characteristics, they do not provide the same ecological functions and values, and they do not have the same influence on the character of a downstream water body. Current Nationwide Permit (NWP) conditions (including specific regional conditions) have varying applicability criteria based on the type and quantity of water resources impacted. Specific mention is made to streams, wetlands, and waterbodies. The types of water resources included in the term "tributary" must also be clearly defined so that an applicant and regulator can assess what type of aquatic resource is being impacted, what impact calculations may be applicable, what type of waterway permit may be required (NWP or individual 404j), and what type of aquatic resource mitigation may be appropriate. For example, while both a stream and a ditch may be considered a "tributary" by the proposed definition, and therefore jurisdictional, would they be regulated the same? Would they require the same "tributary" mitigation, even though they do not function in the same manner ecologically? The same could be considered for the treatment of a stream type "tributary" versus an Impoundment type "tributary", or lake type "tributary." The way it is currently addressed in the proposed rule continues, or exacerbates, the ambiguity in defining the water resources, and likely would increase the inconsistencies in regulation of the water resources between Corps Districts (and Individual regulators within those Districts) nationwide.

The proposed rule revision is the EPA's and the USACFs chance to clarify and define the types of water resources that are regulated by the EPA and USACE. These definitions could then be referred to and referenced in future regulatory guidance on Identification and delineation protocols as well as compensatory mitigation rules. (p. 7-8)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of "tributary" and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction. Section IV(F) of the preamble to the final rule discusses tributaries and section IV(I) discusses "Waters and Features that Are Not Waters of the United States." See also the summary response for "Relevance of Flow Regime" in Section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams." Permitting programs under the CWA, including Section 404 permitting, are beyond the scope of the final rule.

- 8.221 1. The agencies request comment on all aspects of the proposed definition of tributaries and in particular on whether and how this definition can be revised to provide increased clarity as to the distinction between jurisdictional tributaries, as defined, and nonjurisdictional features such as gullies, rills and non-wetland swales. The agencies seek comments on how to provide greater regulatory certainty as to which specific aquatic features are jurisdictional tributaries, and which are not, Commenters should

explain how any suggestions are consistent with the Clean Water Act, applicable case law, and the scientific literature regarding connectivity of aquatic features.

MRM [Division of Mineral Resources Management]: While the proposed rule intent is to clearly spell out and provide specific definition for “tributary” that includes characterization of a “bed, bank and ordinary high water mark” and provides “flow either directly or indirectly to waters in (a)(1) through (4) of the proposed rules, it is unclear and somewhat confusing to include wetland, lakes, and ponds as “tributaries” as well. By including these other water features into the definition for “tributary”, which appears to be a substitution for “streams” in the new policy, adds to the confusion. (p. 11)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

- 8.222 3. The agencies recognize that it may add an element of uncertainty to the definition of tributary to include features as tributaries (wetlands) which do not have a bed and banks and OHWM. An alternate approach would be to clarify that wetlands that connect tributary segments are adjacent wetlands, and as such are jurisdictional waters of the United States under (a)(6). The agencies request comment on this alternate approach, as well as any other suggestions commenters may have on how to clarify the definition of tributaries and provide a clear explanation of their lateral and upstream extent.

MRM: Wetlands should not be included within the definition for “tributary” as they do not have defined bed, bank, or ordinary water mark. The proposed alternate approach is the preferred.

The jurisdictional nature of tributaries is described somewhat unclearly. A jurisdictional 8b tributary contributes flow either directly or through another water to (a)(1) through (a)(4) waters -- interstate or foreign commerce waters, interstate waters, the territorial seas, or impoundments of such waters. This is a very indirect approach to stating that all streams to the head waters of first order streams are jurisdictional, which is apparently the intent. It would be much clearer to state this fact more directly, rather than requiring an inference. Also, it appears, based on the tributary definition, that wetlands, lakes, and ponds are not tributaries if (1) they contribute flow to impoundments of (a)(1) through (3) and (5) waters and to (a)(7) waters (“other waters”). The basis for this is unclear and should be clarified. (p. 16)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Attorney General, State of Michigan (Doc. #16469)

- 8.223 the proposed definition of “tributary” includes the following language: “wetlands, lakes and ponds are tributaries (*even if they lack a bed, banks, or ordinary high water mark*) if they contribute flow [to a core water].” (Emphasis added.) This is contrary to the common understanding of a tributary, which is an identifiable water course that connects to a larger stream, river, or other water body. This is reflected in Michigan law, which for decades has described the streams, lakes, or ponds that may be tributaries to larger bodies of water as a “body of water that has *definite banks, a bed, and visible evidence of a*

continued flow or continued occurrence of water. . ." Part 301 of the NREPA, Mich. Comp. Laws § 324.30101(i) (defining "[i]nland lake or stream") (emphasis added). (p. 5)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Tennessee Department of Transportation (Doc. #16470)

- 8.224 The proposed rule defines tributaries of certain other waters as jurisdictional by rule and includes a new definition of "tributary." TDOT agrees with the concept of defining certain tributaries as jurisdictional by rule. TDOT also agrees that it is appropriate and useful to include a definition of the term "tributary" in the regulations. However, TDOT is concerned that the proposed rule would, in effect, substantially broaden the universe of tributaries that are deemed jurisdictional by rule. In as much, TDOT recommends revising the rule to be more consistent with the treatment of tributaries in the 2008 Guidance.

...

C. Relationship to exclusions for ditches

The definition of "tributary" in the proposed rule includes "ditches not excluded in paragraph (b)(3) or (4) of this section." TDOT interprets this statement to mean that, if a ditch is excluded by paragraphs (b)(3) or (b)(4), the ditch cannot be considered jurisdictional, even if it would otherwise, to a TNW would not meet the definition of "tributary."

TDOT suggests that the final rule should make clear that the exclusions take precedence over the jurisdictional-by-rule provisions. (p. 4, 5)

Agency Response: See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section I of the Technical Support Document further discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Paragraph (b) of the final rule identifies exclusions and makes clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule.

State of South Dakota (Doc. #16925)

- 8.225 In an EPA blog post dated July 7, 2014, Nancy Stoner, EPA Acting Assistant Administrator for Water, made several claims unsupported by the actual language of the rule. In the post, Ms. Stoner stated, "The proposed Waters of the U.S. rule does not regulate new types of ditches, does not regulate activities on land, and does not apply to

groundwater." The rule includes "ephemeral streams," "wetlands," and "seasonal ponds." These are areas that are usually dry but where water channels and flows or ponds when it rains. By categorically designating them as "waters of the United States," any farming or ranching activities which have historically occurred here are now subject to Clean Water Act permitting and/or restrictions. Further, by including "ditches" as part of the definition, the agencies are clearly exceeding the authority granted under the Clean Water Act to regulate "navigable" waters.

Most concerning, Ms. Stoner's blog indicated that, "The proposed rule does not expand jurisdiction." The rule includes non-navigable features that do not contain water most of the time as a part of the categorical definition of waters of the United States. Under current rules, these features meet the definition of waters of the United States only if a case-by-case finding that the area has a significant effect on navigable waters. Moving from a case-by-case determination to a categorical inclusion is an expansion of the rule. (p. 4)

Agency Response: Ephemeral streams, wetlands and seasonal ponds have all been subject to consideration as waters of the United States for decades. Section I of the Technical Support Document discusses the legal basis of the final rule, including the historic scope of the regulatory definition of "waters of the United States. See summary response for "Relevance of Flow Regime" in section 8.1.1 of this RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The final rule excludes most ditches that are not relocated tributaries or excavated in a tributary. See the summary response for Section 8.2, particularly the subsection on "Ditches as Tributary." The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. Paragraph (b) of the final rule also excludes many artificial lakes and ponds, detention and retention basins and water filled depressions created in dry land incidental to mining or construction activity from being considered waters of the United States. All exemptions in the CWA, including those at section 404(f) for normal farming, silviculture and ranching activities remain in effect and unchanged as a result of the final rule.

State of Alaska (Doc. #19465)

- 8.226 The inclusion of wetlands, lakes, and ponds in the definition of "tributary" adds significant confusion and would create significant implementation problems. Any rulemaking should not subject lakes and ponds to the significant nexus test, as that test is inapplicable for these types of waters, and is only applicable, if at all, to wetlands. Further, ponds and lakes without a surface water connection to downstream navigable waters should be categorically excluded from jurisdiction. (p. 26)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Section II of the Technical Support Document discusses significant nexus analysis. Paragraph (b) of the final rule excludes many artificial

lakes and ponds, detention and retention basins and water filled depressions created in dry land incidental to mining or construction activity.

Skamania County Board of Commissioners, Washington (Doc. #2469.1)

8.227 ...the EPA and the Corps state that the purpose of the rule is to provide clarity in the jurisdictional process. However, the definition is unclear. The proposed rule states that man-made conveyances, including ditches, are considered jurisdictional tributaries if they have a bed, bank and ordinary high water mark (OHWM) and flow directly or indirectly into a "water of the U.S.," regardless of perennial, intermittent or ephemeral flow. The proposed rule excludes certain types of upland ditches with less than perennial flow or those ditches that do not contribute flow to a "water of the U.S." **However, key terms like "uplands" and "contribute flow" are not defined. It is unclear how currently exempt ditches will be distinguished from jurisdictional ditches, especially if they are near a "water of the U.S."** A public infrastructure ditch system - roadside, flood or stormwater - is interconnected and can run for hundreds, if not thousands of miles. Ditches are not wholly in uplands nor do they strictly drain in uplands, since they are designed to convey overflow waters to an outlet. (p. 3-4)

Agency Response: See the summary response for Section 6.2 in the Ditches compendium of this RTC for a discussion of how the exclusions for ditches were revised and clarified for the final rule. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of "tributary" and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction. Section IV(F) of the preamble to the final rule discusses tributaries and section IV(I) discusses "Waters and Features that Are Not Waters of the United States." See also the summary response for "Relevance of Flow Regime" in Section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams."

Franconia Township, Pennsylvania (Doc. #8661)

8.228 Wetlands should also not be considered "tributaries" in the final rule, as they should have to meet "adjacency" or "significant nexus" tests associated with "adjacent" or "other waters" to be considered "waters of the U.S." (p. 3)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Murray County Board of Commissioners (Doc. #7528)

8.229 **VI. WETLANDS AS TRIBUTARIES**

The proposed rule includes as part of the definition of "tributary" a wetland that has a stream inlet and a stream outlet, or just a stream outlet as in the case of a wetland headwater.

This proposal is one of the more absurd wordsmithing aspects to the proposed rule. The rule's prefatory comments seek comment on whether to include, as part of the definition of a "tributary," a wetland that contributes surface water to downstream navigable waters. These proposed tributary wetlands may be headwaters of the tributary network or located outside of the headwaters within a stream channel itself.

Wetlands are not understood as tributaries in either common sense, plain language or in statutory and caselaw verbiage. It is not logical to refer to a wetland, a body of water without a defined bed, bank, and ordinary high water mark, as a "tributary."

Wetlands that are connected hydrologically to a stream with perennial flow into navigable water certainly meet the hydrological connection test authored by Justice Scalia under *Rapanos* and likely also meet the significant nexus test authored by Justice Kennedy.

We are concerned that the proposed rule attempts to define wetlands as jurisdictional tributaries if the wetland, when at full retention capacity, overflows across upland during a rainfall event, thereby establishing a hydrological connection to a perennially flowing tributary. All wetlands, when at full retention capacity within their basin, flow overtop upland when additional rainfall occurs. That connection, in and of itself, does not make the wetland jurisdictional as a tributary to other tributaries or covered waters.

The agencies must evaluate the connectivity and nexus of waters and wetlands under "normal circumstances." For example, when delineating a wetland, evidence gathered under conditions that are too wet or too dry are typically not considered as credible indicators for identifying whether the land is classified as "wetland." Similarly, using hydrological connections between wetlands during extreme rainfall events and tributaries does not create a credible indicator that the wetland has a jurisdictional connection that significantly impacts the integrity of navigable waters.

We believe that the agencies' attempt to describe some wetlands as tributaries is an attempt to bring more wetlands into jurisdiction as "navigable waters" without proper scientific or legal justification. If a wetland's outlet is the justification for a finding of "significant nexus" under Justice Kennedy's test in *Rapanos*, then the wetland is jurisdictional as an "adjacent wetland." Claiming jurisdiction over the wetland as a tributary only further confuses the regulated community and prevents clear, bright-line rules that can be understood in the field.

Furthermore, the agencies inclusion of wetlands as tributaries is contradictory to its analysis of adjacent wetlands within the proposed rule. Under the agencies analysis of adjacent waters, the agencies state, "In circumstances where a particular water body is outside of the floodplain and riparian area of a tributary, but is connected by a shallow subsurface hydrologic connection or confined surface hydrologic connection with such tributary, the agencies will also assess the distance between the water body and tributary in determining whether or not the water body is adjacent." In the case of a wetland connected by a confined surface hydrologic connection, a reasonable interpretation of the

proposed rule would conclude that all such wetlands would be tributaries due to their outlet connection. Therefore, no wetland would be outside of reasonable proximity to other waters of the United States as they would all be considered tributaries themselves.

RECOMMENDATION: We recommend that the agencies do not consider wetlands as tributaries under the new rule. We support jurisdiction over wetlands that are adjacent to navigable waters, interstate waters, or the territorial seas. We support the clarity of a rule that defines adjacent as "neighboring" and limits the interpretation of neighboring to only those wetlands that have a confined surface hydrologic connection within a reasonable proximity to navigable waters. (p. 10-11)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. The final rule does not define "neighboring" as restrictively as recommended by the commenter. Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss "Adjacent Waters," of which, "neighboring" is one component.

City of Chesapeake, Virginia (Doc. #9615)

- 8.230 The Rule proposes to categorize wetlands, lakes, ponds, impoundments and ditches as *tributaries*, even if they lack a bed and banks or Ordinary High Water Mark (OHWM), if they contribute flow to WOUS, regardless of perennial, intermittent or ephemeral flow; therefore, by Rule, these features would be jurisdictional WOUS without any significant nexus analysis. The City does not support a definition of *tributaries* to include features such as wetlands, lakes, ponds, impoundments or ditches. It would also not be appropriate to evaluate these features as *adjacent waters*, resulting in jurisdictional determinations without any significant nexus analysis; however, it may be appropriate to evaluate these features through a case-specific significant nexus analysis as "other waters." (p. 2)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of "tributary" and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction. Section IV(F) of the preamble to the final rule discusses tributaries and section IV(I) discusses "Waters and Features that Are Not Waters of the United States." See also the summary response for "Relevance of Flow Regime" in Section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams." Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss "Adjacent Waters."

County of Henry, Virginia (Doc. #10949)

8.231 The Rule proposes to categorize wetlands, lakes, ponds, impoundments and ditches as tributaries, even if they lack a bed and banks or Ordinary High Water Mark (OHWM), if they contribute flow to WOUS, regardless of perennial, intermittent or ephemeral flow; therefore, by Rule, these features would be jurisdictional WOUS without any significant nexus analysis. The County does not support a definition of tributaries to include features such as wetlands, lakes, ponds, impoundments or ditches. It would not be appropriate to evaluate these features as adjacent waters, resulting in jurisdictional determinations without any significant nexus analysis; however, it may be appropriate to evaluate these features through a case-specific significant nexus analysis as "other waters". (p. 2)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of “tributary” and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction. Section IV(F) of the preamble to the final rule discusses tributaries and section IV(I) discusses “Waters and Features that Are Not Waters of the United States.” See also the summary response for “Relevance of Flow Regime” in Section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “Adjacent Waters.”

Board of County Commissioners, Otero County, New Mexico (Doc. #14321)

8.232 Specific comment was requested concerning whether in-channel “wetlands” should be included with tributaries or adjacent waters. Logically, they seem better positioned in the realm of adjacent waters. Placing them in the category of tributaries runs contrary to that definition’s requirements for a bed, banks and an ordinary high water mark. (p. 16)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

New Mexico Environment Department (Doc. #16552)

8.233 The Department is correspondingly concerned that the proposed rule will also swallow non-navigable intrastate waters that are now used for irrigation and drinking water by including as "tributary" all "ditches." 79 Fed. Reg. 22,180, 22,203. Currently the proposed rule excludes only "upland ditches" ("upland" has not been defined in the proposed rule) that drain only upland, and have less than perennial flow. [d. All other ditches that connect or are "adjacent" to a jurisdictional water, as will be discussed further below, will transform and become, surprisingly, their own federal jurisdictional water.

This will directly impact the many New Mexico communities that rely on acequias and other forms of open water ditches, to transport irrigation and pre-potable water. These waters are not only life sustaining, but are part of the States' traditional native and cultural history. It is probable, because of the proposed rule's ambiguity that acequias will fall within the 'per se' jurisdictional sphere. It is unclear on current definitions whether adjacent land disturbance or activity, even maintenance of the acequia or ditch, will be subject to federal permitting and licensing. The Agencies should have consulted the State prior to release of the proposed rule to ensure that such important native and cultural rights would be preserved. (p. 14-15)

Agency Response: See the summary response for Section 6.2 in the Ditches compendium of this RTC for a discussion of how the exclusions for ditches were revised and clarified for the final rule. Ditches are jurisdictional under the final rule only if they both meet the definition of "tributary" and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction. In addition, all existing statutory exemptions, including those at CWA Section 404(f) for maintenance of existing irrigation and drainage ditches, remain in effect and unchanged as a result of the final rule.

Bureau of Environmental Services, City of Portland, Oregon (Doc. #16662)

8.234 6. BES supports including wetlands in the definition of tributary. But the proposed rule, as written, excludes important headwater areas that; depending on the slope of the land, volume and/or intermittent flow, do not always have defined beds and banks but are equally important to the physical, chemical, and biological integrity of downstream waters. While beds and banks always indicate flow, flow is not exclusively defined by beds or banks, therefore necessitating a significant nexus analysis for certain types of headwater areas. (p. 3)

Agency Response: The agencies revised the definition of "tributary" for the final rule in response to the large number of comments from the public comments who indicated that including ponds, lakes, and wetlands as tributaries was confusing and inconsistent with common understanding. See the summary response for Section 8.2 above, particularly the subsection on "Wetlands, Lakes and Ponds." Tributaries are also discussed in section IV(F) of the preamble and in section VII of the Technical Support Document.

Dolores Water Conservancy District and Southwestern Water Conservation District, Colorado (Doc. #19461)

8.235 **III. THE DEFINITION OF TRIBUTARY" IS OVERBROAD AND WOULD UNLAWFULLY SUBJECT NORMALLY DRY ARROYOS AND IRRIGATION DITCHES TO CLEAN WATER ACT JURISDICTION.**

In southwestern Colorado, many irrigation ditches divert water from streams which is then distributed to fields through a series of lateral ditches. Excess water (i.e., diverted but not taken up by plants), which may accrue in ditches either as surface water or as seepage (i.e., groundwater) is returned to the stream. Such "return flows" are essential to the operation of many ditches to provide sufficient head to drive flow and irrigate fields

and because only so much precision can be achieved due to daily and seasonal variability in stream flows and limitations with many irrigation structures.

Another crucial characteristic of irrigation ditches is that water is typically only diverted into them to irrigate intermittently during the growing season. In southwestern Colorado, that season typically lasts from mid-April to mid-October. Accordingly, western irrigation ditches do not convey water much of the year. As such they do not support aquatic habitat typical of either perennial or intermittent streams.

The definition of "tributary" and "ditches" excluded from jurisdiction in the proposed Rule would render almost any irrigation ditch with return flows a "water of the U.S." even if return flows accrue far from a significant tributary or have a de minimus impact on flows or water quality of the receiving "water." As Reclamation pointed out in 2008, which is equally applicable to this Rule:

... this could be the basis for asserting broad jurisdiction over irrigation ditches far removed from any navigable body of water because they are "indirectly" connected to a navigable water by other tributaries. The guidance states that "a tributary includes natural, man-altered, or man-made water bodies that carry flow directly or indirectly into a traditional navigable water," with no further distinction between man-made and natural water bodies. Reclamation believes that jurisdiction over man-made water delivery facilities should be limited.... Again, this is an overly broad basis for asserting jurisdiction and could include miles of irrigation ditches far removed from waters of the U.S. based on the characteristics of the irrigation ditches at the point where it empties into a water of the U.S.⁴⁶²

Any final Rule must acknowledge the dynamics of western irrigation practices and infrastructure. If the Agencies persist in sweeping such ditches into the jurisdictional net of the Clean Water Act, the Agencies must provide an intelligible rationale for doing so that comports with the intent of Congress expressed in the Clean Water Act and of Supreme Court jurisprudence regarding the same. (p. 6-7)

Agency Response: See the summary response for Sections 6.1 and 6.2 in the Ditches compendium of this RTC for a discussion of flow in relation to ditches and how the exclusions for ditches were revised and clarified for the final rule, respectively. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of "tributary" and are not excluded under paragraph (b) in

⁴⁶² BOR 2008 Guidance Comments, at p. 2 (emphasis added).

the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction.

North Dakota Water Resource Districts Association (Doc. #5596)

8.236 Also of concern is the application of "tributary" status to wetlands outside the channel of a tributary, but are contributing flow to the channel. While using Ordinary High Water Mark (OHWM) as a determining factor in establishing jurisdictional tributaries, the agencies acknowledge that at there are places along a tributary where the OHWM may disappear, such as in a wetland. Under the proposed rule, the agencies would still extend Federal jurisdiction to these areas, if not as tributaries, then as "adjacent waters." Therefore, when there is a question as to the applicability of the CWACW A to a wetland, the rule favors Federal jurisdiction. The agencies request specific comment on how to best provide certainty on wetlands where no OHWM is evident and the Association feels declining jurisdiction over such wetlands would provide best certainty to the regulated community. (p. 1-2)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. However, the final rule is clear that a water that otherwise meets the definition of a tributary does not lose its status as a tributary if, for any length, there are one or more constructed breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. This component of the definition did not change from the proposed rule. Tributaries are further discussed in section IV(F) of the preamble and in section VII of the Technical Support Document.

Nebraska Association of Resources Districts (Doc. #11855)

8.237 Under the Proposed Rule, a "tributary" is categorically jurisdictional, and includes wetlands, lakes, ponds, impoundments, canals, and ditches, whether natural, man-altered, or man-made, if they contribute flow either directly **or through another water** to an interstate water, interstate wetlands, or territorial sea.⁴⁶³ No meaningful exemption from this definition is provided,⁴⁶⁴ and no case-by-case determination as to the status of the water will be made. Under the plain language of the Proposed Rule, this means any hydrologic connection to a traditionally navigable water, interstate water, or interstate wetland, will result in the characterization of an isolated intrastate body or conveyance of water as a "tributary." (p. 6)

Agency Response: See the summary response for Sections 8.1 and 8.2. In addition, see the summary response for Section 6.2 in the Ditches compendium of

⁴⁶³ 40 CFR 230.3(u)(5) (emphasis supplied).

⁴⁶⁴ Id. Exempt from the definition of "tributary" are ditches that "drain only uplands" and "do not contribute flow either directly or through another water" to any TNW, interstate water, interstate wetland, or territorial sea.

this RTC for a discussion of how the exclusions for ditches were revised and clarified for the final rule.

- 8.238 Prior attempts to assert jurisdiction over isolated intrastate bodies or conveyances of water, whether through broad definitions of statutory terms or through identifying isolated waters as habitat for migratory birds, have been rejected as an overreach of the authority granted by the Clean Water Act.⁴⁶⁵ The Proposed Rule is yet another attempt to expand federal jurisdiction over conceivably all waters through exactly the same means. (p. 6-7)

Agency Response: Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions and the historic scope of the regulatory definition “waters of the United States.”

California Association of Sanitation Agencies (Doc. #12832)

- 8.239 For the first time, the proposed rule seeks to define what constitutes a “tributary” under the Clean Water Act. The proposed rule drastically expands the number of waters potentially subject to federal jurisdiction... Perhaps most significantly, under the proposed rule, a tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not otherwise explicitly excluded. (*Id.* at 22202).

This overly broad definition of tributary could potentially increase the number of manmade conveyances, ditches and conveyance facilities, including those utilized by wastewater entities, under federal jurisdiction, and the lack of certainty surrounding the rule’s definition of a tributary could lead to regulation of previously unregulated waters. This broad classification of “tributaries” would be considered jurisdictional regardless of perennial, intermittent or ephemeral flow. Even dry washes could be considered jurisdictional under the proposed rule. This is significant for a variety of reasons.

One example of the potential impacts of defining what constitutes a “tributary” too broadly is the potential discharge from sanitary sewer systems to dry creeks/sloughs/washes when no pollutants ever actually reach water. It is entirely unclear whether this constitutes a discharge of pollutants to a water of the U.S. Under the broad definition of tributary in the proposed rule, it is possible that spills to dry creeks, sloughs, or washes would be considered a “discharge” even if there is absolutely no real or potential impacts to surface waters of any kind.

Similarly, there are circumstances where sewer spills occur in a street that drains to a roadside ditch or local creek bed that has no flow and is unconnected to a water of the U.S. The responsible party may fully remediate the spill and address all real and potential water quality impacts before the spill ever reaches a water source. It is difficult to

⁴⁶⁵ *SWANCC. v. U.S. Army Corps of Engineers*, 531 U.S. 159, 166-67, 121 S. Ct. 675, 680 (2001), (The Agencies have interpreted the CWA “to cover the abandoned gravel pit at issue here because it is used as habitat for migratory birds. We conclude that the ‘Migratory Bird Rule’ is not fairly supported by the CWA.” *See also United States v. Riverside Bayview Homes, Inc.*, 474 U.S. 121, 133, 106 S.Ct. 455 (1985) (the concept of adjacency is defined as wetlands that actually abutted on a navigable waterway).

understand how can this kind of circumstance could be envisioned as a discharge to “waters of the United States” when there is no actual water in a dry creek or ditch nor an adverse impact to the environment. (p. 5-6)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of “tributary” and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction, including those that are part of a waste treatment system designed meet the requirements of the CWA. Tributaries are further discussed in section IV(F) of the preamble and in section VII of the Technical Support Document.

Association of California Water Agencies (Doc. #12978)

8.240 Ordinary High Water Mark Delineations Unnecessarily Broad

...wetlands, lakes and ponds would be tributaries (even if they lack a bed and banks or OHWM) if they contribute flow, either directly or through another water to a water identified in the paragraphs mentioned above. This definition does not address the implications for jurisdictional scope inherent in the methodology used in identification of the OHWM in practice. Currently, in the arid west, the methodology to be used to locate and identify the OHWM is described in the 2008 Lichvar Field Manual.⁴⁶⁶ (It should be noted that the methodology in the 2008 Lichvar Field Manual differs from the methodology prescribed in the 2005 Regulatory Guidance Letter 0505.) (p. 11-12)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Western Coalition of Arid States (Doc. #14407)

8.241 4. Diversion Ditches Become Tributaries

WESTCAS members routinely have to construct conveyances to divert upstream ephemeral flows around water, solid waste, industrial and power transmission facilities. The diversion of upstream flows is not only a good engineering practice, it is also required under federal and state stormwater regulations to prevent flows from coming into contact with unstable soils during construction activities and potential solid waste and industrial activities. For example, Arizona’s Stormwater Construction General

⁴⁶⁶ The proposed rule mentions the use of the 2008 Lichvar Field Manual on pages 22259 and 22260 of the Federal Register notice.

Permits (CGP) require the use of certain types of control measures to prevent stormwater from flowing onto disturbed areas and transporting pollutants off-site.

One common measure used to meet this requirement is the construction of up gradient interceptor ditches or channels. When constructed properly, these control measures intercept up gradient flows, channel the water around the disturbed project site, and discharge the intercepted flows downstream of the project. Often-times these temporary control measures become permanent stormwater management features and are included in the final design of the project.

However, under the proposed rule these ditches will retain their status as jurisdictional waters and any activities undertaken to maintain their function or integrity, i.e., applying pesticides to control vegetation or remove sediment that would impede flow, will be subject to the same §402 or §404 permitting requirements as stormwater retention and groundwater recharge basins. Furthermore, the desire to categorically designate manmade ditches as jurisdictional waters is inconsistent with proscriptive state stormwater permitting requirements that encourage the use of man-made channels to divert upstream flows. In particular, Arizona's CGP requires site operators to, "...divert run-on flows, or otherwise provide other appropriate control measures to account for off-site contributions of stormwater and non-stormwater flow."⁴⁶⁷ (p. 10-11)

Agency Response: The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of "tributary" and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction, including those that are stormwater control features constructed to convey, treat or store stormwater that are created in dry land. However, this exclusion does not change the agencies' longstanding practice of viewing some waters, such as channelized streams or piped streams, as jurisdictional even where used as part of stormwater management systems. Thus, stormwater control features that have been built in or excavated from jurisdictional waters continue to be jurisdictional waters of the United States. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," provide a broad discussion of the final rule's exclusions. See summary response for section 6.2, "Excluded Ditches" in this RTC for a more focused discussion of revised and clarified ditch exclusions. Tributaries are further discussed in section IV(F) of the preamble and in section VII of the Technical Support Document.

8.242 8. Agricultural Ditches meet the Definition of Tributary

⁴⁶⁷ See AZG2013-001. Part 3.1.1.1.1. Run-on Management

WESTCAS members operate and maintain thousands of miles of water transmission canals, distribution laterals, and drainage ditches, (i.e., “ditches”) throughout the arid West. These ditches are used to transport and distribute water for agricultural, industrial, and municipal uses. When combined, many of our members ditch systems are also larger than most river systems in the United States. In addition, there are hundreds of private irrigation and federal reclamation projects in the arid West that provide drinking water to over 31 million people, irrigation water to more than 140,000 farmers, and irrigate over 10 million acres of farmland. These lands produce 60% of the nation’s vegetables and 25% of its fruits and nuts.

Under the proposed rule, man-made conveyances, including ditch systems, meet the definition of an (a)(5) water if they have a bed, a bank, and an ordinary high water mark (OHWM), and contribute flow either directly or indirectly to a (a)(1) through (a)(4) water. Almost every ditch system in the arid West can meet this definition. Most transmission and distribution ditches meet the physical description of having a bed, bank and OHWM, and usually discharge a small percentage of their water as “carriage” water at the end of their system. This is needed to ensure there is adequate head pressure in the ditch to deliver water at various turnout gates. When the carriage water is discharged, it is typically delivered to the next irrigation operator, or to a TNW. (p. 14)

Agency Response: See summary responses in Section 6.0 and 6.2 of the Ditches compendium in this RTC.

Rhode Island Rivers Council (Doc. #16367)

8.243 In regards to whether headwater wetlands should be classified as “tributaries,” or rather, as “adjacent wetlands,” it is advised that such wetlands should be defined as adjacent, and thus still having a significant nexus to waters of the U.S. by virtue of being connected with tributaries. The term tributary by many is considered to mean moving water and could create confusion for the regulated communities. By keeping headwater wetlands and other similar waterbodies classified as “adjacent,” with established standards for showing a significant nexus to another water of the U.S., it is likely more easily explained to and understood by the regulated public. (p. 2)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Washington State Water Resources Association (Doc. #16543)

8.244 Despite the proposals stated objective to add clarity to the regulatory process, the proposal in fact creates great confusion and uncertainty. Some of the unanswered questions have been alluded to above, e.g., what will be the effect of the proposal on the construction and operation of stormwater control facilities, or the repair and replacement of ditches. Other issues that must be addressed, through clarification and in the context of an ongoing dialogue amongst stakeholders, include:

...

- If an exempt ditch eventually takes on wetland characteristics due to the running of water through it, does it become jurisdictional;

...

- Would all ponds or lagoons, including artificial ones that overflow during heavy precipitation events, resulting in overland flow that reaches TNWs, become jurisdictional? (p. 17, 18, 19)

Agency Response: An exempt ditch that eventually takes on wetland characteristics due to the running of water through it will not become jurisdictional. See paragraph (b) of the final rule and the summary responses in Section 6.0 and 6.2 of the Ditches compendium in this RTC. Paragraph (b) of the final rule also excludes many artificial lakes and ponds, detention and retention basins and water filled depressions created in dry land incidental to mining or construction activity from being considered waters of the United States.

Michigan Association of Conservation Districts (Doc. #16583)

8.245 Additional Concerns with the Proposed Rule:

- Ditches. While the proposal specifically excludes two types of ditches from jurisdiction, EPA clarifies the following ditches as jurisdictional waters: natural streams that have been altered (e.g., channelized, straightened or relocated); ditches that have been excavated in "waters of the United States," including jurisdictional wetlands; ditches that have perennial flow; and ditches that connect two or more "waters of the United States." The determination of jurisdiction over these is made independent of the intended use of those features, which is a cause for concern. For example, a constructed pond or wetland intended for reuse or to provide water quality improvements could still be jurisdictional under this rule. (p. 2)

Agency Response: See summary response in Section 6.2 of the Ditches compendium for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of "tributary" and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction. In addition to certain ditches, paragraph (b) also excludes many other features from being considered waters of the United States. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," provide a broad discussion of the final rule's exclusions.

Federal Water Quality Coalition (Doc. #15822.1)

8.246 ...one SAB Panel member, Dr. Jossleyn, points out that, as currently drafted, the Draft Connectivity Report does not support including manmade features in the waters of the U.S.:

The tributary definition in the Proposed Rule also includes other features such as flood control channels, some ditches, underground stormwater drainage works that are not part of, nor discussed in, the Draft Science Report. Presumably such man-made features may alter the functions associated with the tributary or alter the water quality considerably—either beneficially (sediment deposition in reservoirs) or adversely (addition of urban storm water). The Draft Science Report focused on research from natural systems and therefore does not provide sufficient information on which to discuss the role of these man-made features. The Panel recommended that more information be provided in the Science Report on the effect of man-made features on connectivity—either elimination or enhancement of connectivity. In urban environments where water flows are largely in man-made structures, this information will be necessary to support the conclusion that impacts to upstream features not part of the urban infrastructure would have a significant impact on navigable waters, when in fact the urban infrastructure itself is the cause of the impact to water quality.⁴⁶⁸ (p. 53)

Agency Response: The definition of “tributary” has been clarified in the final rule. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discusses tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in Section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams.” Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). Ditches are one important example of constructed features that in many instances can meet the definition of tributary. Ditches are jurisdictional under the final rule only if they both meet the definition of “tributary” and are not excluded under paragraph (b) in the rule. Not all ditches meet the definition of a tributary, and others are expressly excluded from jurisdiction. In addition to certain ditches, paragraph (b) also excludes many other features from being considered waters of the United States. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions.

Water Advocacy Coalition (Doc. #17921.1)

8.247 ...the proposed rule’s treatment of wetlands, lakes, and ponds as tributaries (even if they lack bed, bank, and OHWM) expands the concept of tributary to essentially any type of

⁴⁶⁸ *Id.* at 43.

water. The common understanding of a tributary is that it is a stream that feeds into a larger stream or river. Few would consider a pond, lake, or wetland to be a tributary in common parlance. Many members of the SAB Panel raised this issue in their review of the proposed rule.⁴⁶⁹ The agencies provide no support for treating non-stream waters, such as wetlands, lakes, and ponds, as tributaries. By including them in the (a)(5) tributary definition, the proposed rule allows for jurisdiction over “adjacent waters” in the same floodplain or riparian area or that have a subsurface connection with these wetlands, lakes, and ponds. Again, this stretches the “tributary” definition too far. (p. 46)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

8.248 **2. The tributary definition does not provide clarity, but creates confusion.**

In addition to its broad reach, the tributary definition is problematic because it relies on vague language and confusing concepts, including the following:

...

- Non-stream features as tributaries: Inclusion of wetlands, lakes, and ponds as tributaries, even when they do not have a bed, bank, and OHWM, makes the “tributary” definition confusing and conflicts with the way in which tributaries are traditionally defined in scientific literature.⁴⁷⁰ For example, under the proposed rule, “waters, including wetlands, that are adjacent to a wetland that meets the definition of tributary would be considered adjacent waters.” 79 Fed. Reg. at 22,209. This collapses and confuses the “adjacent wetlands” and “tributary” categories of jurisdiction.
- Impoundments as tributaries: The proposed rule’s inclusion of “impoundments” as tributaries is confusing, given that the proposed rule identifies impoundments as their own separate category of “waters of the United States” such that tributaries to impoundments are jurisdictional. When is an impoundment regulated under (a)(4)? When is it regulated under (a)(5)?

... (p. 47, 48-49)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Virginia Manufacturers Association (Doc. #18821)

8.249 ...the Proposal includes what is described as “clarifying” language relating to impoundments that raises additional concerns about an expansion of federal jurisdiction to impoundments. For example, the Agencies included statements that impoundments can become jurisdictional, and that “an impoundment does not cutoff a connection between

⁴⁶⁹ See *id.* at 108 (comments of Dr. Amanda Rodewald). [SAB Panel Member Comments, Exhibit 7 at 42 (comments of Dr. Michael Josselyn).]

⁴⁷⁰ See Rodewald Memo, Exhibit 7 at 2.

upstream tributaries and a downstream water so tributaries about the impoundment are still considered tributaries even where the flow of water is impeded due to the impoundment." VMA respectfully submits that purpose-built operational impoundments, like those that are common at industrial sites, must be explicitly exempted from jurisdiction. (p. 3)

Agency Response: Impoundments of jurisdictional waters of the United States have been regulated themselves as waters of the United States under longstanding agency practice for decades. Certain impoundments, such as those associated with waste treatment systems designed to meet the requirements of the CWA and artificial lakes and ponds created in dry land and used primarily for uses such as stock watering, irrigation, settling basins, rice growing or cooling ponds, are specifically excluded under paragraph (b) of the final rule. Section IV(I) of the preamble to the final rule describes the exclusions.

Action United et al. (Doc. #18859)

8.250 ...we support the Agencies' definition of tributary and strongly agree that ditches should be defined as "waters of the U.S." where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important. (p. 2)

Agency Response: While paragraph (b) of the final rule excludes certain ditches from being waters of the United States, non-excluded ditches are jurisdictional under the final rule if they meet the definition of "tributary."

Minnkota Power Cooperative, Inc. (Doc. #19607)

8.251 A wider variety of wetlands and even man-made features are now included within this proposed definition of tributaries. We have seen borrow pits from substation construction in the past that have since been included in the National Wetland Inventory (NWI) which would likely be considered a tributary, and thus by significant nexus, a WOTUS. This Proposed Rule would result in numerous additional facilities and construction projects, including small projects to now be regulated. The resultant burden of time and resources on behalf of the regulated community would be substantial for a very minimal or non-existent environmental benefit. The economic impact would add to ever increasing costs to the regulated community as well as the average citizen. Man-made features should not be considered in determinations of a significant nexus unless they have uncontrolled perennial flow. (p. 2)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Kerr Environmental Services Corp. (Doc. #7937.1)

8.252 The following two portions of the definition should be deleted as explained below:

"In addition, wetlands, lakes and ponds are tributaries (even if they lack bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water. ..of this section"

"A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds impoundments, canals and ditches not excluded in paragraph . . . of this section"

These modifications are overly broad, unclear, introduce enormous vagaries, are unnecessary, and move these water bodies from the category of "other waters" which they have been regulated under since 1986 (33 CFR 328.3(a)(3)). This proposed revision is unnecessary and the previous definition of "other waters" including intrastate lakes, and wetlands was sufficient and avoided the complications being introduced. The proposed sentences above are not required by any recent federal court action and are therefore beyond the needs of the proposed rulemaking. (p. 6)

These statements are in direct conflict with the exemption for ditches that have less than perennial flow. Ephemeral and intermittent ditches are not jurisdictional, or tributaries to Waters of the United States and thus should continue to not be regulated as has been the case since 1986. All ditches are by definition at least ephemeral as they convey water when it is raining. Many ditches in the Coastal Plain are intermittent, in that they intercept the seasonal high water table, and can be in part why they were designed and constructed. Such conveyances have never been regulated. The only ditches regulated to date have been channelized natural tributaries, or those ditches with perennial flow as demonstrated by the presence of bed and bank and other characteristics of the "Ordinary High Water Mark" (33 CFR 328.3(e)). In that manner the conveyance is demonstrating that it is in fact a "water" and part of the *aquatic system* regulated via interstate commerce under the CWA. (p. 6)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. However, the final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discusses tributaries, including man-made or man-altered tributaries. See also the summary response for "Relevance of Flow Regime" in Section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams." Waters of the United States, as defined in the final rule, thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b).

8.253 Intrastate Lakes

Intrastate Lakes do not need to be considered tributaries. If they are at the upstream termini of a river or stream (tributary), they should be considered an Adjacent Water. Adjacent Waters are being considered by the USEPA and USACE to be waters of the US "by rule", and as such only confusion will be lost by moving intrastate Lakes to this category.

Wetland

Wetlands should not be included in the definition of tributaries. Wetlands are jurisdictionally, either "adjacent", "other waters" or "isolated". Wetlands with no bed and bank do not have sufficient flow to be considered to be a tributary, which has heretofore

always required bed and bank and/or ordinary high water mark indicators. The problems created by the proposal to include wetlands as tributaries, is as follows:

1. Tributaries by rule are jurisdictional, so consequently any wetland identified is by definition jurisdictional. This is factually incorrect, especially in the case of isolated wetlands, and creates enormous regulatory over-reach without direction from Congress or the federal courts.
2. Jurisdictional wetlands, since the 1986 regulation, have been considered "other waters" (33 CFR 328.3(a)(3), or adjacent wetlands (33 CFR 328.3(a)(7). Those wetlands that were not adjacent, pursuant to the Rapanos ruling require a significant nexus evaluation (Jurisdictional Determination Form Instructional Guidebook, Q&A #21).

a. The proposed regulations would wrongly reclassify wetlands which have been considered heretofore as "other waters" and were ruled by the Supreme Court to require a significant nexus, to now be determined as "tributaries" that the USEPNUSACE consider "by rule" to be jurisdictional. We do not believe a regulation can usurp the Supreme Court decision in Rapanos by removing the requirement for a significant nexus determination for certain wetlands. (p. 8)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Portland Cement Association (Doc. #13271)

8.254 v. Adjacent waters should not be considered “tributaries”

... the proposed rule identifies as tributaries features with a bed and bank and ordinary high water mark. In addition, under the proposal,

wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (l)(1)(i) through (iii) of this section.

This portion of the proposed definition has its own separate problems and should not be adopted by the Agencies.

...2. The proposed definition would unreasonably expand federal jurisdiction

In addition to contradicting current regulations and caselaw on the question of whether wetlands adjacent to other adjacent wetlands are in actuality adjacent to flowing waters of the US, the rule improperly expands the “adjacency” factor to cover non-wetland waters.

The proposed rule would allow adjacent non-wetland waters to be considered tributaries for the first time.⁴⁷¹

As with many of the other portions of the proposed rule, this portion of the proposed definition would expand federal jurisdiction beyond the scope of the Act. Focusing as it does on “navigable waters,” the CWA does not allow for the application of federal jurisdiction to “adjacent” non-wetland waters.

3. The contribution of flow is an insufficient rationale for claiming tributary status.

The rule would identify wetlands and other waters as tributaries if they contribute flow to a tributary. By the Agencies’ own rationale, this is an insufficient link.

The purpose of this portion of the rule is to identify waters that have a significant nexus to downstream jurisdictional waters.⁴⁷² As proposed, the rule establishes a test for proof of “adjacency”: a showing that the water be bordering or contiguous to the tributary or be in its floodplain or riparian area. These are therefore the only waters that always have a significant nexus to downstream traditionally navigable waters. Nevertheless, the proposal would include another set of waters as always having a significant nexus – wetlands, ponds and lakes that “contribute flow” to tributaries. Since, under the Agencies’ formulation, the contribution of flow in and of itself would be insufficient to identify an adjacent water as one always having a significant nexus, an adjacent tributary cannot always have a significant nexus simply by contributing flow – doing so would make the definitions of “floodplain” and “riparian area” irrelevant.

Further, the rule does not state what factors are to be examined in determining if a water “contributes flow.” Such contribution must not include subsurface flow, as it is beyond the scope of the CWA. Nor should simply cross-upland stormwater flow be sufficient to make an adjacent wetland, lake or pond jurisdictional – all water flows downhill and sheetflow is not a proper basis for jurisdiction, as described below. (p. 22-23)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Although revised, the definition of “tributary” retains the requirement that a water contribute flow, either directly or through another water (including an impoundment identified in paragraph (a)(4) of the final rule), to a water identified in paragraphs (a)(1) through (3) of the final rule and also possess

⁴⁷¹ Indeed, to date, the adjacency discussion has related to wetlands, not other waters. See, e.g., *San Francisco Baykeeper v. Cargill Salt Div.*, 481 F. 3d 700, 707 (9th Cir. 2007) (“Rapanos, like *Riverside Bayview*, concerned the scope of the Corps’ authority to regulate adjacent wetlands. Justice Kennedy’s controlling concurrence explained that only wetlands with a significant nexus to a navigable-in-fact waterway are covered by the Act. Id. at 2248 (Kennedy, J., concurring) (“Consistent with *SWANCC* and *Riverside Bayview* and with the need to give the term ‘navigable’ some meaning, the Corps’ jurisdiction over wetlands depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense.”). No Justice, even in dictum, addressed the question whether all waterbodies with a significant nexus to navigable waters are covered by the Act.”)

⁴⁷² As noted above, the entirety of the “always significant” waters portion of the test is based on their significant nexus to downstream waters. This obviously includes adjacent waters and wetlands.

physical indicators of a bed and banks and an ordinary high water mark in order to be considered a water of the United States as a “tributary.”

- 8.255 vi. Even if included in the rule, lakes and ponds must be defined, and defined as perennial waters

Even if the Agencies promulgate a rule identifying wetlands, lakes, and ponds as tributaries, they must define lakes and ponds. Such a definition is particularly needed given that the proposed states that tributaries need not be perennial (or even intermittent) waterbodies.

Neither the rule nor the preamble define “lake” or “pond.” But, consistent with the definition of tributary, the preamble notes that “[t]he flow in the tributary may be ephemeral, intermittent or perennial.” An ephemeral stream is one which flows briefly in direct response to precipitation in the immediate vicinity. Since “lakes” and “ponds” are tributaries, it appears that under the rule lakes and ponds might be jurisdictional even if they only contain water when there is nearby rain or snow melt.

Unlike wetlands, which contain specialized vegetation even when dry, under the rule ponds and lakes need not have such vegetation (or else they would be wetlands). Thus, without a specific definition of “lake” and “pond,” the implications of this part of the definition of tributary are unclear:

1. All water flows downhill. The preamble states that “[n]on-jurisdictional geographic features (e.g., non-wetland swales, ephemeral upland ditches) may still serve as a confined surface hydrologic connection between an adjacent wetland or water and a traditional navigable water, interstate water or the territorial sea.”

Many uphill areas are connected to downstream waters by surface water. Are all of these upstream areas lakes or ponds?

2. There is no clarity as to whether groundwater connectivity is sufficient to be the type of “direct contribution of flow” needed under the rule for a pond or lake to be a tributary. The preamble suggests that it may be, so long as the flow is not “lost to deep groundwater.”

Identifying groundwater connectivity would definitely require technical consultants – it cannot be seen by laypersons.

In short, it is unclear how lakes and ponds will be identified if they need not have a bed or bank, may not have to be wet much of the year, and can be connected to downstream waters by swales or other featureless forms (or possibly even underground flow).

We note that, in referring to a puddle over which they disclaim jurisdiction, the Agencies state that it “cannot reasonably be considered a water body or aquatic feature at all, because usually it exists for only a brief period of time before the water in the puddle evaporates or sinks into the ground.” This explanation reinforces our concern that the Agencies may consider other ephemeral waterbodies – if they contain water that flows downhill into another waterbody – as jurisdictional. Without specific definitions, this portion of the rule will be subject to future disagreement and litigation. (p. 23-24)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Associated General Contractors of America (Doc. #14602)

8.256 The proposed rule categorically determines that tributaries have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas.⁴⁷³ Likewise, waters and wetlands adjacent to tributaries will be automatically jurisdictional, under the proposal.⁴⁷⁴ Specifically, any channelized feature, including ditches and other man-made conveyances, no matter how remote from navigable waters, would be jurisdictional tributaries if they exhibit a bed, bank, and ordinary high water mark (OHWM). The proposed rule’s “tributary” definition vastly expands the scope of features that are currently regulated as tributaries, extending jurisdiction to features like ephemeral drainages and stormwater conveyances (e.g., roadside ditches) that have not been and should not be jurisdictional. The proposed rule’s two narrow ditch exclusions are unclear and unlikely to provide meaningful relief. (p. 5)

Agency Response: See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.” As defined in the final rule, “tributaries” thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). In addition to certain ditches, paragraph (b) also excludes many other features from being considered waters of the United States, including stormwater control features constructed in dry land. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions.

⁴⁷³ See 79 Fed. Reg. at 22,201.

⁴⁷⁴ *Id.* at 22,263.

Vulcan Materials Company (Doc. #14642)

8.257 The rule includes exemptions for rills and gullies from being considered waters; however, the inclusion of ditches combined with the bed and bank criteria creates uncertainty and confusion regarding the upper reach of jurisdiction that the agencies may pursue. In the case of aggregate mining operations, this extension is unnecessary as the mine sites are subject to National Pollutant Discharge Elimination System (NPDES) permitting for process and storm water discharges either under the federal program or federally delegated state permitting programs. These NPDES permits require aggregate mining sites to employ best management practices to control erosion and sediment discharges and to use water treatment systems with settling ponds and/or other treatment methods to ensure that discharges to surface waters are in compliance with applicable water quality criteria. (p. 2)

Agency Response: See summary response in Section 6.2 of the Ditches compendium for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule. Only those ditches meeting the definition of “tributary” in the final rule and that are not excluded under paragraph (b) will be waters of the United States. Section I of the Technical Support Document provides the legal framework under which a ditch could be considered both a point source and a water of the United States.

8.258 The proposed rule’s inclusion of man-altered, or man-made water and ponds, impoundments, canals and ditches as tributaries is problematical. This inclusion raises the potential for water management systems employed by facilities to be subject to full CWA jurisdiction. These engineered systems manage stormwater runoff, collect and treat water prior to discharge, and provide a means for water re-use and recycling thereby minimizing the consumption of surface and groundwater resources. As previously stated, the management of stormwater and process water at aggregate mining operations is already subject to regulation under the NPDES program or federally authorized and equivalent state or local programs and additional regulation under the CWA is therefore not necessary. (p. 2)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.” As defined in the final rule, “tributaries” thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). In addition to certain ditches, paragraph (b) also excludes many other features from being considered waters of the United States, including stormwater control features constructed in dry land, waste treatment systems designed to meet the requirements of the CWA and wastewater recycling structures created in dry land. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of

this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions. Note also that Section I of the Technical Support Document provides the legal framework under which a ditch could be considered both a point source and a water of the United States.

National Association of Home Builders (Doc. #19540)

8.259 6. The Tributary Definition Unlawfully Includes Ditches.

The proposed rule explicitly includes ditches in its definition of tributaries. The Agencies state that “a tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded.”⁴⁷⁵ Ditches are only excluded from the definition of “waters of the United States” if they meet one of two very limited exclusions. Excluded ditches are those “that are excavated wholly in uplands, drain only uplands, and have less than perennial flow” and those “that do not contribute flow, either directly or through another water,” to an (a)(1) through (4) water.⁴⁷⁶

The issue of ditches is critically important because ditches are pervasive and endemic to every type of landscape and human activity across the country. Historically, most ditches have not been regulated as “waters of the United States” under the CWA. Because ditches are expressly included in the tributary definition, all ditches with a bed, bank, and OHWM that contribute flow to an (a)(1) through (4) water will be per se jurisdictional unless they meet one of the two narrow exclusions. The categorical regulation of ditches represents an expansion from current practice and an impingement on traditional state and local authority over water and land use. Additionally, ditches are already specifically identified as point sources in CWA Section 502(14) and therefore are protected under CWA Section 402.⁴⁷⁷ In other words, they do not need to be regulated as “waters of the United States” for the Agencies to ensure their protection.

The Agencies have historically taken the position that ditches are not “waters of the United States,” but they have gradually expanded claims of jurisdiction over ditches without any change in the law. The Corps’s 1975 regulations stated that “[d]rainage and irrigation ditches have been excluded” from CWA jurisdiction.⁴⁷⁸ Their 1977 regulations read similarly: “[M]anmade nontidal drainage and irrigation ditches excavated on dry land are not considered waters of the United States under this definition.”⁴⁷⁹ The preamble of the 1977 regulations indicated that ditches, if they were to be regulated at all, were meant to be regulated as point sources and not “waters of the United States”: “[N]ontidal drainage and irrigation ditches that feed into navigable waters will not be considered ‘waters of the United States’ under this definition. To the extent that these

⁴⁷⁵ 79 Fed. Reg. at 22,263 (emphasis added).

⁴⁷⁶ *Id.*

⁴⁷⁷ 33 C.F.R. § 1362.14; 33 C.F.R. § 1342.

⁴⁷⁸ 40 Fed. Reg. 31,320 and 31,321 (July 25, 1975).

⁴⁷⁹ 42 Fed. Reg. 37,112 (1977).

activities cause water quality problems, they will be handled under other programs of the FWPCA, including Section 208 and 402.”⁴⁸⁰

Nevertheless, the Agencies’ position on ditches has shifted over time, beginning in the mid- to late- 1980s, when they began treating ditches as “waters of the United States” in the context of Section 404 on a case-by-case basis, using OHWM and the Migratory Bird Rule tests.⁴⁸¹ The preamble of the 1986 regulations continued to maintain the exclusion for ditches stating, “We generally do not consider [drainage and irrigation ditches excavated in dry land] to be ‘Waters of the United States.’”⁴⁸² However, the same regulations included a provision for the Corps to assert regulatory authority on a “case-by-case” basis to claim jurisdiction after all.⁴⁸³ Similarly, EPA had historically refrained from regulating ditches as “waters of the United States,” and did not even discuss the possibility that ditches might be “waters of the United States” until 1988 when they included reservation of “case-by-case” authority to regulate upland ditches as “waters of the United States” under Section 404. It’s clear the Agencies, without any congressional authorization, have incrementally expanded claims of jurisdiction over ditches. To make matters worse, the proposed rule goes even further.

With the proposed tributary definition, the Agencies claim of jurisdiction over ditches has expanded exponentially. For the first time, the Agencies are categorically regulating ditches under all CWA programs. In the past, the Agencies have said that, for the purposes of the Section 404 program, some ditches could be regulated as “waters of the United States” on a case-by-case basis.⁴⁸⁴ Indeed, that is a far cry from categorically regulating all ditches as “waters of the United States” under all CWA programs, unless they meet one of two very narrow exclusions. Under the proposed rule, the Agencies will regulate all ditches with a bed, bank, and OHWM that contribute flow to a traditional navigable water, interstate water, territorial sea, or impoundment.⁴⁸⁵ This includes irrigation ditches, roadside ditches, MS4 ditches and other stormwater conveyance ditches. Treating all of these features, many of which are in place to meet the goals of the CWA, as per se jurisdictional for the purpose of all CWA programs will vastly expand CWA jurisdiction. Adding insult to injury, even if ditches do not meet the tributary definition, the proposed rule allows for them to be jurisdictional as either “adjacent waters” or “other waters.”

Regulating ditches is not what Congress had in mind when enacting the CWA or what the Supreme Court deemed prudent in *Rapanos*. The Agencies’ overbroad treatment of ditches as tributaries indeed stretches the term “waters of the United States” beyond parody. (p. 71-72)

⁴⁸⁰ Id. at 37,127.

⁴⁸¹ See e.g., 65 Fed. Reg. at 12818, 12823, 12824 (Mar. 9, 2000) (In the 2000 nationwide permit [NWP] regulations, the Corps’s disapproval of jurisdiction shrank to “ditches constructed entirely in upland areas,” finding that non-tidal drainage ditches are waters of the United States if they extend the OHWM of an existing water of the United States.)

⁴⁸² 51 Fed. Reg. at 41,217.

⁴⁸³ Id.

⁴⁸⁴ Id.

⁴⁸⁵ 79 Fed. Reg. at 22,262,22263.

Agency Response: See the summary responses for Sections 8.1 and 8.2. See summary response for Section 6.2 in the Ditches compendium of this RTC for a history of CWA regulatory jurisdiction of ditches. Section I of the Technical Support Document further discusses the historic scope of the regulatory definition of “waters of the United States,” and also provides a broader discussion of the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section I of the Technical Support Document also provides the legal framework under which a ditch could be considered both a point source and a water of the United States. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.” As defined in the final rule, “tributaries” thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). The summary response in Section 6.2 of the Ditches compendium discusses how the proposed exclusions for ditches were edited and clarified for the final rule. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States

8.260 **7. Defining Wetlands as Tributaries is Absurd and will Increase Regulatory Confusion.**

Although the Agencies claim the proposed rule provides increased clarity regarding what waters are and are not “waters of the United States,” the very definitions used to describe categorically jurisdictional waters only further muddy the waters.

For instance, the Agencies’ definition of tributary contradicts itself. In the preamble, the Agencies state, “[a] tributary is a longitudinal surface feature that results from directional surface water movement and sediment dynamics demonstrated by the presence of bed and banks, bottom and lateral boundaries, or other indicators of OHWM.”⁴⁸⁶ Later, under the definitions section of the proposed rule, the Agencies basically reiterate the preamble, stating, “the term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark . . . which contributes flow . . .”⁴⁸⁷ to an (a)(1) through (4) water. Immediately following the requirement for these physical traits, however, the definition disagrees with itself, stating, “wetlands, lakes, and ponds are tributaries (*even if they lack a bed and banks or ordinary high water mark*) . . .”⁴⁸⁸

This turn of events makes no sense. First, this definition differs from the definition of tributary provided in the draft Connectivity Report as well as the description provided in the preamble. Which one is to be believed? Second, it is nonsensical to state that a tributary requires a bed, bank, and OHWM and then suggest that a tributary may lack

⁴⁸⁶ *Id.*

⁴⁸⁷ 79 Fed. Reg. at 22,263.

⁴⁸⁸ *Id.* at 22,263 (emphasis added).

these *defining* features. Fortunately, the Agencies specifically request comment on whether wetlands, lakes, and ponds should be considered tributaries. The answer is a resounding "no." The Agencies must correct this inconsistency by simply removing wetlands, lakes, and ponds from the tributary definition.

NAHB, along with several EPA SAB panel members, note these waterbodies would already be jurisdictional under the proposed "adjacent waters" definition.⁴⁸⁹ Wetlands, lakes, and ponds are lentic ecosystems and not commonly considered tributaries -not by freshwater ecologists or the Merriam-Webster Dictionary.⁴⁹⁰ Clearly, the Agencies should not define wetlands as tributaries. It is inconsistent with the Agencies' own definition, scientific literature, and common sense and will unnecessarily increase regulatory confusion. What's more, inclusion of wetlands in the tributary definition would render the Supreme Court's ruling in *Riverside Bayview* laughable. *Riverside Bayview* addressed the question whether the CWA authorizes the Corps to assert jurisdiction over wetlands adjacent to traditional navigable waters. The Supreme Court ruled in *Riverside Bayview* that adjacent wetlands are jurisdictional.⁴⁹¹ By defining wetlands as tributaries, a wetland adjacent to a wetland that is itself adjacent to a tributary in the traditional sense would be "jurisdictional by rule because the intervening wetland would be deemed a tributary. This "stepping stone" interpretation of wetlands as tributaries could be extended indefinitely to wetlands far removed from traditional navigable waters if a string of a wetland adjacent to a wetland adjacent to a wetland - and so on - exists between the wetland in question and a tributary in the traditional sense. Surely this was not what the Supreme Court had in mind in *Riverside Bayview*. It is quite plain and simple: wetlands are not tributaries and tributaries are not wetlands. (p. 72-73)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

New Mexico Mining Association (Doc. #8644)

8.261 **Comment 4: The definition of tributary under subsection (a)(5) should be amended to exclude Wetlands, Lakes, or Ponds which contribute flow to a Water of the United States.**

⁴⁸⁹ SAB Chair Dr. Amanda Rodewald and SAB panel member Dr. Mazeika Sullivan both assert that wetlands should not be included in the tributary definition as wetland jurisdiction is already be addressed under the adjacent waters definition (8114114 Preliminary comments from individual members of the SAB Panel for the Review of the EPA Water Body Draft Connectivity Report).

⁴⁹⁰ EPA Office of Research and Development scientists define tributary as "a stream or river that flows into a higher-order stream or river" Draft Connectivity Report at A-20; In 8114114 preliminary comments from individual members of the SAB Panel for the Review of the EPA Water Body Draft Connectivity Report at 10, Dr. Genevieve Ali commented, "I am not sure that the majority of the literature supports the categorization of run-of stream wetlands and lakes as tributaries, especially since the majority of the literature defines tributaries as longitudinal features that have directional flow"; Tributary [Def. 21. (n.d.). In *Merriam-Webster-Online*, Retrieved October 8, 2014, from <http://www.merriam-webster.com/dictionary/tributary>.

⁴⁹¹ *Riverside Bayview*, 474 U.S. at 121.

Wetlands, Lakes, and Ponds should not be included in the definition of tributary under subsection (a)(5). These water bodies should only be jurisdictional by rule if they satisfy the definition of adjacent under subsection (a)(6).

Currently, the proposed rule provides two distinct methods by which a Wetland, Lake, or Pond may be considered jurisdictional by rule. Under (a)(5), a Wetland, Lake, or Pond is a jurisdictional "tributary" if it contributes flow to another Water of the United States. And then under (a)(6), a Wetland, Lake or Pond may be deemed a jurisdictional "adjacent" water if it includes a hydrological connection with another Water of the United States.

These dual approaches to Wetlands, Lakes, or Ponds are redundant and would be confusing to a land manager or owner seeking clear guidance on whether their water body is subject to the agencies' jurisdiction. Aside from Wetlands, Lakes, or Ponds, the definition of tributaries includes only those water features with a bed and bank and ordinary high water mark. Water bodies without a bed and bank and ordinary high water mark are more logically addressed through the adjacency determination of (a)(6). Thus, the final rule should only consider whether a Wetland, Lake, or Pond falls within the determination of adjacency under subsection (a)(6). (p. 3-4)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Kansas Independent Oil & Gas Association (Doc. #12249)

- 8.262 Within the discussion of tributaries is included the awkward discussion of the regulatory management of ditches. For upland ditches the agencies reference past policies, but express concern over flow and what regime should be defined, perennial or intermittent. Nonjurisdictional ditches become tributaries if they have beds and banks and ordinary high water marks and contribute flow. The preamble discussion lists those ditches that may be deemed jurisdictional. The proposal discusses flow relative to downstream traditional navigable waters. This proposed regulatory discussion is, again, part of the expansion of the scope of "waters of the United States." Rather than certainty, this regulation creates uncertainty as to current operations and future impacts on the status of ditches. (p. 14-15)

Agency Response: The summary in Section 6.2 of the Ditches compendium discusses how the proposed exclusions for ditches were edited and clarified for the final rule. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.” As defined in the final rule, “tributaries” thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). The agencies

believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States.

Alliance Coal, LLC (Doc. #14577)

8.263 ...the Agencies define "tributary" as any water "physically characterized by the presence of a bed and banks and ordinary high water mark ... which contributes flow, either directly or through another water," to a traditional navigable water, interstate water, territorial sea, or jurisdictional impoundment. Tributaries are per se jurisdictional regardless of whether they contribute perennial, intermittent, or ephemeral flow.⁴⁹² And for the first time, "waters of the United States" explicitly includes ditches that meet the new definition of tributary.⁴⁹³ Even "wetlands, lakes, and ponds" that lack a bed, bank, and ordinary high water mark can be tributaries (and hence per se jurisdictional), as long as they "contribute flow, either directly or through another water" to a traditional navigable water, interstate water, or territorial sea.⁴⁹⁴ Under this new concept of "tributary," it is likely that many, if not most, ditches, as well as certain ponds and other water management features on mine sites, would fall within that definition based solely on contribution of flow, no matter how insubstantial or indirect. Indeed, many on-site water features are permitted under Section 402 to discharge to "waters of the United States" because of such connections. As explained in greater detail below, many such features do not fit neatly into any of the exclusion categories in the proposal, and as such would become federal waters under the new rule. (p. 2-3)

Agency Response: See the summary responses for Sections 8.1 and 8.2. See summary response for Section 6.2 in the Ditches compendium of this RTC for a history of CWA regulatory jurisdiction of ditches. Section I of the Technical Support Document further discusses the historic scope of the regulatory definition of "waters of the United States," and also provides a broader discussion of the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The summary response in Section 6.2 of the Ditches compendium discusses how the proposed exclusions for ditches were edited and clarified for the final rule. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States.

8.264 ...even if on-site waters at mines are somehow outside of the definitions of "tributary" or "adjacency," which are per se jurisdictional, they could nevertheless be deemed jurisdictional "other waters" on a "case-specific basis" through application of the "significant nexus" test in the proposed rule.⁴⁹⁵ An on-site water management feature at a mine, either alone or when aggregated with "similarly situated" waters in the same region, could be deemed to significantly affect the chemical, physical, or biological integrity of a traditional navigable water, interstate water, or territorial sea so long as it has more than a speculative or insubstantial effect on such a downstream jurisdictional water. As an example, biota movement among otherwise isolated onsite water

⁴⁹² *Id.* at 22,202.

⁴⁹³ *See id.* at 22,263.

⁴⁹⁴ *Id.*

⁴⁹⁵ *See id.* at 22,263.

management features such as settling ponds and a jurisdictional water may be all that is needed to trigger Clean Water Act jurisdiction under this new test. (p. 3)

Agency Response: The exclusions at paragraph (b) of the final rule include many features in addition to ditches, such as waste treatment systems designed to meet the requirements of the CWA, stormwater control features created in dry land, water filled depressions created in dry land incidental to mining or construction activity and artificial lakes and ponds created in dry land. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions.

Devon Energy Corporation (Doc. #14916)

8.265 Even if ditches do not have bed, bank and OHWM and so are not tributaries, the Proposed Rule allows for them to be jurisdictional as “adjacent waters” or “other waters.” Key terms like “uplands” and “contribute flow” are undefined and therefore do not provide the stakeholder with any guidance to determine what ditches are affected and which are exempted. Also, if shallow groundwater enters ditches and creates perennial flow, then they are likely jurisdictional. (p. 6)

Agency Response: Paragraph (b) of the final rule makes clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, a ditch or any other excluded feature may not be considered waters of the United States under any other provision of the rule. Section IV(I) of the preamble to the final rule discusses the rule’s the exclusions, and the summary response for section 6.2, “Excluded Ditches,” in this RTC addresses the ditch exclusions more specifically.

Sinclair Oil Corporation (Doc. #15142)

8.266 ...Sinclair is not confident that the ditches that convey wastewater to the evaporation ponds [and around the properties located adjacent to the refineries], wouldn't be deemed "waters of the United States" as "tributaries" under the definition contained in the proposed rule.

The proposed rule determines whether a surface feature is or isn't a tributary based on whether or not it contributes flow. But the proposed rule does not clearly articulate what it means to contribute flow and does not limit the manner in which that flow must be contributed for a water to become jurisdictional. For example, the preamble to the proposed rule specifically provides that any amount of flow contributed in any manner, including through shallow groundwater, would be sufficient to make an otherwise isolated ditch a "water of the United States." 79 Fed. Reg. 22,203. However, the contribution of marginal amounts of flow is not sufficient to establish a significant nexus under the standard the Agencies assert they are applying. *Rapanos*, 547 U.S. at 784 ("a mere hydrologic connection should not suffice in all cases; the connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood"). The proposed definition simply goes too far and Sinclair could be deemed in violation of the CWA, for operating its RCRA-permitted

waste treatment system, based on nothing more than an assertion of subsurface connectivity between the waste water ditch, evaporation ponds or flood irrigation area and "waters of the United States."⁴⁹⁶ These man-made ditches, carrying waste water at a zero discharge industrial facility are simply not the types of waters allowed to be included in the definition of "waters of the United States" by SWANCC and *Rapanos*. 11 (p. 13-14)

Agency Response: Paragraph (b) of the final rule excludes wastewater treatment systems designed to meet the requirements of the CWA. Paragraph (b) of the final rule also makes clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, a ditch or any other excluded feature may not be considered waters of the United States under any other provision of the rule.

Ohio Coal Association (Doc. #15163)

8.267 The Rule Should Not Permit Federal Jurisdiction on the Basis of Surface Connections or Contributions of Flow that are Ephemeral or Intermittent.

In two instances, the Proposed Rule permits jurisdiction over waters based on the vague and undefined concepts of ephemeral and intermittent surface connections. First, the Proposed Rule states that a wetland, lake or pond that contributes even ephemeral or intermittent flow to a water identified in (a)(1) through (a)(3), is a tributary and jurisdictional under (a)(5). See 79 Fed. Reg. 22202....The Proposed Rule's use of ephemeral and intermittent connections is both unclear and over-expansive. Such an expansive approach is well beyond the "significant nexus" standard and greatly expands federal jurisdiction beyond applicable law or common sense. As such, these concepts should be removed. (p. 3)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

National Sustainable Agriculture Coalition (Doc. #15403)

8.268 We are generally supportive of providing clarity to the regulated community by establishing tributaries to traditionally navigable waters, interstate waters, territorial seas, and impoundments ((a)(1) through (4) waters) as *per se* jurisdictional. Tributaries, especially headwater tributaries, greatly affect the chemical, physical, and biological integrity of (a)(1) through (4) waters by contributing flow and pollutants, impacting the geomorphology of the water bodies, and providing additional aquatic habitat. Given the impact of tributaries, it would be unreasonable to argue that they lack a significant nexus to waters of the United States.

The current definition of *tributary* in the proposed rule provides descriptions of physical demarcations—a bed and banks along with an ordinary high water mark—that would help landowners easily identify a tributary on their property. The inclusion of wetlands as

⁴⁹⁶ Moreover, since the proposed rule provides that ditches that contribute flow to an impoundment of a "water of the United States" are tributaries, the ditches and drains at Sinclair's refineries would be considered tributaries if the evaporation ponds were considered "impoundments." 79 Fed. Reg. 22,201.

potential tributaries, however, introduces more confusion than clarity. As acknowledged in the rule, wetlands can serve as tributaries by contributing flow to a jurisdictional water either directly or through another water. Although these wetlands may warrant jurisdiction, not all wetlands contribute flow to (a)(1)through (4) waters and, as such, could not be classified as tributaries. The inclusion of wetlands as possible tributaries effectively rescinds any clarity provided by the bed, banks, and ordinary high water mark criteria previously established.

While this vagueness may work for lakes or ponds lacking an ordinary high water mark where contribution of flow to a jurisdictional water would be more obvious, such a connection would be less apparent when it comes to wetlands. We do not dispute that wetlands can contribute flow—either directly or through another water—and act as a tributary, but for the sake of reducing ambiguity, it would be best to reconsider this addition of wetlands to the *tributary* definition. Wetlands directly contributing flow to a traditionally navigable water would be considered adjacent waters and would therefore remain jurisdictional. Non-adjacent wetlands with a more obscure connection to traditionally navigable waters could still be jurisdictional as “other waters” pending a significant nexus determination.

Recommendation: Remove wetlands from the definition of tributary, covering them instead as either adjacent waters or other waters subject to a significant nexus test. (p. 3)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Pennsylvania Aggregates and Concrete Association (Doc. #16353)

8.269 8. The Proposed Rule’s Treatment of Tributaries and Ditches is Not Supported by Science, Will Result in Confusion in the Field, and Infringes upon State and Local Authority.

The proposed rule’s “tributary” definition vastly expands the scope of features that are currently regulated as tributaries and gives jurisdiction to areas such as ephemeral drainages, which may only flow in response to precipitation, and stormwater conveyances, which should not be jurisdictional. The proposed rule states this includes ditches, explicitly stating that “rivers, streams, lakes, ponds, impoundments, canals, and ditches” are tributaries. Neither the Connectivity Report nor Appendix A of the proposed rulemaking preamble demonstrates that ephemeral features have significant chemical, physical and biological effects on traditional navigable waters. Additionally, the proposed rule draws an arbitrary distinction between erosional features and ephemeral drainages.

In Pennsylvania, agriculture is the leading economic enterprise. The inclusion of ditches in this proposed rulemaking is significant because ditches are found on every type of landscape across the Commonwealth of Pennsylvania— agricultural irrigation, homes, pipelines, electric generation facilities and transmission/distribution lines, transportation-related infrastructure including roads and railways, flood control, rural drains and roads, and mines. This regulation of ditches expands the current practice and encroaches on traditional State and local authority over water and land use. Ditches do not need to be regulated as “waters of the U.S.” to ensure protection, because the CWA regulates them

in other ways such as point sources. Since the Commonwealth of Pennsylvania is already charged with controlling stormwater volume through their NPDES program, there is no environmental benefit by treating these ditches as jurisdictional “waters of the U.S.”

Additionally, waters should not be considered tributaries regardless of man-made and natural breaks “for any length.” Such breaks can sever connectivity, even when a channel can be identified upstream.

Furthermore, the proposed rule’s definition of tributary is overly broad and is inconsistent with the *Rapanos* Plurality and Justice Kennedy’s opinions, which made it very clear that many ditches are excluded from jurisdiction, even those that connect waters of the United States. (p. 5)

Agency Response: See the summary responses for Sections 8.1 and 8.2. See summary response for Section 6.2 in the Ditches compendium of this RTC for a history of CWA regulatory jurisdiction of ditches. Section I of the Technical Support Document further discusses the historic scope of the regulatory definition of “waters of the United States,” and also provides a broader discussion of the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The summary response in Section 6.2 of the Ditches compendium discusses how the proposed exclusions for ditches were edited and clarified for the final rule. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Section IV(F) of the preamble to the final rule discusses the agencies’ conclusion that waters that meet the rule’s definition of tributary remain tributaries even if there is a manmade or natural break at some point along the connection to the traditional navigable water, interstate water, or the territorial seas.

National Farmers Union (Doc. #6249)

8.270 ... the proposed rule treats wetlands that are connected to tributaries as tributaries themselves, but the preamble requests comment on this approach and offers an alternative. Wetlands should not be considered tributaries. Treating wetlands as tributaries would negate the bed, bank and OHWM criteria the Corps uses for identifying tributaries. The agencies should enact the alternative proposed in the preamble and "clarify that wetlands that connect tributary segments are adjacent wetlands, and as such are jurisdictional waters of the United States under (a)(6)." This alternative creates a bright-line definition for "tributary" without relinquishing any opportunities to protect water resources. (p. 3-4)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Alameda County Cattlemen (Doc. #8674)

8.271 The plain language of the definition of tributary encompasses numerous isolated and, in many cases, dry features that are far beyond the agencies' authority under the CWA. It would encompass isolated ponds not otherwise excluded that somehow be connected through a surface connection, groundwater, or any other connection to a nearby (a)(1) through (4) water. It encompasses isolated wetlands in pastures that may be connected to a nearby creek through ground water or ditches. It encompasses virtually all artificial stock ponds west of the Mississippi River, of which, virtually all will have been built on a drainage (ephemeral streams) in order to fill with water. It is clear that the plain language of the definition makes the category almost limitless.

NCBA and PLC assert that the agencies' definition of "tributary" is a limitless category that has the potential to wrap every natural pond, isolated wetland, or ditch into the federal regulatory scheme, which violates the language and spirit of the Supreme Court's decisions in *SWANCC* and *Rapanos*.⁴⁹⁷ It is clear that the phrase "waters of the U.S." is not limitless, yet that is exactly what the agencies have proposed through their broad and ill-defined term "tributary." Key phrases have been left undefined. The definition for "through another water," a key phrase in the definition, was simply left out by the agencies. Not only does this foster confusion instead of clarity in the regulated community, it could be stretched by regulators or litigants now or in the future. If the agencies' intent was not to create such a broad definition, then they should have put such intent in the regulation. ACCW members cannot "take agency officials' word for it." (p. 7-8)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. The agencies do not believe that the definition of “tributary” in the final rule is a “limitless category that has the potential to wrap every natural pond, isolated wetland, or ditch into the federal regulatory scheme.” Section I of the Technical Support Document provides a discussion of the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

8.272 A dry ditch could be a "water of the U.S." under the proposed definition if it flows once per year but drains to a jurisdictional creek. Is it truly the agencies intent to capture all ditches that ever drain to a larger ditch that then drains to creek or other water the agency defines as a TNW? If not, the agencies should make that clear. American ranches

⁴⁹⁷ *Rapanos v. United States*, 547 U.S. 715 (2006); (J. Scalia, Indicating "navigable" invokes a limit on the CWA jurisdiction the plurality stated "... that the qualifier "navigable" is not devoid of significance...the waters of the United States in 1362(7) cannot bear the expansive meaning that the Corps would give it"); *SWANCC v. U.S. Army Corps of Engineers*, 531 U.S. 159 (2001); (In striking down the agencies' Migratory Bird Rule the court stated, "we find nothing approaching a clear statement from Congress that it intended 404(a) to reach an abandoned sand and gravel pit such as we have here").

throughout the United States have millions of these features dotted across their landscapes. Let us be clear, DITCHES DRAIN! That is their purpose. They will be connected eventually leading to some other jurisdictional water, therefore all ditches will be jurisdictional. The agencies' use of the phrase "through another water" could remove all ditches from the excluded categories and could make them jurisdictional. Making these features jurisdictional would cripple the production of food and fiber across this country by requiring permits to conduct many routine activities no longer exempt under different sections of the CWA due to the agencies' new interpretation of the 404(f)(I)(A) exemption for "normal farming, silviculture and ranching activities." Ditches should not be per se jurisdictional tributaries.

ACCW assert that the agencies have underestimated how many ditches will be captured by their proposed definition of "tributaries" and therefore have not adequately analyzed their impact on downstream jurisdictional waters to categorically say they have a "significant nexus" to these downstream jurisdictional waters. The definition of tributary captures different features of size and scope which will have varying effects on TNWs. These differences are too great to categorically find anything with a bed, bank and OHWM that ever contributes flow will have a significant nexus to downstream jurisdictional waters

The exclusions provided by the agencies for ditches are addressed in Sec. III.b. below, but as they are included under the definition of tributary they are addressed here as well. ACCW strongly believe that very few, if any, ditches will actually fall into the (b)(3) or (b)(4) categories of the proposed definition. EPA and the Corps should show the American public on maps, by state, how many ditches will be jurisdictional and how many will not. The agencies should also map the sheer expanse of their proposed definition and respond to maps presented to the agencies from industry showing our projection and interpretation of their proposed definition. It is our understanding that the agencies were provided these types of maps by the U.S. Geological Service (USGS), but the agencies failed to provide this important information to the American public, which would have provided a clear picture to everyone exactly what the expansion of the proposed rule would be. Because the maps were not provided to the public by EPA in a timely manner, the public has not had adequate time to analyze and ultimately, comment on them. Precluding the public from having the ability to meaningfully comment is a violation of the APA. (p. 9-10)

Agency Response: It is not the agencies intent to capture all ditches as waters of the United States. The summary in Section 6.2 of the Ditches compendium discusses how the proposed exclusions for ditches were edited and clarified for the final rule. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States. Paragraph (b) of the final rule also makes clear that the excluded features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, neither an excluded ditch nor any other excluded feature may be considered waters of the United States under any other provision of the rule. The agencies do not have maps depicting waters of the United States under either present regulatory standards or those in the final rule.

8.273 ...if the intent is to provide clarity to the regulated public, the agencies should give terms their common meaning. The term “tributary” to most landowners in the country is going to be a flowing feature like a river, creek, or stream. Ponds and wetlands are not what most would consider a “tributary” and therefore ACCW request the agencies to remove ponds, wetlands and any other non-flowing feature from inclusion in the definition of “tributary.” ACCW encourage the agency to withdraw the proposed rule, convene stakeholder discussions to address these important issues and ways the agencies can legally address any concerns that they have. As it is currently written, the definition of “tributary” under the proposed rule goes far beyond what the Supreme Court has articulated as a limit to federal jurisdiction. (p. 11-12)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries

Michigan Farm Bureau (Doc. #10196)

8.274 Further, EPA and USACE defy their own definition of tributary by extending the term to include wetlands, ponds, and lakes even if they lack a bed, bank, or ordinary high water mark, so long as they contribute flow directly or indirectly to a jurisdictional water. Again the significance of that connection is missing from the definition, and lacking any requirement for testing of the significance of a connection downstream, this extends EPA and USACE's jurisdiction to virtually any water on the landscape regardless of its position or connection. Wet spots in farm fields regardless of size, isolated vernal pools in woodlots, and broken water features across the landscape that may in fact be dry most of the year could fall under this regulatory definition. This gives farmers and landowners no certainty whatsoever unless that certainty is that if any water sits anywhere on their property it will be regulated. EPA and USACE's assurances that these definitions are consistent with past practice and interpretation gives farmers and landowners no relief, as several court battles in which agency interpretations have been limited demonstrate (e.g., *Rapanos*, *SWANCC*, *U.S. v Wilson*, 133 F.3d 251 (4th Cir. 1997), *Rice v. Harkin Exploration Company*, 250 F.3d 264 (5th Cir. 2001), and *U.S. v. Needham*, No. 02-30217, 2003 WL 22953383 (5th Cir. 2003).) (p. 5)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Section I of the Technical Support Document provides a discussion of the legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

North American Meat Association and American Meat Institute (Doc. #13071)

8.275 The proposed rule would contribute to the confusion by including wetlands, lakes, and ponds as tributaries, even when they have no bed, bank; and OHWM. Specifically, the proposed rule provides "waters, including wetlands that are adjacent to a wetland that meets the definition of tributary would be considered adjacent waters."¹⁸ This language collapses and confuses the "adjacent wetlands" and "tributary" categories of jurisdiction.

Such inclusion conflicts with how tributaries are traditionally defined in scientific literature.⁴⁹⁸ (p. 6)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Kennewick Irrigation District, Kennewick, Washington (Doc. #13571)

8.276 This definition is troublesome, as it would appear to expand what constitutes "waters of the United States" to include irrigation and on-farm drainage features such as canals, ditches, ponds, and wetlands created by irrigation seepage. (p. 4)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Paragraph (b) of the final rule provides exclusions for many features, including but not limited to most ditches that are not relocated tributaries or excavated in a tributary, artificial lakes and ponds created in dry land and used primarily for uses such as stock watering, irrigation, etc. and artificially irrigated areas that would revert to dry land should application of water to that area cease.

American Exploration & Mining Association (Doc. #13616)

8.277 **The Definition of “Tributary” Will Result in Duplicative and Onerous Permit Requirements.**

The proposed rule categorically determines that tributaries have a significant nexus to traditional navigable waters, interstate waters, and the territorial seas. 79 Fed. Reg. at 22,201. Likewise, waters and wetlands adjacent to tributaries will be automatically jurisdictional. Id. at 22,263. Any channelized feature, including ditches and other man-made conveyances, no matter how remote from navigable waters, will be jurisdictional tributaries if they exhibit a bed, bank and ordinary high water mark. The proposed rule’s “tributary” definition vastly expands the scope of features that are currently regulated as tributaries, extending jurisdiction to features like ephemeral drainages and stormwater conveyances that have not been and should not be jurisdictional. (p. 4)

Agency Response: Section I of the Technical Support Document discusses the historic scope of the regulatory definition of “waters of the United States,” and also provides a broader discussion of the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions, including those for stormwater control features created in dry land. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions. The agencies believe that these exclusions ensure for the first time by rule that most ditches will

⁴⁹⁸ See SAB Panel Comments on Proposed Rule, at 2.

not be considered waters of the United States. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.” As defined in the final rule, “tributaries” thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b). The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Western Growers Association (Doc. #14130)

8.278 Western Growers asks that the Corps and EPA clarify several aspects of “tributaries”...
...the proposed regulation also appears to create two kinds of tributaries: 1) smaller waterways that have a bed, banks, and ordinary high water mark; and 2) waters like lakes, wetlands, and ponds that lack these features but nevertheless contribute flow to traditional as jurisdictional waters.⁴⁹⁹ The division between these two types of “tributaries” is unclear, particularly because many lakes can have a bed, banks, and high water mark. It is our belief that the categorization of lakes and ponds as “tributaries” requires additional clarification. As one example of the potential ambiguity, is a lake with a bed, banks, and high water mark a “water “waters of the United States” if it flows into a non-navigable stream that flows into an impoundment of a navigable-in-fact waterway? (p. 13)

Agency Response: The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Section I of the Technical Support Document discusses legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

National Corn Growers Association (Doc. #14968)

8.279 ...we think it is unlawful for any of the following to be deemed WOTUS categorically:
...

⁴⁹⁹ “II.F.1 What is a Tributary for the purposes of the proposed regulation?” 79 Fed. Reg. 22,188, 22,201-04 (April 21, 2014).

2. Impoundments of Ephemeral or Intermittent Tributaries. Only impoundments of WOTUS should be found to themselves be categorically WOTUS. Such impoundments could be found to be WOTUS on a case-States’ by-case basis. But as in the case for ephemeral or intermittent or tributaries, to do so categorically without accounting for the specific facts involving the affected flows is not lawful as it would amount to speculation.

3. Wetlands or Waters that are Adjacent to Ephemeral Intermittent Tributaries or their Impoundments. Only waters that are adjacent to WOTUS could be found to be WOTUS, and since ephemeral and intermittent tributaries and their impoundments should not be found WOTUS categorically, neither should wetlands nor waters adjacent to them be so categorically found.

... (p. 20, 21)

Agency Response: The agencies agree that only impoundments of waters of the United States should categorically themselves be waters of the United States, and this is clearly the meaning of paragraph (a)(4) of the final rule. Section IV(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.” The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion and are thus, waters of the United States. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Klamath Water Users Association (Doc. #15063)

8.280 ...Wetlands should not be considered “tributaries” in the final rule, as they should have to meet the “adjacent” and “significant nexus” tests to be considered “waters of the U.S.” (p. 5)

Agency Response: The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Union County Cattlemen (Doc. #15261)

8.281 **FR Page Page 22206** (6) *Man-Made or Man-Altered Tributaries Significantly Affect the Chemical, Physical, and Biological Integrity of(a)(1) Through (a)(3) Waters This proposal expressly states that a tributary, including wetlands, can be a natural, man-altered, or man-made water body and includes waters such as rivers, streams, lakes, impoundments, canals, and ditches that meet the definition of tributary and are not excluded from the definition of "waters of the United States" by paragraphs (b)(3) and (b)(4) of the proposed rule.*

Comment: We disagree. Man-altered water bodies do not require EPA's oversight or regulatory actions. Water quality sampling by inspectors for so many water areas is beyond the agencies' ability to conduct the work in a reasonable manner. Tributaries and wetlands are very distinct in much of the West and many have limited water, do not contribute sediments to a flowing body of water, and are being managed and observed at the state and local levels of government. A man-made ditch is man-made for many

reasons unrelated to the authority provided in the CWA. It has nothing to do with the CWA and the agencies should delete references to man-made conveyances. There is little or no evidence that they impact any flowing water body directly or indirectly to an extent that the contributions from runoff or anthropogenic activities create pollution problems. Delete this section.

EPA's desire to re-write the Supreme Court opinions and traditional use of the term "navigable waters" appears to be a grab at authority the people of the United States have not given to the agency in the law. If and when we do desire the agency to regulate more we will go through Congress to give the agencies the amount and kind of regulatory authority that will be workable and beneficial to everyone. (p. 3)

Agency Response: The agencies disagree. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for "Relevance of Flow Regime" in section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams" and the summary response for section 8.2 above, "Ditches as Tributary." Section I of the Technical Support Document discusses legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

- 8.282 **FR Page Page 22206** *As described above, tributaries of all flow regimes have a significant nexus to downstream (a)(1) through (a)(3) waters. Due to the often straightened and channelized nature of ditches, these tributaries quickly move water downstream to (a)(1) through (a)(3) waters. Ditches and canals, like other tributaries, export sediment, nutrients, and other materials downstream.*

Comment: We disagree. We are unaware of the science that supports such notions as the export of sediment, nutrients, and other materials downstream. Delete this because it is too broad in the approach field-testing has taken place and been conducted in a way to associate the channelized ditches to the nutrients and sediments contributed to the "navigable waters". Delete the references to "materials" if you cannot describe what the materials might be that are harmful to the water. (p. 3-4)

Agency Response: The agencies disagree. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for "Relevance of Flow Regime" in section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams" and the summary response for section 8.2 above, "Ditches as Tributary."

Beet Sugar Development Foundation (Doc. #15368)

- 8.283 *a. Defining Tributaries and Wetlands as per se "Waters of the United States"*

BSDF recommends that the agencies implement the alternative approach to defining tributaries that flow through wetlands as “waters of the United States.”⁵⁰⁰ BSDF agrees that including wetlands within the definition of tributary will add confusion because the wetlands have no ordinary high water mark. Both wetlands and tributaries should be analyzed under their respective categories. (p. 16)

Agency Response: The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Jensen Livestock and Land LLC (Doc. #15540)

8.284 The proposed rule states “...ditches not excluded in section (b) that, either directly or **through other tributaries**, convey water to...” Yet, this is in conflict with the actual definition for a tributary that states “...which contributes flow, either directly or **through another water**,...”⁵⁰¹ It is unclear whether to be a tributary the feature must contribute water through any means (i.e. “another water”) or through another tributary. Contributing flow through any type of water is clearly expansive, essentially making anything with a bed, bank and OHWM a “tributary” and subject to the CWA. It also contradicts the agencies’ statements and proposition that the proposed definition does not regulate groundwater, if groundwater can serve as the connection, and part of, a “tributary.” Jensen Livestock and Land LLC. assert that neither Congress nor the Commerce Clause of Article I of the U.S. Constitution intended or allows such a result.⁵⁰² The agencies’ definition of “tributary” violates the CWA and is beyond the authority of Congress to grant such unlimited authority based on the restrictions under the Commerce Clause of the U.S. Constitution. (p. 11)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Although revised, the definition of “tributary” retains the requirement that a water contribute flow, either directly or through another water (including an impoundment identified in paragraph (a)(4) of the final rule), to a water identified in paragraphs (a)(1) through (3) of the final rule and also possess physical indicators of a bed and banks and an ordinary high water mark in order to be considered a water of the United States as a “tributary.” Groundwater is explicitly excluded as water of the United States in paragraph (b) of the final rule.

8.285 a. Ambiguous Terms and Phrases

Jensen Livestock and Land LLC assert that the vast instances of undefined terms and phrases throughout the proposed rule make meaningful comments on the proposed rule impossible. Jensen Livestock and Land LLC cannot provide comments on the impact of a proposed definition that does not exist, or has a wide range of interpretations. This

⁵⁰⁰ See Definition of “Waters of the United States” Under the Clean Water Act, 79 Fed. Reg. at 22203 (requesting comment on how to delineate tributaries from wetlands).

⁵⁰¹ Proposed Rule at 22202.

⁵⁰² SWANCC at 173; (“...we have reaffirmed the proposition that the grant of authority to Congress under the Commerce Clause, though broad, is not unlimited...But this [Migratory Bird Rule] is a far cry, indeed, from the ‘navigable waters’ and ‘waters of the United States’ to which the statute by its terms extends.”).

section attempts to identify those legally important terms and phrases that the agencies have failed to adequately describe. However, Jensen Livestock and Land LLC assert that unless the agencies re-propose the definition with adequately defined terms and phrases for these legally significant terms that the public can comment on, they have not satisfied the notice and comment requirements under the APA.

...

iii. “Through Another Water”

Under the definition for tributary as well as the exclusions for ditches the agencies have used the phrase “through another water.” (Proposed Rule at 22199). Yet, the agencies have neglected to explain what this phrase means. When an important regulatory term or phrase is left undefined the regulated community will look at the broadest logical meaning of the term or phrase to determine the scope of their liability. In this case the phrase “through another water” could mean through ground water or through a non-jurisdictional ditch. If the agency does find that a ditch lacks a surface water connection to any other jurisdictional water, but does have some groundwater connection to a jurisdictional water, that water can now fall outside the exclusions for ditches, and now is a tributary by rule.

Jensen Livestock and Land LLC believe that the agencies should have known they needed to provide a definition for such significant regulatory terms, and their failure to provide a definition prohibits Jensen Livestock and Land LLC. from being able to meaningfully comment on the proposed rule. The agencies must re-propose the rule with such definitions included so that the regulated public may provide comments on its scope. Jensen Livestock and Land LLC. assert that including groundwater in the phrase “through another water” is inappropriate and fails to recognize that there is a limit to federal jurisdiction under the CWA. (p. 16-17)

Agency Response: The proposed rule preamble included language explaining the terms water and waterbodies as the agencies used them in the proposal. The public had ample opportunity to comment on these terms. Section IV(F) of the preamble to the final rule discusses “tributaries,” including the phrase “through another water.” See summary response. See also summary response 13.2.1 for a discussion of compliance with the APA.

Florida Crystals Corporation (Doc. #16652)

- 8.286 The Proposed Rule would now regulate most Florida farm ditches. The Proposed Rule would define the "navigable waters" to include "all tributaries" of waters used in interstate or foreign commerce and the territorial seas. A "tributary" is defined as "a water physically characterized by the presence of a bed and banks and ordinary high water mark ... which contributes flow, either direct or through another water, to [waters used in interstate or foreign commerce, interstate waters, the territorial seas, and impoundments of such waters]." Since almost all ditches in Florida are connected to offsite waters of some sort in order to provide drainage and irrigation functions, and eventually connect to the ocean through circuitous routes, the Proposed Rule makes almost all ditches presumptively subject to federal regulation under the CWA. (p. 4)

Agency Response: The summary response in Section 6.2 of the Ditches compendium in this RTC discusses how the proposed exclusions for ditches were edited and clarified for the final rule. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States.

North Dakota Farmers Union (Doc. #16930.1)

8.287 “Wetland” as a “Tributary”

We are particularly concerned about including “wetlands” in the definition of tributaries. Wetlands are not tributaries under any legal, plain language, or common sense understanding. If a discharge into a wetland is significantly affecting a navigable water, it will be jurisdictional as an “adjacent water” or significant nexus analysis of “other waters.” Further, finding jurisdiction over the wetland as a tributary will only further confuse – not provide clarity to – farmer and rancher community.

Recommendation: We strongly request that “wetlands” are removed from any definition of tributary. (p. 4)

Agency Response: See the summary responses for Sections 8.1 and 8.2.

Agribusiness Association of Kentucky et al. (Doc. #18005)

8.288 Given the breadth of the definitions in the proposed rule, the vast majority of ephemeral drainage features and ditches on farmlands and pastures described above would be categorically regulated as jurisdictional tributaries under the proposed rule. And the vast majority of small wetlands, ponds and pools (including, potentially, ephemeral ponds, which some might call “puddles”) would be either categorically regulated as “adjacent” waters or could still be regulated as “other waters.” Consequently, with the exception of very narrow section 404 exemptions discussed in Part IV.A below, regulating drains, ditches, stock ponds, and other low spots within farm fields and pastures as “navigable waters” would mean that any discharge of a pollutant (e.g., soil, dust, pesticides, fertilizers and “biological material”) into those ditches, drains, ponds, etc. will be unlawful without a CWA permit. (p. 2-3)

Agency Response: Puddles and ephemeral drainage features that do not meet the revised definition of “tributary” in the final rule and are both explicitly excluded from being considered waters of the United States in paragraph (b)(4) of the final rule. In addition, artificial lakes and ponds created in dry land and used primarily for uses such as stock watering, irrigation, etc. are also excluded under paragraph (b)(4). Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States.

8.289 In their marketing campaign, the Agencies repeatedly insist that the rule does not expand jurisdiction over ditches, that most ditches will not be regulated, that ditches are

excluded, and that the Agencies do not intend to regulate ditches.⁵⁰³ A careful reading of the proposal's fine print, combined with a common sense understanding of ditches and how they function, however, shows that the proposed rule would in fact regulate many ditches. (At the very least, the proposed language could easily be interpreted to regulate many ditches, and we presume that, like most EPA/Corps regulations, it would be broadly interpreted by the Agencies.) Lost in the denials is the fact that, for the first time ever, the text of the Agencies' regulations will specifically define the term "tributary" to include "ditches" and "canals." The proposed rule would categorically regulate as "tributaries" all ditches that ever carry any amount of water that eventually flows (over any distance and through any number of other ditches) to a navigable water—unless the ditch falls within a narrowly crafted exclusion for certain "upland" ditches. (p. 8-9)

Agency Response: The summary response in Section 6.2 of the Ditches compendium in this RTC discusses how the proposed exclusions for ditches were edited and clarified for the final rule. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States.

Hampton Roads Planning District Commission, Chesapeake, Virginia (Doc. #9612)

8.290 **The definition of tributaries should not include features such as wetlands, lakes, ponds, impoundments or ditches.** It would be more appropriate to classify these features as "other waters" which would require a case-specific significant nexus analysis to determine if they are WOTUS. (p. 2)

Agency Response: See the summary responses for Sections 8.1 and 8.2.

Georgia Department of Transportation (Doc. #14282.1)

8.291 **C. Relationship to exclusions for ditches**

The definition of "tributary" in the proposed rule includes "ditches not excluded in paragraph (b)(3) or(4) of this section." We interpret this statement to mean that, if a ditch is excluded by paragraphs (b)(3)or (b)(4), the ditch cannot be considered jurisdictional, even if it would otherwise meet the definition of "tributary."

Recommendation: The final rule should make clear that the exclusions take precedence over the jurisdictional-by-rule provisions. We raise this concern because of the breadth of the definition of "tributary" in the proposed rule. If that definition is not changed, it is possible that some ditches could meet the criteria for being jurisdictional by rule, while also meeting the criteria for the first ditch exclusion - i.e., "excavated wholly in uplands, drain only uplands, and have less than perennial flow." The final rule should clearly state that, in those situations, the exclusion takes precedence and therefore the ditch would be deemed non-jurisdictional. (p. 6)

Agency Response: Paragraph (b) of the final rule clearly states that the excluded features identified therein “are not waters of the United States even where they

⁵⁰³ U.S. EPA, "Facts About the Waters of the U.S. Proposal", July 1, 2014, http://www2.epa.gov/sites/production/files/2014-09/documents/facts_about_wotus.pdf and attached at Appendix H.

otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, neither an excluded ditch nor any other excluded feature may be considered waters of the United States under any other provision of the rule.

Department of Public Works, City of Chesapeake, Virginia (Doc. #5612.1)

- 8.292 The Rule proposes to categorize wetlands, lakes, ponds, impoundments and ditches as *tributaries*, even if they lack a bed and banks or Ordinary High Water Mark (OHWM), if they contribute flow to WOUS, regardless of perennial, intermittent or ephemeral flow; therefore, by Rule, these features would be jurisdictional WOUS without any significant nexus analysis. The City does not support a definition of *tributaries* to include features such as wetlands, lakes, ponds, impoundments or ditches. It would also not be appropriate to evaluate these features as *adjacent waters*, resulting in jurisdictional determinations without any significant nexus analysis; however, it may be appropriate to evaluate these features through a case-specific significant nexus analysis as "other waters." (p. 2)

Agency Response: See the summary responses for Sections 8.1 and 8.2. The agencies disagree that wetlands, lakes, ponds and- impoundments should not be regulated as adjacent waters. See section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document for discussions concerning adjacent waters.

- 8.293 The Rule states that a tributary is a WOUS, and a tributary may be ephemeral, intermittent or perennial. This statement is in direct conflict with the exemption for ditches that have less than perennial flow. Ephemeral and intermittent ditches are not tributaries and should not be subject to regulatory oversight under the CWA. The Corps' Nationwide Permit program defines an ephemeral stream having flowing water only during, and/or a short duration after, precipitation events in a typical year; in addition, ephemeral stream beds are located above the water table year-round and groundwater is not a source of water/or the stream... Ephemeral streams as well as ditches with less than perennial flow should be explicitly exempt to regulatory oversight under the CWA. (p. 3)

Agency Response: The agencies disagree that the exclusions for ditches is in direct conflict with the definition of “tributary.” First, the exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). Second, paragraph (b) of the final rule clearly states that the excluded features identified therein, including ditches, “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, neither an excluded ditch nor any other excluded feature may be considered waters of the United States under any other provision of the rule. The agencies also disagree that ephemeral streams should not be considered waters of the United States. See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters,

and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

Black Hills Corporation (Doc. #6248)

- 8.294 "Tributaries" - The draft definition of "tributary" includes any feature that drains to U.S. water bodies and has a bed, bank and an ordinary high water mark. A tributary can be natural, *man-altered*, or *man-made*, and include rivers, streams, lakes, impoundments, canals, and *man-made ditches and conveyances*. This definition covers most types of manmade surface structures to manage water flow and treatment including roadside ditches, ditches associated with treatment systems, stormwater management conveyances, and irrigation ditches. (p. 3)

Agency Response: See the summary responses for Sections 8.1 and 8.2.

Paragraph (b) of the final rule provides many exclusions, including but not limited to waste treatment systems designed to meet the requirements of the CWA, most ditches that are not relocated tributaries or excavated in a tributary, stormwater control features constructed in dry land, and artificial lakes and ponds created in dry land and used primarily for uses such as stock watering, irrigation, etc. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," provide a broad discussion of the final rule's exclusions. See summary response for section 6.2, "Excluded Ditches" in this RTC for a more focused discussion of revised and clarified ditch exclusions. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States.

Clearwater Watershed District et al. (Doc. #9560.1)

- 8.295 Wetlands are not understood as tributaries in either common sense, plain language or in statutory and caselaw verbiage. It is not logical to refer to a wetland, a body of water without a defined bed, bank, and ordinary high water mark, as a "tributary."

... the agencies inclusion of wetlands as tributaries is contradictory to its analysis of adjacent wetlands within the proposed rule. Under the agencies analysis of adjacent waters, the agencies state, "In circumstances where a particular water body is outside of the floodplain and riparian area of a tributary, but is connected by a shallow subsurface hydrologic connection or confined surface hydrologic connection with such tributary, the agencies will also assess the distance between the water body and tributary in determining whether or not the water body is adjacent." In the case of a wetland connected by a confined surface hydrologic connection, a reasonable interpretation of the proposed rule would conclude that all such wetlands would be tributaries due to their outlet connection. Therefore, no wetland would be outside of reasonable proximity to other waters of the United States as they would all be considered tributaries themselves.

RECOMMENDATION: We recommend that the agencies do not consider wetlands as tributaries under the new rule. We support jurisdiction over wetlands that are adjacent to navigable waters, interstate waters, or the territorial seas. We support the clarity of a rule that defines adjacent as "neighboring" and limits the interpretation of neighboring to only those wetlands that have a confined surface hydrologic connection within a reasonable proximity to navigable waters. (p. 11)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Section (IV)(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.”

Central Massachusetts Regional Stormwater Coalition (Doc. #15443.1)

- 8.296 The definition of the term “tributary” in this section of the Proposed Rule includes wetlands. The term “tributary” is commonly considered to mean moving water and could result in confusion for entities regulated under the MS4 Program. Headwater wetlands are already classified as “adjacent” under §328.3(c)(1), and many categories of wetlands are thoroughly defined, regulated, and managed in Massachusetts under the Wetlands Protection Act (310 CMR 10.00). This duplication and contradiction in the Proposed Rule introduces the very confusion that it aims to eliminate. We suggest that the clause “including wetlands” be removed from the last sentence in this section. (p. 2)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Duke Energy (Doc. #13029)

- 8.297 Tributaries: The definition for tributaries should be reexamined and several key changes should be made:

- Remove language that would include lentic-type waters (lakes, ponds, wetlands, impoundments) from this category as they would be better classified under different categories;
- Remove the explicit references to ditches from the definition... (p. 12)

Agency Response: See the summary responses for Sections 8.1 and 8.2. Although the exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC), thus ensuring for the first time by rule that most ditches will not be considered waters of the United States, the agencies believe that some ditches do serve as tributaries and provide many of the same functions to downstream waters as natural tributaries. See summary response for section 8.2 above, particularly the subsection on “Ditches as Tributary.”

- 8.298 With this new overly broad definition, the agencies would extend jurisdiction to many water features that the agencies have not historically regulated, such as ephemeral streams, and the proposed definition specifically identifies ditches as tributaries. (p. 21)

Agency Response: The agencies disagree that ephemeral streams should not be considered waters of the United States. See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses

the science supporting the agencies’ conclusion. The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC), thus ensuring for the first time by rule that most ditches will not be considered waters of the United States. The agencies believe that some ditches do serve as tributaries and provide many of the same functions to downstream waters as natural tributaries. See summary response for section 8.2 above, particularly the subsection on “Ditches as Tributary.”

- 8.299 The inclusion of water features that lack a bed, bank and OHWM such as wetlands, lakes or ponds also extends the concept of a tributary way past a traditional meaning and introduces additional confusion. These types of waters would be more appropriately covered under a different category such as “adjacent waters,” not defined as tributaries. (p. 23)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

- 8.300 Another aspect that is confusing with the definition of tributary concerns the inclusion of non-stream features that lack a bed, bank and OHWM, such as wetlands, lakes and ponds. Not only does this broaden the traditional meaning of a tributary, but it directly conflicts with how tributaries are defined in scientific literature.⁵⁰⁴ The agencies do not provide any clarification on how these types of water features would be different from “adjacent waters”. (p. 25)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

- 8.301 It is also unclear why impoundments are listed in the definition for tributary, when they are already included in their own category as an (a)(4) water under the definition for “waters of the United States.” Since the agencies did not propose a definition for impoundment, it leaves open the possibility that different impoundments could be regulated as an (a)(5) tributary versus and (a)(4) impoundment. Again, this does not provide the clarity the agencies claim and regulated stakeholders seek. (p. 25-26)

Agency Response: See the summary response for Section 8.2. The definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, impoundments and wetlands as tributaries.

Murray Energy Corporation (Doc. #13954)

- 8.302 The new definition of “tributary” in the Proposed Rule would also radically alter this term’s traditional meaning and long-held practice by extending the term to lakes, ponds and wetlands, even where they lack traditional indicia of tributary – *i.e.*, OHWM and bed and bank. Provided the tributary “contribute[s] flow, either directly or through” (a)(1) to (a)(4) waters, no matter how significant or insignificant the flow is, under this Proposed Rule it will be deemed jurisdictional. Proposed Rule at 22272.

⁵⁰⁴ SAB Panel Comments on proposed rule, September 30, 2014, Page 2 (EPA-SAB-14-007).

The Agencies' proposed approach deeming all tributaries as *per se* jurisdictional is inconsistent with the Agencies' desire for consistency, clarity and certainty to the extent the new definition of "tributary" includes wetlands and other water bodies that do not contain clear and discernible features such as bed and bank and OHWM. The definition is also at odds with the Agencies' description of a tributary elsewhere in the Proposal, where the agencies seem to acknowledge the necessary presence of bed and bank and OHWM. ("A tributary is a longitudinal surface feature that results from directional surface water movement and sediment dynamics *demonstrated by the presence of bed and banks, bottom and lateral boundaries, or other indicators of OHWM.*"). *Id.* at 22202 (emphasis added). (p. 10-11)

Agency Response: See the summary response for Section 8.2. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

- 8.303 Also troubling to us is the potential for significantly expanded jurisdiction over stormwater ditches and temporary diversion ditches under the current Proposal. If adopted as written, the broad new definition of "tributary" and narrow, if not meaningless, exclusions for ditches under the Proposed Rule would bring many, perhaps even most, stormwater ditches under federal jurisdiction. Specifically, the Proposed Rule would extend jurisdiction to all stormwater ditches with an identifiable bed, bank and OHWM that drain into "waters of the U.S." Considering the Proposal's expanded interpretation of "waters of the U.S.," this would likely become an exceedingly common scenario, necessitating a substantial increase in the number of jurisdictional determinations and permit applications required at regulated sites across the country. (p. 14)

Agency Response: Paragraph (b) of the final rule provides many exclusions, including but not limited to waste treatment systems designed to meet the requirements of the CWA, most ditches that are not relocated tributaries or excavated in a tributary and stormwater control features constructed in dry land. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, "Features and Waters Not Jurisdictional," provide a broad discussion of the final rule's exclusions. See summary response for section 6.2, "Excluded Ditches" in this RTC for a more focused discussion of revised and clarified ditch exclusions. The agencies believe that these exclusions ensure for the first time by rule that most ditches will not be considered waters of the United States.

Southern Company (Doc. #14134)

- 8.304 ...the upper limit of a tributary, according to the agencies, is usually established where "the channel begins," but under the proposal, jurisdiction may extend farther up into a watershed if wetlands are providing flow to the tributary. (*See Proposed Rule* at 22201) ("wetlands, lakes and ponds are tributaries (even if they lack a bed and banks (sic) or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (a)(1) through (3)."). This could potentially extend jurisdiction well into upper reaches of watersheds and water features far from tributaries with discernible bed and bank and OHWM that were not otherwise jurisdictional prior to

the proposed rule, and regardless of a tributary's significant nexus to TNWs.⁵⁰⁵ As a practical matter, it will be extremely difficult for the regulated community and the agencies to effectively determine—absent continuous flow—what features are upstream or downstream. For example, transmission lines are most frequently constructed on narrow rights-of-way, which provide very limited access to adjacent features and land. The agencies have not explained how they or the regulated community would gain access to wholly separate (and disinterested) tracks of land (up- and down-gradient) to assess whether on-site features “contribute flow.” (p. 35-36)

Agency Response: See the summary responses for Sections 8.1 and 8.2.

Santa Clara Valley Water District, California (Doc. #14776)

8.305 The agencies' implicit suggestion that lakes and ponds may lack a bed and banks or ordinary high water mark (79 Fed. Reg. 22263) is confusing and troubling. Currently, the lateral boundary of waters of the United States, apart from wetlands, is the ordinary high water mark. (33 C.F.R. § 328.4.) Indeed, the agencies commonly determine both the existence and extent of a water of the United States, e.g., a stream, by ascertaining whether a feature exhibits an ordinary high water mark. They fail to explain the conflicting suggestion in the Proposed Rule that a feature may constitute a "lake" or "pond" and thus a water of the United States even if it lacks an ordinary high water mark. (p. 3)

Agency Response: See the summary responses for Sections 8.1 and 8.2.

Nucor Corp. (Doc. #14963)

8.306 ...the Agencies propose to expand the definition of "tributary" and, except in some very limited circumstances, *categorically* extend jurisdiction to ephemeral and intermittent drainages, ditches and other conveyances. Under the proposed rule, a "tributary" is defined as including any feature with a bed and banks and ordinary high water mark that contributes flow to a TNW, interstate water or territorial sea. 79 Fed. Reg. 22263. Even more importantly, the proposed rule stretches the definition of tributary to include man-altered and man-made waters and expressly includes ditches. *Id.* In doing so, the proposed rule gives no weight to the limits placed on jurisdiction by the Plurality or Justice Kennedy. The proposed rule categorically defines ditches carrying any amount of water in any location as tributaries and, even more alarmingly, has no exclusion for the Plurality's clear statement that ditches used to convey stormwater are *not* "waters of the United States". (p. 9)

Agency Response: See the summary responses for Sections 8.1 and 8.2. The agencies disagree that ephemeral streams should not be considered waters of the United States. See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters.

⁵⁰⁵ See *U.S. v. Robison*, 505 F.3d 1208 (11th Cir. 2007) (concluding in a criminal matter that a perennial stream, with continuous uninterrupted flow, was not jurisdictional under the CWA where the government failed to establish a significant nexus).

The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC), thus ensuring for the first time by rule that most ditches will not be considered waters of the United States. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for "Relevance of Flow Regime" in section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams" and the summary response for section 8.2 above, "Ditches as Tributary." Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

Colorado River Water Conservation District, Colorado (Doc. #15070)

- 8.307 ...the inclusion of man-made canals in the definition of tributary adds to the confusion surrounding specifically which man-made ditches and canals are jurisdictional. At a minimum, the rule should explicitly state that it does not alter Section 404 exemptions included in the Clean Water Act. (p. 2)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC), thus ensuring for the first time by rule that most ditches will not be considered waters of the United States. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for "Relevance of Flow Regime" in section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams" and the summary response for section 8.2 above, "Ditches as Tributary." All statutory exemptions in the CWA remain in effect and unchanged by the final rule.

Illinois Fertilizer & Chemical Association (Doc. #15129)

- 8.308 Ditches should be removed from the definition of tributary as this term is overly broad and means very different things across the country only generating more confusion. (p. 1)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC), thus ensuring for the first time by rule that most ditches will not be considered waters of the United States. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the

Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.”

Tri-State Generation and Transmission Association, Inc. (Doc. #16392)

8.309 The use of the tributary definition to encompass wetlands, lakes, and ponds is duplicative, as the impoundments, adjacent waters, and other waters (based on a significant nexus evaluation) already address these systems. (p. 5)

Agency Response: See the summary responses for Sections 8.1 and 8.2.

Texas Water Development Board (Doc. #16563)

8.310 ...the proposed rule goes on to include wetlands, lakes, and ponds *even if they lack a bed and banks or ordinary high water mark* as tributaries. The determination is made on the basis of whether a water contributes flow rather than on proximity as discussed by the Court. The rule should be re-drafted to consider only relatively permanent tributaries, and provide objective steps to determine connectivity based on a continuous surface connection to jurisdictional waters. (p. 6)

Agency Response: See the summary responses for Sections 8.1 and 8.2. Although excluded as “tributaries” in the final rule, the wetlands described by the commenter may still be waters of the United States if they meet the definition of “adjacent waters.” Section (IV)(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.” The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC), thus ensuring for the first time by rule that most ditches will not be considered waters of the United States. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.”

Ducks Unlimited (Doc. #11014)

8.311 In cases in which wetlands serve as water sources at the upper limit of the tributary system, or serve to connect two waters from among the other classes of wetlands considered jurisdictional by rule, we agree with the proposed approach of considering such wetlands as a “tributary” for purposes related to jurisdiction. The alternative approach of considering them “adjacent wetlands” would appear to achieve the same end result, but the proposed approach seems more efficient, particularly when considering the issue of classification of these waters for purposes of potential future database management. (p. 14)

Agency Response: See the summary responses for Sections 8.1 and 8.2. Although excluded as “tributaries” in the final rule, the wetlands described by the commenter may still be waters of the United States if they meet the definition of “adjacent waters.” Section (IV)(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.”

8.312 Treatment of "Ditches" Within the Tributary Class: In general, we find the EPA's treatment of ditches scientifically sound and acceptable. For example, it is clear that a significant nexus to other jurisdictional waters would be provided by the four primary types of ditches that would remain jurisdictional by rule:

- natural streams that have been altered (e.g., channelized, straightened or relocated);
- ditches that have been excavated in "waters of the United States," including jurisdictional wetlands;
- ditches that have perennial flow; and,
- ditches that connect two or more "waters of the United States." (p. 14)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). Ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries.

8.313 ... it should be made more clear that the treatment of ditches will not and cannot be used to expand the longstanding interpretation of jurisdiction as it applies to infrastructure used for normal agricultural activities... (p. 75)

Agency Response: Exclusions in paragraph (b) of the final rule include prior converted cropland, most ditches that are not relocated tributaries or excavated in a tributary, artificial lakes and ponds created in dry land and used for uses such as stock watering, irrigation, etc. and artificially irrigated areas that would revert to dry land should application of water to that area cease. Section IV(I) of the preamble to the final rule and the summary responses in Compendium 7 of this RTC, “Features and Waters Not Jurisdictional,” provide a broad discussion of the final rule’s exclusions. See summary response for section 6.2, “Excluded Ditches” in this RTC for a more focused discussion of revised and clarified ditch exclusions. Furthermore, all statutory exemptions, including those for normal farming, silviculture and ranching activities, remain in effect and unchanged by the final rule.

Southern Environmental Law Center et al. (Doc. #13610)

8.314 H. The definition of the term “tributaries” is confusing.

The term “tributaries” should be redefined so that it is clear that for the purposes of this rule wetlands, lakes, and ponds that contribute flow to a tributary system are clearly included in the term and thus do not require case-by-case jurisdictional analysis. (p. 4)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition

of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. The wetlands described by the commenter may still be waters of the United States if they meet the definition of “adjacent waters.” Section (IV)(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.”

- 8.315 Comment: Under the proposed rule most ditches are considered tributaries. We offer the following comments concerning ditches. In contrast to other tributaries, ditches are required to meet additional characteristics before even being potentially considered jurisdictional. Ditches must have an OHWM, connect directly or indirectly to a traditional navigable water or interstate water and meet one of five other factors, and the proposed Guidance presumes that ditches are not tributaries.⁵⁰⁶ Historically, ditches commonly have been protected under the CWA. Some so called ditches have been regulated under the Clean Water Act because they are actually altered streams (i.e., streams that have been dredged out), and because ditches can transport pollutants downstream they are functionally no different than other tributaries. Ditches can also be regulated under the Clean Water Act if they flow into other bodies of water that are protected by the Clean Water Act even if the ditches themselves are artificial.⁵⁰⁷ There is no compelling legal or scientific reason to treat ditches differently from other tributaries and find them jurisdictional under the significant nexus test and we urge EPA to remove the unnecessary and burdensome additional factors. (p. 48-49)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). Ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.”

Chesapeake Bay Foundation (Doc. #14620)

- 8.316 ii. CBF supports the inclusion of “Lakes, ponds and wetlands with surface connection to waters” in the definition of “Tributary”. CBF has considerable experience within bay states where nutrient pollution from lakes, ponds, canals, and ditches, because of higher residence times than streams or tidal waters, contributes to excessive microalgae populations and in some cases, harmful algal blooms. For example, Higgins Millpond, an

⁵⁰⁶ Proposed Guidance, p.12.

⁵⁰⁷ *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526 (9th Cir. 2001); *United States v. Holland*, 373 F. Supp. 665 (M.D. Fla. 1974).

artificially impounded tributary of the Transquaking River has experienced several harmful algal blooms which then spread beyond the confines of the impoundment.⁵⁰⁸

These conditions in turn can contaminate downstream water segments with the bio-toxin or add biochemical oxygen demand to already eutrophic downstream waters. Therefore we support the inclusion of lakes, ponds and wetlands with surface connection to waters in the definition of “Tributary”. (p. 5)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.”

National Wildlife Federation (Doc. #15020)

8.317 ... [W]e strongly support the agencies’ preamble clarification that even when not jurisdictional waters, non-wetland swales, gullies, rills and specific types of ditches may still be a surface hydrologic connection for purposes of the proposed definition of adjacent under paragraph (a)(6) or for purpose of a significant nexus analysis under paragraph (a)(7). We also support the clarification that these geographic features may function as “point sources” under the CWA such that discharges of pollutants to waters through these features would subject to CWA permitting requirements such as CWA section 402. 79 Fed. Reg. at 22219. (p. 103)

Agency Response: Section IV(I) of the preamble to the final rule indicates that while the waters listed in the exclusions are never “waters of the United States,” they can serve as a hydrologic connection that the agencies would consider under a case-specific significant nexus under paragraphs (a)(7) and (a)(8).

8.318 **B. The Proposed Rule, much like the 2008 Guidance, properly treats many non-tidal ditches as tributaries where they clearly function as tributaries.**

Ditches that clearly function as tributaries – contributing flow and pollutants downstream – are regulated as such under both the 2008 Guidance and the Proposed Rule. As the preamble explains, “[d]itches not excluded under paragraphs (b)(3) and (4) of the proposed regulation meet the definition of tributary where they have a bed and banks and ordinary high water mark and they contribute flow directly or indirectly through another water to (a)(1) through (a)(4) waters.” 79 Fed. Reg. at 22203.

We are generally supportive of the agencies’ proposed rule with respect to the jurisdictional treatment of non-tidal ditches and swales. Non-tidal ditches, including roadside and agricultural ditches, are complicated because they are sometimes carved out of upland, but are often constructed in natural streams and wetlands, are prevalent on the landscape, and where they connect directly or indirectly to the tributary system, they often contribute substantial amounts of pollution and flood water to downstream TNWs or IWs. Such ditch systems have wreaked havoc with water quality in some of the

⁵⁰⁸ Microcystis Bloom Continues in the Transquaking River, Maryland Department of Natural Resources, Eyes on the Bay, May2, 2008.

nation's greatest aquatic ecosystems, including the Chesapeake Bay watershed and Mississippi River Basin and Gulf of Mexico.⁵⁰⁹

To maintain and restore the physical, chemical, and biological integrity of the nation's waters, the pollution and flood waters conveyed to downstream tributaries from these tributary ditch systems must be subject to Clean Water Act regulation. The agencies have struck a reasonable balance, consistent with the CWA, the Supreme Court cases, and past practice, by treating non-tidal ditches as tributaries *where they clearly function as tributaries*: where they have a bed, bank, and OHWM, connect directly or indirectly to a TNW or IW, and otherwise function as a tributary and potential source of pollution. See 79 Fed. Reg. at 22203.⁵¹⁰

The preamble concludes, based on the science, that tributary ditches provide the same chemical, physical, and biological functions as other tributaries and have the requisite significant nexus to TNWs and IWs:

Tributary ditches and other man-made or man-altered waters, if they meet the definition of "tributary," have a significant nexus to (a)(1) through (a)(3) waters due to their effects on the chemical, physical, or biological integrity of those downstream waters. As described above, *tributaries of all flow regimes have a significant nexus to downstream (a)(1) through (a)(3) waters*. Due to the often straightened and channelized nature of ditches, these tributaries quickly move water downstream to (a)(1) through (a)(3) waters. Ditches and canals, like other tributaries, export sediment, nutrients, and other materials downstream."

79 Fed. Reg. at 22206.

EPA precedent for protecting man-made or altered waters that function as tributaries began quite early in the Act's implementation. The agency's General Counsel concluded in 1977 that the Arlington Canal, in Buckeye, Arizona, was a "water of the United States," despite describing the Canal as:

[A]n earthen irrigation ditch which flows roughly parallel to the Gila River [, which has flow that] consists primarily of groundwater pumped from wells, irrigation return flows and treated sewage effluent [and which] takes in water from the main Gila River channel only during periods of heavy flow when upstream users are not diverting all of the flow of the River.⁵¹¹

The opinion states that the "facts clearly support the Regional Administrator's finding that the Arlington Canal is a tributary of the Gila River, which is navigable water."⁵¹²

⁵⁰⁹ See, e.g., SAB Connectivity Peer Review Report at 23-24, 31-32. See also, Section IX.K. *infra*; Dr. Robert Magnien, *Miles of Ditches have Altered Delmarva Peninsula Hydrology*, Chesapeake Bay Journal April 1999 at <http://www.bayjournal.com/article.cfm?article=2128> (last checked 11.12.14).

⁵¹⁰ The agencies' proposed criteria of an OHWM, a bed and bank, and additional criteria indicative of tributary function are criteria above and beyond existing regulatory requirements for what is considered a tributary.

⁵¹¹ U.S. EPA, Office of General Counsel, In re: Town of Buckeye, Arizona, 1977 WL 28254, at * 1 (Nov. 11, 1977).

⁵¹² *Id.* (citation omitted).

And this conclusion was not an aberration; a separate opinion from the General Counsel two years earlier was consistent with this view.⁵¹³

Since the passage of the Act, federal courts have consistently concluded that man-made channels can properly be considered “waters of the United States.” For instance, in a case involving the discharge of raw sewage during the 1970s into a Louisiana canal that was adjacent to (and from which water was periodically pumped into) wetlands that were considered to be “waters of the United States,” the court found that the canal could be protected either as a water linked to interstate commerce or as a tributary to the wetlands.⁵¹⁴

In the last decade – both before and after *SWANCC* – numerous federal courts of appeal have found that ditches and canals properly could be protected “waters of the United States.” Specifically, the Fourth, Sixth, Seventh, Ninth, and Eleventh Circuits found that such features were properly protected by the Clean Water Act.⁵¹⁵ Similarly, the Second Circuit rejected an attempt to limit jurisdiction over a natural tributary that had been “channeled in some places . . . into underground pipes to make room for development. . . .”⁵¹⁶ Cases since *Rapanos* have similarly found that man-made or man-altered tributaries are jurisdictional.⁵¹⁷

In keeping with this approach, the Bush Administration staunchly defended the protection of the entire tributary system, ditches included, before the Supreme Court. Solicitor General Clement explained “the definition of a tributary is basically any channelized body of water that takes water in a flow down to the traditional navigable water.”⁵¹⁸ Specifically, he noted that “[t]he Corps has not drawn a distinction between man-made channels or ditches and natural channels or ditches. And, of course, it would be very absurd for the Corps to do that since the Erie Canal is a ditch.”⁵¹⁹

Even opponents of the continued broad scope of the Act recognize that ditches have long been covered by the Clean Water Act. One such opponent observed (in a 2006 email about the draft guidance sent to staff at the Council on Environmental Quality (“CEQ”))

⁵¹³ U.S. EPA, Office of General Counsel, In re: Riverside Irrigation Dist., Ltd. & 17 Others, 1975 WL 23864, at *3-4 (June 27, 1975) (discussing objection about irrigation return canals, EPA’s regulations defining “waters of the United States” and a judicial interpretation which noted that tributaries to navigable waters were protected, and concluding, “[i]t thus appears that the waters that are the subject of these permits may well be determined by the finder of fact, applying the statutory and regulatory test to the facts of these cases, to be navigable waters within the definition in the Act.”).

⁵¹⁴ *U.S. v. St. Bernard Parish*, 589 F.Supp. 617, 620 (E.D. La. 1984).

⁵¹⁵ S.Ct. 2964 (2006), *on remand* 464 F.3d 723 (7th Cir. 2006) (remanding to district court to apply *Rapanos*), *cert. denied* 128 S.Ct. 45 (2007); *Headwaters, Inc. v. Talent Irrigation Dist.*, 243 F.3d 526, 533 (9th Cir. 2001) (holding that irrigation canals were “tributaries” protected as “waters of the United States”); *U.S. v. Eidson*, 108 F.3d 1336, 1342 (11th Cir.) (“There is no reason to suspect that Congress intended to regulate only the natural tributaries of navigable waters. Pollutants are equally harmful to this country’s water quality whether they travel along man-made or natural routes.”), *cert. denied*, 522 U.S. 899 (1997).

⁵¹⁶ *U.S. v. TGR Corp.*, 171 F.3d 762, 765 (2d Cir. 1999).

⁵¹⁷ See note 107, *supra*.

⁵¹⁸ Transcript of Oral Argument, *Rapanos v. United States*, 126 S.Ct. 2208 (2006), at 39 (Feb. 21, 2006), available at http://www.supremecourt.gov/oral_arguments/argument_transcripts/04-1034.pdf.

⁵¹⁹ *Id.*

that ditches had “long been covered under [the] CWA,” and wondered whether excluding such “artificial” waters from coverage would create legal vulnerabilities.⁵²⁰ (p. 35-37)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). Ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries.

American Rivers (Doc. #15372)

8.319 ***2. Ensure that Wetlands that Connect Tributary Segments are Categorically Protected***

The Agencies specifically request comment on whether wetlands that connect tributary segments and contribute flow at the upper reaches of a tributary system should be considered tributaries or adjacent waters. From an ecological perspective, these waters could be covered under either category. Most importantly, these waters should be categorically protected whether they are considered tributaries or adjacent waters. We recommend that these wetlands remain covered as a tributary, particularly in the context of our recommended revised definition of tributary. Much of the concern about whether these wetlands should be tributaries or adjacent waters is the result of the likely absence of an OHWM. By revising the definition of tributary to deemphasize this physical feature, we believe that wetlands that connect tributaries or provide headwaters can reasonably be considered under the tributary category. (p. 20)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section (IV)(G) of the preamble and section VIII of the Technical Support Document discuss “adjacent waters.”

Natural Resources Defense Council et al. (Doc. #15437)

8.320 ***1. Request for comment on not treating waters without an ordinary high water mark as tributaries, even when they function as such.***

The agencies request comment on whether features without an ordinary high water mark (OHWM) that contribute flow to downstream waters, such as wetlands and ponds, should be eligible to be considered tributaries, or if they should be treated exclusively as adjacent waters. The notice states:

⁵²⁰ Email from Jeff Eisenberg, National Cattleman’s Beef Ass’n, to Greg Schildwachter, CEQ, Sept. 13, 2006, at 1 (produced in response to Freedom of Information Act by Council on Environmental Quality). The message went on to convey that, despite their legal concerns, “[w]e of course are happy to have ditches excluded.” See also *Dialogue: Will the New Waters of the United States (WOTUS) Rule Float?* 44 ELR 10862 (10-2014), *Comments of Deidre Duncan* (“It is true that the Corps has, in case-specific circumstances, regulated ditches in the sec. 404 program, but what is also clear is that ditches have not previously been regulated as waters of the United States under non-sec. 404 CWA programs.”).

An alternate approach would be to clarify that wetlands that connect tributary segments are adjacent wetlands, and as such are jurisdictional waters of the United States under (a)(6). In this approach, a tributary would be defined as having a bed and bank and OHWM, and the upper limit of the tributary would be defined by the point where these features cease to be identifiable. *** The agencies request comment on this alternate approach, as well as any other suggestions commenters may have on how to clarify the definition of tributaries and provide a clear explanation of their lateral and upstream extent”⁵²¹

We strongly disagree with treating features that function as tributaries as anything but. Historically, the OHWM was used to establish the spatial limits of flowing waters in the Corps’ section 404 regulations,⁵²² but was not a defining characteristic for “waters of the United States” more broadly. The proposal elevates this feature as an essential component of the definition of “tributary” for all Clean Water Act programs.

In our judgment, the primary import of OHWM (and bed and banks) in the proposal is to reflect the agencies’ intent that the rules apply only to real and permanent aquatic features (which includes waters that lack perennially flowing or standing water). That is, OHWM is an indicator of a geographic feature the shape of which is determined by the action over many years of hydrologic forces like flowing water. We support the goal of focusing these rules on recognized types of surface waters; doing so reflects the agencies’ longstanding practice of distinguishing between permanent aquatic features and places where water temporarily collects, like puddles or sheet flow.

Viewed in this context, we urge the agencies not to require wetlands and ponds that function as tributaries to have an OHWM in order to be considered tributaries under the rule.⁵²³ Rather, those features should continue be treated as tributaries, as in the proposed rule, and the definitions of various types of water bodies should include indicia of long-term hydrologic processes. For wetlands, for instance, the existing regulatory definition would suffice.

In addition to ignoring the functional role that tributary wetlands and ponds play, treating them only as adjacent waters could create a significant loophole in the rules. If tributary ponds were treated as adjacent waters, they would still be jurisdictional categorically, but wetlands adjacent to such ponds would not be categorically covered; instead, they could only be protected as “other waters.” (p. 60-61)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of

⁵²¹ 79 Fed. Reg. at 22,203.

⁵²² 33 C.F.R. § 328.4(c).

⁵²³ Indeed, we suggest that OHWM not be a threshold condition for flowing waters to be considered tributaries either. The SAB had similar advice, urging “EPA to reconsider the definition of tributaries because not all tributaries have ordinary high water marks. An ordinary high water mark may be absent in ephemeral streams within arid and semi-arid environments or low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark. The Board advises the agency to consider changing the wording in the definition to ‘bed, bank, and other evidence of flow.’” SAB Rule Review at 2.

the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

National Federation of Independent Business (Doc. #8319)

8.321 (4) The Proposed Regulation inappropriately asserts jurisdiction over almost any ditch

The Proposed Regulation provides that any “natural, man-altered, or man-made water body” with an ordinary high water mark will be considered a tributary, and therein requires the Agencies to assert jurisdiction over practically any land over which water occasionally flows by applying either the ‘continuous surface connection’ or “nexus” tests. But, both *Rapanos* tests reject such an expansive interpretation of CWA jurisdiction. *Rapanos*, 547 U.S. at 731-32. Justice Kennedy’s “significant nexus test” was not intended to apply beyond wetlands to tributaries. And the plurality’s “continuous surface connection” test was intended to strictly limit CWA jurisdiction over tributaries, and would not justify assertions of jurisdiction over “ditches, channels and conduits.” *Id.* at 737-39. (p. 6)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). Only ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

Earthjustice (Doc. #14564)

8.322 EPA also asked for comment on the potential exclusion of wetlands from the definition of tributary because, as EPA argues, they lack a bed, bank, or ordinary high water mark. 79 Fed. Reg. at 22206. ICL strongly opposes this suggestion as it is not supported by the science or simple facts on the landscape. In fact, wetlands are often tributaries to water of the U.S.—for example, the large wetland complexes like those that used to exist across the U.S., and still do to a lessened degree in the Red River area between Minnesota and North Dakota (the ancient Lake Agassiz plain), are tributaries. The large flat wetlands complex, on its western edge, would begin to form small streams draining to the Red River in the west, once the topography started to become less flat. The wetlands complex was clearly a tributary to the Red River and contributed flow to the river. *See also* discussion of Red River in the Connectivity Report. Similarly, peatlands in the northern Great Lakes states and in some areas of the east and northeast plainly demonstrate flow in their topography (e.g. teardrop shapes of vegetated “islands” within the peatlands), *see e.g., Patterned Peatlands of Minnesota*, H.E. Wright Jr. and Norman Aaseng, eds. (1992), and are the headwaters of numerous streams and rivers including the St. Louis River in Minnesota that originates in the Hundred Mile Swamp then flows through Partridge River and enters Lake Superior at Duluth’s harbor. *See EPA Reg. 5, Comment on NorthMet Project - Draft Environmental Impact Statement CEQ# 20090387* (Feb. 18, 2010). There is no scientific support for the removal of wetlands from the definition of tributary (and indeed there is scientific evidence directly contrary to doing so.) *See also*, Connectivity

Report at 1-8 (nutrient removal and cycling) and Member Comments Rosi-Marshall at 81, and Sullivan at 85. (p. 6-7)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

Center for Rural Affairs (Doc. #15029)

- 8.323 The current definition of tributary in the proposed rule provides descriptions of physical demarcations—a bed and banks along with an ordinary high water mark—that would help landowners easily identify a tributary on their property. The inclusion of wetlands as potential tributaries, however, introduces more confusion than clarity. As acknowledged in the rule, wetlands can serve as tributaries by contributing flow to a jurisdictional water either directly or through another water. Although these wetlands may warrant jurisdiction, not all wetlands contribute flow to (a)(1) through (4) waters and, as such, could not be classified as tributaries. The inclusion of wetlands as possible tributaries effectively rescinds any clarity provided by the bed, banks, and ordinary high water mark criteria previously established.

While this vagueness may work for lakes or ponds lacking an ordinary high water mark where contribution of flow to a jurisdictional water would be more obvious, such a connection would be less apparent when it comes to wetlands. We do not dispute that wetlands can contribute flow—either directly or through another water—and act as a tributary, but for the sake of reducing ambiguity, it would be best to reconsider this addition of wetlands to the tributary definition. Wetlands directly contributing flow to a traditionally navigable water would be considered adjacent waters and would therefore remain jurisdictional. Nonadjacent wetlands with a more obscure connection to traditionally navigable waters could still be jurisdictional as “other waters” pending a significant nexus determination.

Recommendation: Remove wetlands from the definition of tributary, covering them instead as either adjacent waters or other waters subject to a significant nexus test. (p. 3)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries.

Alabama Rivers Alliance (Doc. #14280)

- 8.324 ..we support EPA’s inclusion in the definition of “waters of the US” all tributaries and adjacent wetlands as well as the proposed cumulative analysis of similarly situated waters. Watershed networks are inherently connected, and failure to protect small

upstream tributaries could result in “alterations [to] downstream hydrology, water quality, biota and geomorphic processes.”⁵²⁴

Environment North Carolina Research and Policy Center’s timely report “Waterways Restored: The Clean Water Act’s Impact on 15 American Rivers, Lakes and Bays” succinctly explains that, despite great progress in restoring our nations great waters, “[n]o places are more vulnerable or more important to the overall protection of waterways than headwaters and tributaries.”⁵²⁵ We strongly support SELC’s recommended that “[t]he term “tributaries” should be redefined so that it is clear that for the purposes of this rule wetlands, lakes, and ponds that contribute flow to a tributary system are clearly included in the term and thus do not require case-by-case jurisdictional analysis.”⁵²⁶ For the purposes of the rule, the term “tributary” should mean:

“1) a water (such as a stream, creek, or river) that has a bed and bank and ordinary high water mark and that contributes flow to other jurisdictional waters either directly or through another water or a discrete conveyance; or

2) a nonlinear water (such as a wetland, lake, or pond) even if it does not possess a bed or bank or ordinary high water mark as long as it contributes flow to other jurisdictional waters either directly or through another water or a discrete conveyance.”⁵²⁷ (p. 2-3)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

Atlanta Audubon Society (Doc. #14281)

8.325 ...Although the proposed definition is correct in principle, it contains an internal contradiction. It is confusing in how it first defines tributaries as those waters that contain a bed, banks, and an ordinary high water mark, but then includes waters in the definition that often do not exhibit such features, such as wetlands, lakes, and ponds. We believe that to avoid this internal conflict, the tributary definition should resemble the substitute definition provided by SELC... To the extent that there is concern that such a definition would cover insignificant features such as puddles, gutters, and upland roadside ditches,

⁵²⁴ Southern Environmental Law Center, *Comments On “Definition of ‘Waters of the United States’ Under the Clean Water Act, Proposed Rule,”* 79 Fed. Reg. 22188-22271, November 13, 2014, p. 48 (citing Freeman, M.C., C.M. Pringle and R.J. Jackson. 2007. Hydrologic Connectivity and the Contribution of Stream Headwaters to Ecological Integrity at Regional Scales. *Journal of the American Water Resources Association*. 43(1): 6-14.)

⁵²⁵ Environment North Carolina Research and Policy Center, “Waterways Restored: The Clean Water Act’s Impact on 15 American Rivers, Lakes, and Bays”, October 2014, p. 33. Available at :

<http://environmentnorthcarolinacenter.org/reports/ncc/waterways-restored> (Last accessed November 14 2014)

⁵²⁶ SELC Comments at 4.

⁵²⁷ Id. at 13.

the agencies could define waters to exclude such features. Or preamble language could be drafted to address this issue. (p. 2-3)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.” Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including puddles and most ditches. Stormwater control features constructed in dry land are also excluded as waters of the United States in paragraph (b), and as the preamble to the final rule notes, curbs and gutters have never been considered waters of the United States. Stormwater control features constructed in dry land are excluded as waters of the United States in paragraph (b).

Clean Water Action et al. (Doc. #14884)

- 8.326 In addition, we support the Agencies’ definition of tributary and strongly agree that ditches should be defined as “waters of the U.S.” where they function as tributaries. There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important. (p. 2)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). The agencies agree that some ditches may function as tributaries, and only ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries.

Conservancy of Southwest Florida (Doc. #14980)

- 8.327 Support for the Definition of Tributaries

The Clean Water Rule definition of jurisdictional tributaries is of particular relevance to Southwest Florida. Due to the vast hydrologic alterations of the region - including miles of manmade canal systems which drain historic wetlands and sheet flow areas to in order to facilitate development and agriculture - the proposed definition of tributary will clarify that these man-altered natural streams, wholly manmade canals and natural streams with control structures, such as tidal streams with berms or dams, are considered jurisdictional if they meet the definition of tributary. While tidally influenced areas are considered jurisdictional under (a)(1) of both the proposed and existing rule, many of the tidally influenced waterbodies also have a dam, weir or other associated structure. The proposed definition will clarify that the upstream portions beyond the control structure are also considered categorically jurisdictional....

...Moreover, the Conservancy supports the definition of tributary for categorically defining as WUS all tributaries and their adjacent waters, including ditches that function as tributaries with the exception of those which meet the exclusion criteria by paragraphs (b)(3) and (b)(4) of the proposed rule. (p. 3)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). The agencies agree that some ditches may function as tributaries, and only ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries.

Clean Water Action Maryland et al. (Doc. #15072)

- 8.328 **Our organizations also support the Agencies’ determination that all adjacent wetlands are “Waters of the U.S.” Wetlands perform critical functions that support aquatic life, clean drinking water and safeguard communities from floods.** Wetlands protect the water quality of entire watersheds by filtering pollutants. They also store floodwaters, reducing flood flows that can threaten property and infrastructure. A single acre of wetland can store 1 to 1.5 million gallons of flood water. Wetlands in the continental United States save an estimated \$30 plus billion in annual flood damage repair costs. Wetlands also provide essential fish and wildlife habitat that support robust fishing and outdoor recreation and tourism economy in Maryland. When wetlands are polluted, dredged or filled, these benefits are lost. (p. 2)

Agency Response: The definition of “adjacent waters” has been revised and clarified for the final rule. Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

- 8.329 **In addition, we support the Agencies’ definition of tributary and strongly agree that ditches should be defined as “waters of the U.S.” where they function as tributaries.** There is sufficient scientific evidence that some ditches function as tributaries moving water and pollutants downstream. In those cases protection is important. (p. 3)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). The agencies agree that some ditches may function as tributaries, and only ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries.

Tulane Environmental Law Clinic et al (Doc. #15123)

- 8.330 ...We further support the proposed Rule’s explanation that wetlands and other waters located alongside, next to, or otherwise adjacent to any tributary are themselves waters of the United States for the same reason – these waters are physically, chemically and biologically connected to traditionally navigable waters. (p. 1)

Agency Response: The definition of “adjacent waters” has been revised and clarified for the final rule. Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

Stormwater Management Commission, Lake County, Illinois (Doc. #15381)

- 8.331 32 8(c)(5) = Tributary : We are in general support of this term as defined. However, we are concerned that the inclusion of 'man-made' features could create confusion with respect to the ditch exclusions in §328(b)(3-4). We suggest modifying the final sentence to omit 'man-made' from the definition. (p. 3)

Agency Response: See summary **resposne** for section 8.1. Paragraph (b) of the final rule clearly states that the excluded features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, neither an excluded ditch nor any other excluded feature may be considered waters of the United States under any other provision of the rule.

Wisconsin Wetlands Association (Doc. #15629)

- 8.332 We support the language clarifying that wetlands contributing flow to other waters will be considered tributaries and agree that defining these wetlands as tributaries is more appropriate than defining them as adjacent waters. The intent to classify headwater wetlands and other source waters as tributaries could be further clarified by mentioning springs and seeps as examples of other waters that will meet the definition where physical evidence is present. (p. 2)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

The River Alliance of Wisconsin (Doc. #16344)

- 8.333 A broader definition of tributary in (u)(5) should incorporate a more scientific understanding of what constitutes a tributary. This will fulfill the purpose of the CWA to prevent pollutants that are dumped into any part of the tributary system and eventually are washed downstream to traditional navigable waters, interstate waters, or the territorial seas where those pollutants endanger public health and the environment. Broadening the definition to not restrict a tributary as having bed, banks and an ordinary high water mark would also allow wetlands to be included within the definition of tributaries. In Wisconsin, there are river systems where there is “grey area” between tributaries and wetlands. For example, the headwaters of the Bad River are a system of wetlands rather than tributaries as narrowly defined in the proposed rule and activities that degraded these headwaters would result in degradation of the water quality of the Bad River itself. It makes sense to define tributaries by their function and connectivity, rather than a set of narrow physical characteristics. (p. 2)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

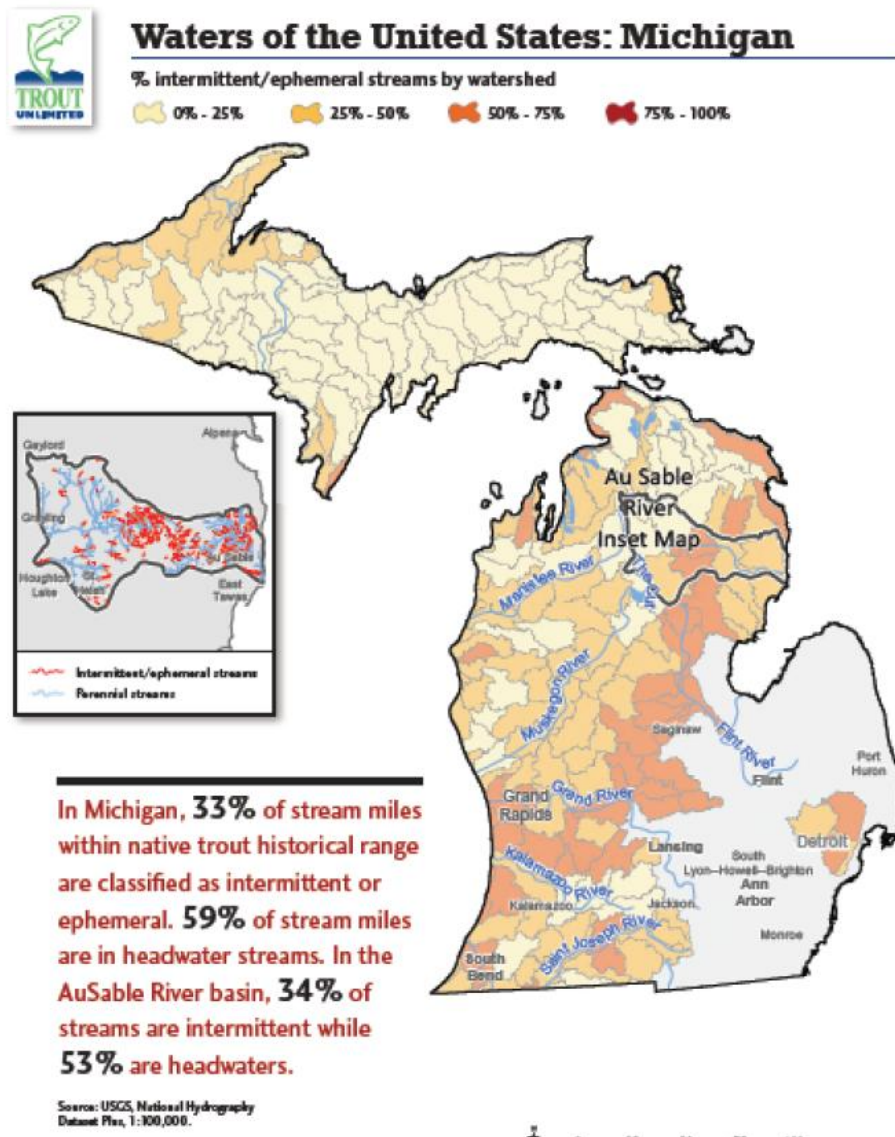
- 8.334 EPA also asked for comment on the potential exclusion of wetlands from the definition of tributary because they lack a bed, bank, or ordinary high water mark. 79 Fed. Reg. at 22206. As described more fully by Earthjustice, we strongly oppose this suggestion because wetlands are often tributaries to waters of the U.S. and should be treated as such. (p. 7)

Agency Response: See the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

Michigan United Conservation Clubs (Doc. #16395)

- 8.335 It is also important to note that Michigan’s law exempts many lakes, ponds, and “non-contiguous” wetlands less than 5 acres in size. Michigan law also includes broad exemptions for agriculture, silviculture, ranching, iron and copper processing, drainage ditches, and oil and gas pipelines. Significantly, Michigan’s past economic woes has led to very significant cutbacks in Michigan’s water permitting programs in 2008 and 2009, though they have been increased in recent years. While we strongly support Michigan’s program, it takes constant vigilance and commitment within the administration and Michigan Legislature to keep it adequately funded.

Absent Michigan’s assumption of the Section 402 and 404 Programs, much of our waters would be unregulated in Michigan. EPA estimates that 48 percent of Michigan’s streams have no other streams flowing into them, and that 36 percent do not flow year-round. Under varying interpretations of the most recent Supreme Court decision, these smaller water bodies are among those for which the extent of Clean Water Act protections has been questioned. EPA also says that 1,400,633 people in Michigan receive some of their drinking water from areas containing these smaller streams and that at least 163 facilities located on such streams currently have permits under the federal law regulating their pollution discharges. Also, Michigan’s Department of Environmental Quality estimated that 930,856 acres of wetlands in the state, along with 26,384 lakes and ponds, could be considered so-called “isolated” waters – water bodies that are particularly vulnerable to losing Clean Water Act safeguards if Michigan’s program is not maintained or funded. In view of all of these facts, perhaps it’s not surprising that Michigan joined over 30 states in asking the Supreme Court to uphold broad legal protections for small tributaries and their adjacent wetlands.



Waters of the United States: Michigan. In Michigan 33% of stream miles within native trout historical range are classified as intermittent or ephemeral. 59% of stream miles are in headwater streams. In the AuSable River basin, 35% of streams are intermittent while 53% are headwaters.

(p. 2-4)

Agency Response: The agencies consider the commenter's remarks statements of fact and have no response regarding the State of Michigan's regulatory programs.

Waterkeeper Alliance et al. (Doc. #16413)

8.336 With regard to tributaries, the Proposed Definition states "[a] tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (2)(iii) or (iv) of this definition." There are compelling legal and scientific reasons for ensuring that man-altered and man-made waters are covered as tributaries, and those reasons apply equally to ditches. As the 11th Circuit stated in the case of *U.S.*

v. Eidson, "[t]here is no reason to suspect that Congress intended to regulate only the natural tributaries of navigable waters. Pollutants are equally harmful to this country's water quality whether they travel along man-made or natural routes."⁵²⁸

We believe that ditches should be categorically included when they otherwise meet the definition of a "water of the United States," including specifically a tributary. We also believe that ditches should be protected when they meet either the "relatively permanent" or "significant nexus" test without regard to the agencies' unspecified policy considerations. The agencies do not possess the authority to exclude waters that Congress intended to cover from the definition of "waters of the United States" for policy or any other agency administrative purpose."⁵²⁹ (p. 35)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). The agencies agree that some ditches may function as tributaries, and only ditches that meet the definition of "tributary" in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries.

Red River Valley Association (Doc. #16432)

8.337 Although the Proposed Rule would exclude two types of ditches from CWA jurisdiction, ditches that do not meet the criteria for exclusion could be considered waters of the United States. The proposed definition of "tributary" could be interpreted to include man-made waters with artificial features, such as drainage ditches or artificial ponds. Also, ditches with perennial flow are not covered by the exemption, but it is not clear what the agencies believe is meant by "perennial flow." (p. 3)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). The agencies agree that some ditches may function as tributaries, and only ditches that meet the definition of "tributary" in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for "Relevance of Flow Regime" in section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams" and the summary response for section 8.2 above, "Ditches as Tributary." Paragraph (b) of the final rule excludes many features from consideration as waters of the United States, including artificial lakes and ponds created in dry land and used primarily for such uses as stock watering, irrigation, etc. As noted in section IV(F) of the preamble, longstanding agencies' practice considers perennial streams as those with flowing water year-round during a typical year, with groundwater or contributions

⁵²⁸ *US. v. Eidson*, 108 F.3d 1336, 1342, (11th Cir.1997) cert. denied, 522 U.S. 899 (1997).

⁵²⁹ 1972 Legislative History, *supra* note 14, p. 327; *NRDC v. Callaway*, 392 F.Supp. 685, 686 (D.D.C. 1975); *Cf NRDC. v. Castle*, 568 F.2d at 1377.

of flow from higher in the stream or river network as primary sources of water for stream flow.

Ruby Valley Conservation District, Montana (Doc. #16477)

- 8.338 our Board requests that ditches be removed from the definition defining tributaries and remove the provision that makes isolated wetlands, ponds, and other open waters per se jurisdictional if they are located within a riparian area or floodplain. (p. 1)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). Some ditches may function as tributaries, and only ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.” In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

Society for Freshwater Science (Doc. #11783)

- 8.339 Along with our support of most components, we would also like to express our concern over the following proposed elements... Second, we are concerned about tributaries that have been altered or created. Suburban and urban channels that have been transformed into part of the current stormwater infrastructure ought to be considered tributaries. The fact that they have been altered does not change their importance to water quality. Similarly, agriculturally channelized headwaters and/or created channels (e.g., ditches) that become part of the tributary system, by very presence of the connection, are connected to and therefore influential upon downstream water quality and cannot be ignored or exempted. These waters deserve protection as jurisdictional waters and it should be added, distinguished, or confirmed that such tributary waters are still jurisdictional; this critical issue is unclear to us in the current proposed rule. (p. 2-3)

Agency Response: Paragraph (b) of the final rule specifically excludes stormwater control features constructed in dry land. Section IV(I) of the preamble to the final rule reiterates the agencies’ longstanding practice to view stormwater water control measures that are not built in “waters of the United States” as non-jurisdictional. Conversely, the agencies view some waters, such as channelized or piped streams, as jurisdictional currently even where used as part of a stormwater management system. Nothing in the proposed rule was intended to change that practice, and the final rule likewise leaves this policy in place.

Florida Stormwater Association (Doc. #14613)

- 8.340 We recommend that the definition of “tributary” be revised to delete all language after the end of the first sentence of the proposed definition (i.e. delete all “additional” references) that add wetlands, lakes, ponds, impoundments, canals and ditches, whether they are natural, man-altered, or man-made.

Concerning ditches and whether they already should or should not be considered to be tributaries and therefore jurisdictional waters, EPA has stated during numerous conference calls, webinars and other meetings (both public and those that are less formal) that ditches and other conveyances with standing water in them already are or should be determined to be waters of the United States. This obviously begs the question: Why is it necessary to categorically include the term “ditches” within the definition of tributaries if they are already subject to existing regulations? (p. 7)

Agency Response: The exclusions for ditches have been revised and clarified in the final rule (see Section 6.2 of the Ditches compendium of this RTC). The agencies agree that some ditches may function as tributaries, and only ditches that meet the definition of “tributary” in the final rule and are not excluded under paragraph (b), will be considered waters of the United States as tributaries. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.” See also the summary response for Section 8.2. In response to many public comments that found the proposed definition confusing, the definition of “tributary” has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. Ponds, lakes and wetlands may still be waters of the United States if they meet the definition of “adjacent waters.” Section IV(G) of the preamble to the final rule and section VIII of the Technical Support Document discuss “adjacent waters.”

Robert J. Pierce, PhD, Wetland Science Applications, Inc. (Doc. #4958)

- 8.341 The concept that lakes and ponds that lack either an OHWM or bed and bank (excluding those ringed by wetlands on the edge) are still tributaries is inappropriate. In the absence of wetlands, the OHWM is the end of COE jurisdiction [33 CFR 328.4(C)(1)]. This definition of tributary would open up all types of landscapes to dispute. With its adoption, puddles can become ponds or lakes. Furthermore, canals and ditches should not be regulated as tributaries unless in the case of canals there is actual navigation on the water and in the case of ditches the ditch is actually a channelized stream that otherwise is jurisdictional.

Ditches are *Point Sources* pursuant to Sec 502(14) of the CWA and whether they flow for any specified period of time or not should not be called tributaries. This proposed definition again treads on States' rights as expressed in Section 101 (b) of the CWA and

is unconstitutional. The fact is that the CWA allows for enforcement of its provisions where point sources connect to Section 10 waters and the enforcement action can pursue the violator to the source. As structured, the definition is simply an attempt to do federal land management - a right and responsibility of the States - not the federal government. (p. 9)

Agency Response: See the summary responses for Sections 8.1 and 8.2. Section I of the Technical Support Document provides the legal framework under which a ditch could be considered both a point source and a water of the United States. Section I of the Technical Support Document also discusses the broader legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

O'Neil LLP (Doc. #16559)

8.342 ...the Agencies should clarify in any final Rule, that riparian areas tapped into shallow groundwater within floodplains that otherwise lack indicators for an OHWM and that also fail to exhibit all three wetland criteria are **not** subject to CWA jurisdiction. Many non-wetland riparian trees and shrubs are phreatophytes or facultative phreatophytes, capable of obtaining water from a groundwater table that is well below the surface and therefore not a component of wetland hydrology. Such areas are currently not subject to CWA jurisdiction as wetlands (as explained, for example, on pages 90-91 of the *Arid West Supplement* Version 2.0). (p. 4)

Agency Response: See the summary responses for Sections 8.1 and 8.2. The term “riparian area” has been removed from the definition of “neighboring,” which is a component of “adjacent” in the final rule.

8.3. RELEVANCE OF BREAKS IN OHWM

Agency Summary Response

The final rule asserts jurisdiction over tributaries when there are breaks (natural or manmade) in the OHWM along the tributary. The definition of tributary in the rule states, "A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break."

Issue: General Comments Opposing and Supporting Approach to Break in OHWM

A number of commenter's stated that the rule language regarding break in OHWM is inconsistent with the science, existing policy, and the preamble language in the proposed rule. One commenter stated that there is no scientific support to the Agencies assertion of categorical jurisdiction over manmade conveyances regardless of a break in OHWM. Another commenter stated the Agencies are excluding information from the Science Report on human modified streams that tends to undercut the rule's treatment of breaks in OHWM and the categorical

inclusion of such features as tributaries. Another commenter stated the definition is subjective since the Agencies have determined that in certain regions of the country the presence of a bed and bank is not necessary. A number of commenters stated that extending jurisdiction beyond the break in OHWM is not consistent with traditional methods of determining jurisdiction, has no meaningful connection to TNWs, and will be an expansion of jurisdiction. Many commenters stated that the uncertainty created by a break in OHWM and the Agencies decision to still assert categorical jurisdiction over these features as tributaries does not provide the clarity, certainty or bright lines that the rule is supposed to provide.

A number of commenters were generally supportive of the rule's approach to breaks in OHWM, and sought clarification from the Agencies that the reach of the break in OHWM itself is jurisdictional. One commenter suggested that even if the feature flows underground for some distance, such water should be jurisdictional for the underground portion as well as the above-ground portion.

The Agencies respectfully disagree that the rule's approach to a break in OHWM is inconsistent with the science, existing policy, traditional methods of determining jurisdiction, or is an expansion of jurisdiction. Streams with a break in OHWM can be WOUS under current practice (2008 Rapanos Guidance and the currently used Approved Jurisdictional Determination Form footnote 6 page 3 which was developed in concert with 2008 Rapanos Guidance). The Approved Jurisdictional Determination Form states that "a natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break. The agencies position is supported by the science and the Science Report which discusses how breaks in stream channel characteristics change the nature of the connection to downstream waters but do not remove it, e.g. piping or channelization may remove all non-bed and bank indicators of OHWM and reduce lateral connectivity but actually increase downstream connectivity by concentrating and speeding up the delivery of water downstream. See also the summary responses in Section 9 "Scientific Evidence Supporting the Rule" of the Response to Comments. The final rule also does not change the longstanding practice that if there is a break in OHWM where the water flows underground without a surface expression of flow path, the portion of the flow path that is underground is not jurisdictional.

Streams with a break in OHWM can be WOUS under current practice. The final rule does not change this practice, and includes a definition of tributary which was modified in response to comments to provide increased clarity.

Issue: Difficulties in determining OHWM, length of break, and contribution of flow

A number of commenters stated that in determining the OHWM, it is very hard to distinguish between ephemeral streams and erosion-based channels, and that two of the three OHWM indicators should be required. A number of commenters requested a reasonable limit on the length of the break in OHWM in order for the feature to remain a tributary. Some commenters also asked how the time it takes for water to make the connection between the waters above and below a break in OHWM affects the jurisdictional determination. A number commenters also

sought clarification of how far upstream a farmer or rancher must look to find the bed and banks and OHWM.

The Agencies agree that determining the OHWM can be challenging. The final rule adds the Corps' existing regulatory OHWM definition to EPA's regulations, and the preamble notes that several Corps technical manuals are available to help identify OHWM. For areas such as the arid west and western mountains OHWM delineation manuals have been developed. The final rule does not change the definition or alter the methods for identification of OHWM. As such, the identification of OHWM will continue to be guided by the statements from RGL 05-05, including:

There are no "required" physical characteristics that must be present to make an OHWM determination. However, if physical evidence alone will be used for the determination, districts should generally try to identify two or more characteristics, unless there is particularly strong evidence of one.

With regard to the challenges faced by farmers and ranchers in finding the bed and banks and OHWM, the Agencies note that certain ditches are excluded from the final rule under section (b), and the current ranching, silviculture, and forestry exemptions of CWA section 404(f) are not changed. In addition, some ditch maintenance work that is not exempted may be covered by non-reporting NWP 3.

The upper limit of the tributary is the point where a bed and banks and another indicator of ordinary high water mark cease to be identifiable. The ordinary high water mark establishes the lateral limits of a water, and its absence generally determines when a tributary's channel or bed and banks has ended, representing the upper limit of the tributary. However, a natural or constructed break in bed and banks or other indicator of ordinary high water mark does not constitute the upper limit of a tributary where bed and banks or other indicator ordinary high water mark can be found farther upstream. By looking to the presence of a bed and banks and an ordinary high water mark upstream, the rule ensures that a mere break in the ordinary high water mark does not render tributaries with a significant nexus to downstream waters not jurisdictional. Thus, the Agencies believe that under current practice, which is not changed by this final rule, a reasonable limit on the length of the break in OHWM exists.

With regard to clarification of how far upstream a farmers and ranchers must look to find the bed and banks and OHWM, the Agencies have regulated all tributaries, including tributaries with breaks in bed and banks and OHWM, throughout regulatory history under the CWA. The Agencies believe that requiring the physical indicators of bed and banks and OHWM will help clarify that only water bodies with sufficient flow will meet the definition tributary. While science does not set a threshold distance that a break in the bed and banks or OHWM must be in order to maintain connectivity with the upstream portion of the tributary, the Science Report is clear that the continuation of bed and banks downstream from disruptions is evidence of the surface connection with the channel that is upstream of the perceived disruption. Science Report at ES-15. Where breaks in the bed and banks or the OHWM occur due to natural causes, such disruptions are associated with changes in the gradient and in the material over and through which the water flows. *Id.* at 2-2. If a disruption in the bed and banks or the OHWM prevented connection, the area downstream would lack a bed and banks or OHWM, be colonized with terrestrial vegetation, and be indiscernible from the nearby land. *Id.* The concentrated

longitudinal movement of water and sediment through these channels lowers local elevation, prevents soil development, selectively transports and stores sediment, and hampers the colonization and persistence of terrestrial vegetation. This approach will simplify implementation of the final rule. There is no limit on the length of the break so long as both bed and OHWM can be detected upstream of the break. The clarification and simplification provided by the final rule will make it easier – not harder – for farmers and ranchers to determine if bed and banks and OHWM can be detected upstream. If bed and banks and OHWM can be detected upstream the water body continues to be a covered tributary. In addition, normal farming and ranching practices have always been exempt and continue to be exempt from 404 permitting which should alleviate much of the concern expressed by the commenters.

A number of commenters stated that the longer the break in OHWM, the less likely the feature is to contribute flow, and asked for confirmation that if a feature ultimately does not contribute flow to any downstream water, such feature would not be categorically included as a jurisdictional tributary.

The final rule definition makes clear that a water is considered tributary if it contributes flow, either directly or through another water, to a traditional navigable water, interstate water, or the territorial seas, and that the water has the physical indicators of a bed and banks and an ordinary high water mark. These physical indicators demonstrate there is volume, frequency and duration of flow sufficient to create a bed and banks and an ordinary high water mark, and thus to qualify as a tributary. If a water does not contribute flow, either directly or through another water, to a traditional navigable water, interstate water, or the territorial seas, such water does not qualify as a tributary. Site specific conditions will continue to determine the distance up valley that needs to be evaluated to see if the break in bed and banks and OHWM is temporary or the start of the stream system. These conditions include the size of the stream (larger streams require looking further up valley) and the nature of the break (look to see the up valley end of manmade breaks, streams buried by colluvium and valley bottom alluvial fans). Conversely, where the bed and banks and OHWM simply fade away or abruptly end at a headcut and the substrate, land use and valley characteristics do not change above and below the break, minimal up valley evaluation is necessary. The time it takes for water to make the connection between the waters above and below a break in OHWM will continue to be considered when evaluating breaks in OHWM and is largely dependent on the nature of the break. While there has never been a time limit on connections, times much longer than would occur if the break was not present point to the presence of distinct waterbodies instead of a single waterbody.

Issue: Break in OHWM should sever jurisdiction

Many commenters stated that natural or man-made breaks in OHWM should sever jurisdiction of the water as a tributary. A number commenter's sought clarification of how the tributary will be characterized within the reach of the break in OHWM. Some commenters felt that the area within the reach of the break in OHWM should not be considered jurisdictional, while others stated that the area within the reach of break in OHWM should be considered jurisdictional.

A number commenters stated that breaks in OHWM are common in ephemeral systems such that there may not be a true connection between upstream and downstream features. Many commenters stated that a break in OHWM severs connectivity and should require a significant

nexus analysis instead of categorical inclusion of the feature water as jurisdictional tributary. Other commenters stated that a break in OHWM that results in the lack an observable hydrologic connection should render the feature as not being categorically included as a jurisdictional tributary.

The rule’s definition of “tributary” retains many elements from the proposed rule, but reflects public comments in several important ways. In particular, the final rule emphasizes the importance of flow. The rule definition of “tributary” requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an OHWM. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. To further emphasize this point, the final rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not “waters of the United States.” The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The agencies have also determined that the presence of sufficient flow to form bed and banks and another indicator of OHWM is also sufficient to support status as a similarly situated class of waters. The Science Report supports the scientific conclusion that all features that meet this definition of tributary, including ephemeral streams, impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. See also the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

As noted by the SAB, and consistent with the scientific literature, tributaries as a group exert strong influence on the chemical, physical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of chemical, physical, and biological processes. *See, e.g.,* SAB 2014b. These significant effects on traditional navigable waters, interstate waters and the territorial seas occur even when the tributary is small, intermittent, or ephemeral. The presence of OHWM above a break in the OHWM indicates that a tributary does contribute flow to a downstream water, and the Science Report suggests there is a more than insubstantial relationship with downstream TNWs. Thus, because a covered tributary – regardless of a break in OHWM - does contribute flow to a downstream water, and there is a more than insubstantial relationship with downstream TNWs, the area within the break in OHWM is considered jurisdictional and is part of a covered tributary. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the responses 8.1 and 8.1.2 and the TSD.

Because the Agencies based their significant affect / significant nexus determination for covered tributaries in part on the amount of flow indicated where a tributary had both a bed banks and another indicator of OHWM, the final rule continues to require both physical indicators. The Agencies believe that a break in OHWM does not sever connectivity. The CWA regulates and controls pollution at its source, in part because most pollutants do not remain at the site of the discharge, but instead flow and are washed downstream through the tributary system – regardless of a break in OHWM - to endanger drinking water supplies, fisheries, and recreation areas. These fundamental facts about the movement of pollutants and the interconnected nature of the tributary system demonstrate why covered tributaries of traditional navigable waters, interstate

waters, and the territorial seas, alone or in combination with other covered tributaries in a watershed, have a significant nexus with those downstream waters. See also the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments. Thus, in the final rule the Agencies assert CWA jurisdiction over all covered tributaries as defined. Those covered tributaries are “waters of the United States” without the need for further significant nexus analysis above the break in OHWM.

As discussed in the previous section on the length of breaks in OHWM, the agencies will continue making case by case determinations of the length of break in OHWM that does not sever the connection to downstream waters. Site specific conditions will continue to determine the distance up valley that needs to be evaluated to see if the break in bed and banks and OHWM is temporary or the start of the stream system. These conditions include the size of the stream (larger streams require looking further up valley) and the nature of the break (look to see the up valley end of manmade breaks, streams buried by colluvium and valley bottom alluvial fans). Conversely, where the bed and banks and OHWM simply fade away or abruptly end at a headcut and the substrate, land use and valley characteristics do not change above and below the break, minimal up valley evaluation is necessary. As discussed in the prior section on general comments, the final rule also does not change the longstanding practice that if there is a break in OHWM where the water flows underground without a surface expression of flow path, the portion of the flow path that is underground is not jurisdictional.

Specific Comments

U.S. House of Representatives Committee on Space, Science and Technology (Doc. #16386)

8.343 Your definition of tributary includes water that disappears underground in a so-called “natural break.”

- a. How will the Corps and EPA decide if an upstream channel before a break is the same as a downstream channel after a break?
- b. Does either distance or timing matter?
- c. Does it matter how far or how long water has to flow underground to be considered all part of the same tributary system when it recharges surface water somewhere downstream, sometime later? (p. 16)

Agency Response: The agencies will continue to use their best professional judgment in the field to determine the connection between the up valley channel and the down valley channel around breaks in OHWM. These decisions are based on site specific conditions and the factors to evaluate vary based on the conditions, e.g. karst landscape may require the use tracers, while a break due to a valley bottom alluvial fan in the arid west could be evaluated visually. See summary response above on Difficulties in determining OHWM, length of break, and contribution of flow for discussion of distance and time.

North Carolina Department of Environment and Natural Resources (Doc. #14984)

8.344 Deletion of the sentence in the definition of “tributary” which says “[a] water that otherwise qualifies as a tributary under this definition ... so long as a bed and bank and an

ordinary high water mark can be identified upstream of the break," because inclusion of such "tributaries" ignores the nature of the break and the effect of such break on the significance of the nexus of the tributary to navigable waters. In essence, the rule assumes a significant nexus notwithstanding the nature of the break. 33 CFR 328.3(c)(5), 40CFR110.1(3)(v), 40 CFR 112.2(3)(v), 40 CFR 116.3(3)(v), 40 CFR 117.1(i)(3)(v), and 40 CFR 122.2(c)(5);

... (p. 7)

Agency Response: See summary response 8.3 above on Break in OHWM should sever jurisdiction.

San Carlos Apache Tribe (Doc. #15067)

- 8.345 Features that would otherwise meet the definition of tributary do not lose that status if, for any length, there are natural or manmade breaks, provided that there is an ordinary high water mark upstream of the break. The proposed rule's definition of tributaries would add a large number of previously unregulated water features to those considered tributaries to traditional navigable waters. (p. 4)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM.

Ohio Department of Natural Resources et al. (Doc. #15421)

- 8.346 The proposed rule asserts jurisdiction over tributaries when there are breaks (natural or manmade) in the OHWM along the tributary. The rule discussion states, "A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break." This would allow the USACE and USEPA to take jurisdiction on tributaries that would currently be considered isolated and in cases where there may be no visible connection to a water included in (a)(1) to (a)(3). For example, a small stream entering a sinkhole into fractured bedrock, or into an abandoned coal mine subsidence portal, is currently considered an isolated stream if there is no known or discernable outlet to a tributary to a downstream water body. By the proposed rule indicating that the water only needs to have a bed, bank, and OHWM "upstream" of the break, the need to show connectivity has been discounted. From the way the proposed rule is worded, it would have to be assumed that a portion of the groundwater discharging to nearby tributaries would be coming from the stream that had entered the fractured bedrock or mine opening, and therefore the small stream would be jurisdictional upstream of where it enters the ground. This change would increase the USACE's and USEPA's jurisdiction on waters that are currently considered isolated and not subject to federal jurisdiction.

In addition to a rule change resulting in the EPA and Corps taking jurisdiction on waters that would not be considered jurisdictional under the current rule, the proposed rule fails to discuss the jurisdictional nature of the tributary as it flows through the location of the

"break" in the OHWM, bed, or banks. For some of the "breaks" mentioned in the proposed definition (such as bridges, culverts, pipes, dams, and run of stream wetlands) it would be obvious where the tributary is located and where it is flowing to, and there will be little doubt that the tributary remains jurisdictional throughout the reach that it flows through the "break." Often these types of "breaks" have a clearly defined channel downstream of the "break." However, in the examples of "debris piles, boulder fields, or a stream that flows underground" evidence of connectivity to downstream tributaries can be much less obvious or non-existent. Would a stream or tributary that flows interstitially through a boulder field, dissipates into a sandy floodplain, or that flows underground remain a federally jurisdictional water throughout the reach of these types of "break" despite the lack of bed, bank, and OHWM? Or, would it only be jurisdictional in areas where it possesses a bed, bank and OHWM? If it continued to remain jurisdictional in subsurface situations, how would a regulator or an applicant determine the location of the tributary? How would they determine potential impacts or fill quantities if the water is jurisdictional throughout these "breaks"?

While it is likely that tributaries that possess "breaks" in their bed, bank, and OHWM do have a significant nexus to a downstream water body, and ODOT is not opposed to including tributaries with these types of "breaks" as jurisdictional waters, we do believe that greater clarification is needed on how the tributaries will be characterized within the reach of the "break". Decisions made in this proposed rule change will have real world implications on 404 and 401 permitting that must be considered before implementation. (p. 8-9)

Agency Response: The termination of an OHWM and bed and banks into a underground mine works and other subsurface works that do not have a clear reemergence continuing the stream system on the surface does not qualify as a break in OHWM. See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM and Break in OHWM should sever jurisdiction for response to other issues raised.

California Department of Transportation, Division of Environmental Analysis (Doc. #19538)

- 8.347 10) The proposed definition for tributaries states that "A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as the bed and banks and an ordinary high water mark can be identified upstream of the bank." We request that this definition be changed to include a reasonable limit to the length of a natural break. The absence of a limit to the length of a natural break could lead to additional information requests and surveys that could unnecessarily delay the jurisdictional delineation verification process and ultimately projects. We recommend that language be added to limit the length of any break in ordinary high water mark (OHWM) to be easily identifiable upstream and downstream and that break size be appropriate to the size of the tributary. Additionally, Caltrans requests that you clarify that the underground portion of a tributary is groundwater and would be excluded from jurisdiction. (p. 3)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM and Break in OHWM should sever jurisdiction.

Western Coalition of Arid States (Doc. #14407)

8.348 The agencies also state that any man-altered natural streams, or man-made conveyances, that meet the definition of a tributary, do not lose their status as jurisdictional waters. The agencies, however, do not discuss anywhere in the rule's preamble, in Appendix A to the preamble, or the Connectivity Report, the science that supports this decision. Allowing for categorical jurisdiction of all man-altered streams or man-made conveyances, regardless of breaks, or conversions, and that lack a scientific chemical, physical, or biological connection, expands the concept of jurisdictional tributary beyond reason. The proposed definition of tributary will significantly affect the manner in which WESTCAS members construct, maintain and operate our critical water infrastructure. (p. 10)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM and TSD sections 7.B.5 and 7.C.

Flood Control and Water Conservation District, Riverside County, California (Doc. #14581)

8.349 ...the length of natural "breaks" through ponds, lakes, and wetlands, should not matter as long as the flows stay on the surface. However, once flows go underground, or dry up, that is a real break in the jurisdictional chain, and what matters then for determining waters of the United States jurisdiction should be the frequency of the physical connection of surface waters. (p. 5)

Agency Response: See summary response 8.3 above on Break in OHWM should sever jurisdiction.

City of Buckeye, Arizona (Doc. #14591)

8.350 7. The definition for the term "tributary" provided in the proposed draft rule language is breathtakingly broad, especially the language related to man-made and natural breaks. Under this language, it appears that many urban SCMs could be considered tributary to other Waters of the United States and, thus, themselves be WOTUS. This contradicts EPA's public statements that most urban SCMs are not WOTUS. Broad inclusion language and reliance on agency best professional judgment and discretion regarding the WOTUS status of most urban SCMs and BMPs are not acceptable or practicable. (p. 3)

Agency Response: See response to comments summary for section 7.4. and the additional clarity provided in the final rule by specifically excluding certain stormwater features from the definition of "waters of the United States" in (b)(6).

American Foundry Society (Doc. #15148)

8.351 The agencies justify this effort to broaden the boundaries of what the agencies consider a tributary because in "some regions of the country where there is a very low gradient, the banks of a tributary may be very low or may even disappear at times." 79 Fed. Reg. at

22202. This appears to be a thinly veiled justification to protect human health and the environment, without first demonstrating any harm that must be eliminated or prevented.

This uncertainty and potential liability is further aggravated by the EPA and the Corps determination that “[a] water that otherwise qualifies as a tributary under the proposed definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as debris piles, boulder fields, or a stream segment that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.” How far would a landowner have to look “upstream” to insure he or she is not liable for routine activities in an area that may lack a bed, bank, or OHWM, yet is still considered a jurisdictional water?

In many intermittent and ephemeral tributaries, including dry-land systems in the arid and semi-arid west, OHWM indicators can be discontinuous within an individual tributary due to the variability in hydrologic and climatic influences. 79 Fed. Reg. at 22202. Furthermore, specific areas of arid land drainage (e.g., alluvial fans) experience random channel breaks or avulsions in heavy precipitation events, the presence of an upstream channel (i.e., at the head of the fan) could then render the entire region an ephemeral streambed subject to regulation. Accordingly, how does a landowner gauge liability for CWA violations of \$37,500 per day per occurrence and the risk of a citizen law suit when the discernable features of a tributary may not exist in a specific location? It is difficult to understand how the agencies consider it logical that the proposed rule provides clarity and certainty for industrial operations. (p. 5-6)

Agency Response: See summary response above on General Comments Opposing and Supporting Approach to Break in OHWM and Break in OHWM should sever jurisdiction.

Federal StormWater Association (Doc. #15161)

- 8.352 The proposed rule asserts jurisdiction over all “tributaries” of navigable or interstate water or territorial seas or impoundments thereof. Tributaries are jurisdictional under the current regulatory definition of waters of the U.S. 33 CFR § 328.3(a)(5). However, the term “tributaries” is not currently defined. The proposed rule expands jurisdiction over this category of water by proposing to define tributaries to include features on the land where an EPA or Corps employee believes he or she can discern a bed, bank, and ordinary high water mark (OHWM), even if these features disappear underground, as long as these features can be identified upstream of where they disappear.⁵³⁰ This proposed expansion of the definition of “tributary” has created tremendous uncertainty regarding the status of land that exhibits erosion features from wind or water even if dry for many years, the status of water conveyance systems, the status of water drainage

⁵³⁰ “A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.” Proposed 33 CFR § 328.3(c)(5).

systems, and the status of ephemeral streams that have no continuous surface connection to navigable water. (p. 3-4)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM and Break in OHWM should sever jurisdiction.

Water Advocacy Coalition (Doc. #17921.1)

8.353 Finally, waters should not be considered tributaries regardless of manmade and natural breaks “for any length.” The GEI Report notes that “the science does not support the Agencies’ assertion that a significant nexus between a tributary and a traditional navigable water is not broken where the tributary flows through a culvert or other structure.” Moreover, the SAB Panel noted that the Connectivity Report lacked sufficient information on the influence of human alterations on connectivity and “generally exclude[d] the many studies that have been conducted in human-modified stream ecosystems.” Such breaks can sever connectivity, even when a channel can be identified upstream. Dr. Mark Murphy points out that such categorical jurisdiction regardless of breaks is not scientifically justified, stating that “OHWM indicators are discontinuous because flow paths are discontinuous and connectivity across them can drop to a near-zero significance.” As the preamble notes, for example, dams cut off flow and store water for any number of reasons, such as flood control, irrigation water supply, and energy generation. See 79 Fed. Reg. at 22,235. It is quite a leap for the agencies to determine that the waters behind such dams categorically have significant physical, chemical, and biological effects on downstream traditional navigable waters. Allowing for per se jurisdiction regardless of breaks for any length expands the concept of “tributary” beyond what the science supports and would include intrastate waters that lack meaningful connection to traditional navigable waters. (p. 46-47)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM and Break in OHWM should sever jurisdiction and TSD sections 2.A, 7.B.5 and 7.C.

Kerr Environmental Services Corp. (Doc. #7937.1)

8.354 The proposed definition of tributary already has an accurate and sufficient clause allowing for both man-made and natural “breaks” in of bed and bank and OHWM. We believe this latter section should be retained. This section reads:

“A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks... , or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.”

By this definition, only those wetlands interspersed along the length or at the tributary's head are considered a part of the tributary. We believe this to be the appropriate and only reference to wetlands needed in the definition of tributary. (p. 9)

Agency Response: The final rule retains much of the language supported in the above comment. Minor changes were made to account for the change in status of wetlands and other features without an OHWM from tributaries to adjacent waters. The final language is:

A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more constructed breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.

El Dorado Holdings, Inc. (Doc. #14285)

8.355 Interruptions in an OHWM also are common in ephemeral systems. Pursuant to the proposal (33 C.F.R. § 328.3(c)(5)), such an interruption does not foreclose a tributary relationship so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. In some cases, there may be a relatively clear connection between upstream and downstream portions of the same tributary despite intervening absence of an OHWM (e.g., where water is conveyed briefly through a culvert). In other cases, however, the connection may be less clear or nonexistent. One such example is a small channel on relatively steep slopes that subsequently enters a flat area and essentially dissipates as a defined channel. There may be other channels with what the agencies consider to be an OHWM downstream of the point where the original channel dissipates, but there may not be any true connection between the upstream and downstream features. In such a case, the channel that dissipates should not be considered part of a regulated tributary, but it is not clear if this would be the case under the proposal. The agencies could resolve this uncertainty in at least two fashions: (1) clarify that in such a situation, the feature that dissipates qualifies as an exempt gully or rill and not part of a tributary; or (2) incorporate language into the “tributary” definition similar to that used in the Corps’ current approved jurisdictional determination form,⁵³¹ which states (in footnote 6) that a break in OHWM “*that is unrelated to the waterbody’s flow regime (e.g., flow over a rock culvert or through a culvert)*” does not necessarily sever jurisdiction above the break (emphasis added).

Another factor that is not clearly considered in the proposal, but that is especially pertinent in arid environments, is transmission losses. One may be able to trace a line on a map that connects a distant headwater ephemeral wash to a downstream TNW, but in reality water from the wash may have little or no potential of reaching the downstream water in any realistic scenario. For example, at the Silver Bell Mine (discussed below), an applicant provided information showing that even in a 100-year, 24-hour storm event, water in headwater ephemeral washes would only travel an estimated 12.9 miles from the mine. The nearest TNW in that case was over 100 miles away. In a situation such as that,

⁵³¹ Available at:

http://www.spl.usace.army.mil/Portals/17/docs/regulatory/JD/AJD/Approved_JD_Form.doc

the headwater wash has no realistic chance of contributing flow to the TNW, and should not be considered a tributary that is automatically regulated.

Recommendation: (1) The agencies should establish some objective standard for determining when a water “contributes flow” to a downstream TNW. For example, the agencies could establish a minimum storm event and state that if a wash or portion thereof would not have a hydrologic connection with a downstream TNW or interstate water during that event, it would not be considered a regulated tributary. (2) The agencies also should clarify that where there are natural breaks in OHWM based on a water’s flow regime (e.g., flow being so infrequent and/or minor that a defined channel disappears), areas upstream of such breaks are not automatically regulated as tributaries. (p. 14-15)

Agency Response: See summary response 8.3 above on General Comments **Opposing and Supporting Approach to Break in OHWM and Break in OHWM should sever jurisdiction. In addition, case specific determinations of jurisdiction are beyond the scope of this rulemaking effort.**

- 8.356 6. Ignoring the existence of dams, diversions or obstructions may result in regulation of portions of waters with no significant nexus to downstream TNWs: The proposed definition of “tributary” provides that a break (such as a dam) does not alter the status of the water as a regulated tributary so long as there is an identifiable OHWM and bed and banks located upstream of the break (e.g., the dam). However, in the arid West, waters upstream of at least some dams, diversions or similar obstructions (depending on their design and purpose) may be effectively precluded from having a physical, chemical or biological effect on a downstream TNW (or any such remaining effect may be severely limited). If a dam impounded all flow and never discharged, the upstream waters presumably would not qualify as tributaries because they would not “contribute flow” to any downstream water. However, if the dam had ever discharged, or even if it just had the potential to discharge (e.g., a spillway included in the design), it presumably would be regulated as a tributary under the proposal. In that latter case, the proposal would result in the regulation of waters with at best a speculative or insubstantial effect on downstream TNWs, despite Justice Kennedy’s conclusion that such waters should not be regulated because they do not possess a significant nexus with downstream TNWs.

Another similar example can be seen in the mining industry, where ephemeral washes have often been truncated through construction of large features (pits, rock piles, tailings piles, etc.). Such construction often occurred pre-Clean Water Act; more recently, it would have been done under the authorization of a Section 404 permit. In some cases, the upstream portions of the washes are diverted around the feature and thus maintain a relationship with downstream washes; in others, however, the upstream washes are not diverted, and instead are merely truncated. A good example would be ephemeral washes that have been cut off by a pit. In this situation, the truncated wash may still have what the Corps considers to be an OHWM, but there is obviously zero chance that it will contribute flow to any downstream water. We presume that in such cases the upstream wash would not be a tributary because there is zero chance that it “contributes flow” to a downstream water, but it would be helpful if the agencies clarified this point in any final rule.

Recommendation: (a) The agencies should remove the categorical statement that presence of an OHWM and bed and banks above a dam or diversion is sufficient to assert jurisdiction, or otherwise clarify that the “contribute flow” requirement may not be met in the case of all dams or diversions (in which case the upstream channels would not be considered tributaries under the proposed rule); (b) the agencies also should clarify that waters completely truncated by man-made features (including but not limited to those at mining sites), such that there is no longer a connection to downstream waters, are no longer considered tributaries because they have no potential to “contribute flow” to other waters. (p. 17-18)

Agency Response: The final rule continues the agencies’ longstanding regulation of impoundments of waters that would otherwise be waters of the U.S., see (a)(4). Manmade structures that impound waters of the U.S. do not sever the jurisdiction of the upstream waters.

National Association of Home Builders (Doc. #19540)

8.357 **4. The Agencies’ Treatment of “Breaks” along Tributaries is Inconsistent with Science and Existing Policy.**

The proposed rule states that a water does not lose its status as a tributary – and thus jurisdiction by rule – if “for any length, there are one or more man-made breaks . . . or one or more natural breaks . . . so long as a bed, and banks, and an ordinary high water mark can be identified upstream of the break.”⁵³² However, in preserving a water’s “tributary” status regardless of the length of any number of man-made and/or natural breaks, the Agencies fail to recognize what their colleagues in EPA’s Office of Research and Development acknowledge in the draft Connectivity Report, that is, the larger a break, the less likely a “tributary” is to contribute flow to a downstream traditional navigable water. Moreover, the contribution of flow from a “tributary” to a downstream water will become increasingly more difficult to quantify as the length of a break or multiple breaks increases.

Further, the proposed rule’s interpretation that a tributary retains its tributary status regardless of the length of a break or breaks along its length would expand categorical jurisdiction beyond tributaries considered jurisdictional under existing guidance. The 2008 *Rapanos* Guidance states, “[a] non-navigable tributary of a traditional navigable water is a non-navigable water body whose waters flow into a traditional navigable water either directly or indirectly by means of other tributaries.”⁵³³ Indeed, under current guidance, flow from a non-navigable tributary must flow into a traditional navigable water either directly or through other tributaries. There is no mention of indirect flow through non-tributaries in the existing guidance, yet the proposed rule would permit indirect contribution of flow from tributaries through non-tributary features for a water to meet the categorically jurisdictional tributary definition.

The treatment of breaks is also inconsistent with language in the preamble in which the Agencies assert that “tributary streams, including perennial, intermittent, and ephemeral

⁵³² 79 Fed. Reg. at 22,263 (emphasis added)

⁵³³ 2008 *Rapanos* Guidance at 6 (emphasis added).

streams, and certain categories of ditches are integral parts of river networks because they are directly connected to rivers via permanent surface features (channels and associated alluvial deposits) . . .⁵³⁴ This statement contradicts the tributary definition that expressly includes flow paths that are not permanent or direct.

The Agencies must remove the language pertaining to “breaks” from the tributary definition as it is inconsistent with science, existing policy, and preamble language. (p. 62-63)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM for clarification of how breaks in OHWM were addressed under the 2008 guidance. See summary response 8.3 above e on Difficulties in determining OHWM, length of break, and contribution of flow; and Break in OHWM should sever jurisdiction for clarification of practice and rationale for looking upstream of breaks in OHWM.

Pennsylvania Coal Alliance (Doc. #13074)

8.358 ...Although not an exhaustive listing, the following types of questions would remain if the Proposed Rule is finalized, as currently written:

...f. Tributary – If a “break” occurs in the tributary, is the area of the “break” considered to be jurisdictional? Asserting that a tributary still exists when there is a “break” or no bed, bank and OHWM obscures the “bright line” categories of jurisdictional waters that the Proposed Rule reportedly tries to introduce to simplify the jurisdictional determination process. (p. 15)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM.

National Stone, Sand and Gravel Association (Doc. #14412)

8.359 NSSGA requests that EPA and the Corps withdraw the proposed rule as fundamentally flawed. Any future rule should include consultation with businesses and the states and incorporate the following recommendations described in more detail...

...

Revise the definition of "tributary" to clarify that a water loses its tributary status, if for any portion of its length there are one or more man-made brakes (such as bridges, culverts, pipes, dams or roads). In order to establish jurisdiction, the agencies would have to provide site specific evidence that, under normal circumstances, water would likely move from one side of the break along with evidence of a continuous Ordinary High Water Mark (OHWM) (or bed and banks) on the opposite side of the break and would provide documented ecological benefits to the closest TNW. (p. 8, 9)

Agency Response: See summary response 8.3 above on Break in OHWM should sever jurisdiction.

⁵³⁴ 79 Fed. Reg. at 22,227 (emphasis added).

Halliburton Energy Services, Inc. (Doc. #15509)

8.360 ... the proposed definition specifies that a water that otherwise qualifies as a tributary under the definition "does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris, piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break." Examples of tributaries with breaks include dry-land systems in the arid and semi-arid west that may have stretches which flow through low gradient areas and do not exhibit an ordinary high-water mark, or a tributary that loses its bed and banks over a stretch characterized by wetlands. (p. 3)

Agency Response: No response required.

Alpha Natural Resources, Inc. (Doc. #15624)

8.361 I. DISRUPTED STREAMS WITHOUT OBSERVABLE HYDROLOGICAL CONNECTIONS TO DOWNSTREAM WATERS ARE NOT "TRIBUTARIES"

Alpha encourages the agencies to clarify that streams with intervening natural or man-made breaks or disturbances that cause the streams to have no observable hydrologic connection to downstream waters do not satisfy the definition of "tributaries" because they lack a significant nexus to downstream navigable waters. Instead, disrupted streams with no observable hydrologic connection to downstream waters should be deemed non-jurisdictional.

...

...intervening natural or man-made breaks or disturbances sometimes completely sever all observable hydrologic connections between a stream with a defined bed and banks and an ordinary high water mark and downstream navigable waters. While these disrupted water segments have many of the features of streams, they do not satisfy the definition of "tributaries" because they do not contribute flow to downstream navigable waters.

A stream's hydrologic connection with downstream waters can be severed in many ways. For example:

- Streams can be buried for thousands of feet when large quantities of rock and dirt are moved from mountainous terrain to nearby valleys during the construction of public highways;
- Changes to geography and geology in mountainous terrain can cause changes to flow regimes that turn streams that once carried water into dry relic stream beds;
- Streams can flow into abandoned underground mine works or into naturally occurring underground caverns and become losing streams that lack observable hydrologic connections to downstream navigable waters;

- Stream segments in higher elevations can be cut-off and isolated from downstream waters by pre-law⁵³⁵ coal mining benches and highwalls; and
- Stream segments can become isolated from downstream navigable waters by the lawful filling of jurisdictional waters through slurry impoundments.

The streams described above that lack observable hydrologic connections to downstream waters are distinguishable from the tributaries described in the proposed rule where culverts or dams disrupt—but do not sever—the hydrologic connection between stream segments above and below the break. See 79 Fed. Reg. 22,201-02 and 22,235.

The preamble acknowledges that streams without observable hydrologic connections to downstream waters, such as “losing streams and other streams that cease to flow before reaching the downstream . . . waters” “are not part of the tributary system” and should be assessed on a case-by-case basis as “other waters.” *Id.* at 22,250. EPA’s draft⁵³⁶ Connectivity Report⁵³⁷ also verifies the existence of streams that are disconnected from downstream waters and therefore cannot be deemed to categorically jurisdictional.

Unidirectional wetlands that do not connect to the river network through surface water include wetlands that spill into losing streams that are completely disconnected from the river network (i.e., the wetland exports water through an output channel but the water is completely lost before it reaches the river network due to evapotranspiration or loss to groundwater).

Draft Connectivity Report, p. 5-40.

The Science Advisory Board (“SAB”), in its August 11, 2014 draft review⁵³⁸ of EPA’s Draft Connectivity Report, reiterates that hydrologic connectivity can be greatly impacted by human activities, thereby providing further support for the notion that disrupted streams with no identifiable hydrologic connectivity to downstream waters should not be deemed tributaries that are per se jurisdictional. The SAB report criticizes the Connectivity Report for failing to adequately address the impacts that human alteration can have on connectivity.

⁵³⁵ “Pre-law” refers to coal mining activities that occurred before the passage of the Surface Mining Control and Reclamation Act of 1977 (“SMCRA”).

⁵³⁶ The agencies’ final rule will be informed by the final version of EPA’s Connectivity Report, which was not released before the November 14, 2014 public comment deadline. The draft version that is currently available to the public is incomplete and has the warning “DO NOT CITE OR QUOTE” stamped on every page. The ability of the public to offer meaningful comments, and the integrity of the public comment process itself, is severely undermined when only an unfinished draft of a key document is made available to the public by the close of the comment deadline. Alpha respectfully requests that the public comment period be re-opened once EPA releases its final Connectivity Report.

⁵³⁷ *Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence*, EPA/600/R-11/098B (Sept. 2013 Draft).

⁵³⁸ The SAB’s final review of EPA’s Connectivity Report was also not made publicly available during the comment period. Given that the agencies have worked on this proposed rule for years since the U.S. Supreme Court’s decision in *Rapanos*, it is unclear why this proposed rule needed to be rushed before EPA finalized its supportive documents and the SAB could complete its review of those EPA documents. Alpha respectfully requests that the public comment period be re-opened following the release of the SAB’s final review of EPA’s final Connectivity Report.

[Human] alterations can be of three types: some can directly decrease connectivity, such as dams (Ward and Stanford 1983) and groundwater pumping that lowers local water tables and causes surface-water connections to cease (Haag and Pfeiffer 2012).

SAB Report, 8/11/14, pp. 10.

The current version of the report generally excludes the many studies that have been conducted in human-modified stream ecosystems. This literature (e.g., Blann et al. 2009) should be included in the Report in order to provide information about the consequences of alterations of headwater streams to the physical, chemical, and biological integrity of downgradient waters. Many headwater stream ecosystems are altered by land-use change and human activity that often disrupts connectivity. ***The SAB finds that there are many insights to be gained about the importance of connectivity to downstream waters when connections are either severed or enhanced. *** The SAB recommends that the Report authors consider including examples from at least some of the following human alterations affecting the connectivity of streams: buried streams *** roads.

SAB Report, 8/11/14, pp. 31-32.

The SAB recommends that Section 5.4, as well as other sections of the Report, acknowledge these types of alterations or man-made habitats and include a discussion of current and past (legacy) human alterations of watersheds and how they affect the type, strength, and magnitude of connectivity pathways. In particular, human activities such as water diversion or water extraction may influence the water table, thereby reducing the potential for connections within and among wetlands and downstream waters.

SAB Report, 8/11/14, p. 58.

For the reasons above, Alpha respectfully requests that the agencies clarify that streams with no observable hydrologic connections to downstream navigable waters as a result of intervening natural or man-made breaks or disruptions are not jurisdictional per se “tributaries.” (p. 2, 3-5)

Agency Response: See summary responses above on Break in OHWM should sever jurisdiction.

8.362 II. DISRUPTED STREAMS WITHOUT OBSERVABLE HYDROLOGIC CONNECTIONS TO DOWNSTREAM WATERS SHOULD RARELY BE AGGREGATED

Streams that lack observable hydrologic connections to downstream waters due to intervening natural or man-made breaks or disturbances possess unique characteristics, most notably the type of disturbance and the length of the break in the hydrologic connection. Accordingly, the agencies should clarify that when evaluating the connectivity of a disrupted stream that has no observable hydrologic connection to downstream waters, the disrupted stream should not be aggregated with streams that may have been “similarly situated” to it prior to the disturbance.

The preamble explains that when the significant nexus of “other waters” is evaluated, the agencies consider whether the “other water,” “alone or in combination with similarly situated ‘other waters’ in the region” has a significant nexus to traditional navigable waters. 79 Fed. Reg. 22,189. The method by which streams are aggregated can have a great impact on significant nexus determinations, because the effect of a single stream on downstream waters is often negligible, especially when the stream has no observable hydrologic connection to downstream waters. (p. 5-6)

Agency Response: See summary response 8.3 above and TSD sections 2.B and 7.

Pennsylvania Grade Crude Oil Coalition (Doc. #15773)

8.363 If a “break” occurs in the tributary, is the area of the “break” considered to be jurisdictional? Asserting that a tributary still exists when water flows underground, through boulders or otherwise without a bed, bank and OHWM only confuses and complicates the “bright line” categories of jurisdictional waters reportedly sought by the agencies to simplify the jurisdictional determination process. (p. 10)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM.

Dominion Resources Services, Inc. (Doc. #16338)

8.364 ...To the extent the agencies move forward with the proposal, we make the following recommendations:

...

- The proposed rule would consider any feature a tributary regardless of a man-made or natural break of any length. This break could be a dam or long culvert. We request that the rule include clarification language to confirm that the interrupted portions of a tributary are not jurisdictional. (p. 8)

...

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM.

Pennsylvania Aggregates and Concrete Association (Doc. #16353)

8.365 Establishment of Ephemeral Jurisdiction Should Utilize More Than Just One of the Ordinary High Mark Indicators.

The proposed rule for identifying whether a stream is ephemeral permits the Corps field personnel to make that determination based on the Ordinary High Water Mark (OHWM)⁵³⁹. The use of the OHWM makes it a challenge to define the difference between ephemeral streams and erosion-based channels due to conflicting agency identifiers and definitions that blur the difference between ephemeral streams and erosional channels. The Corps apparently agrees as evidenced by their publishing of the recent 2014 guidance. However, the latest guidance does not require the use of a rigorous

⁵³⁹ 79 FR 22218.

set of conditions or indicators by which to establish jurisdiction, but rather with only minimal, or even no primary condition or indicator. This should be changed and the jurisdictional limits of ephemeral streams be based on the presence of at least two of the three OHWM conditions/indicators. (p. 4-5)

Agency Response: See summary responses above in Section 8.1.2 on the Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features.

Montana Farm Bureau Federation (Doc. #12715)

8.366 Equally unclear is the Agencies' statement that "a tributary is a longitudinal surface feature that results from directional surface water movement and sediment dynamics demonstrated by the presence of bed and banks, bottom and lateral boundaries, or other indicators of [ordinary high water mark]." Id. at 22,202. Even a bed and bank become unnecessary to call water a "tributary" because the Agencies have declared that "in some regions of the country where there is a very low gradient, the banks of a tributary may be very low or may even disappear at times." This example, and countless others, demonstrate the extensiveness and subjectivity in the proposed "tributary" definition. The proposed rule would regulate activities on land on which water channels and flows when it rains, so long as the flowing water leaves a mark on the land. It may even regulate land where there is no visible channel. This is precisely why the rule would have such an adverse effect on Montana's farmers and ranchers. Keep in mind the previous descriptions of the ways water moves over land in times of snowmelt and heavy rain, but no other time. If temporary snowmelt, low spots, and places where water runs in times of heavy rainfall can be considered "Waters of the United States," many new areas will be regulated in Montana. (p. 2)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. As described in the summary response responses 8.1 and 8.1.2, the final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional "waters of the United States" as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See summary responses above in Section 8.1.2 on the Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features for further discussion of the requirements for tributaries.

National Chicken Council, National Turkey Federation, and U.S. Poultry & Egg Association (Doc. #14469)

8.367 The uncertainty and potential liability associated with implementation of the rule is further aggravated by the EPA and the Corps determination that "[a] water that otherwise qualifies as a tributary under the proposed definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as debris piles, boulder fields, or a stream segment that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break." 79 Fed. Reg. at 22202. This

determination prompts some practical, but critical questions for implementation of the rule. For example, how far will a farmer have to look “upstream” to ensure he is not liable for applying fertilizer or pesticide into an area that may lack a bed and a bank and an OHWM, yet is still considered a jurisdictional water? The agencies have specifically indicated that “[I]n many intermittent and ephemeral tributaries, including dry-land systems in the arid and semi-arid west, OHWM indicators can be discontinuous within an individual tributary due to the variability in hydrologic and climatic influences.” Id. at 22202. Consequently, how does a farmer gauge his liability for CWA violations of \$37,500 per day per occurrence and the risk of a citizen lawsuit when the discernible features required for a water to be a “tributary” do not exist in a specific location? It is difficult to understand how the agencies consider it logical that the proposed rule provides clarity and certainty to poultry and egg producers. (p. 5)

Agency Response: See summary response 8.3 above on Difficulties in determining OHWM, length of break, and contribution of flow.

Charlotte-Mecklenburg Storm Water Services (Doc. #3431)

8.368 ...Regarding man-made and natural breaks, it may be difficult to confirm that a water is actually connected to downstream waters especially when streams flow underground. These systems may be connected to groundwater on a hill due to erosion, but then disappear into a field or flat area with no further evidence of a surface water connection. CMSWS recommends...requiring that “bed banks and OHWM be established above and below of natural or man-made break” in order to prove connectivity. (p. 3)

Agency Response: The final rule incorporates the commenter’s suggestion and requires OHWM and bed and banks both above and below natural or manmade breaks.

Duke Energy (Doc. #13029)

8.369 Further, the proposed definition states “[a] water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground), so long as a bed and banks and an ordinary high water mark can be identified upstream of the break.” This again is an expansion of the traditional concept of a tributary. Moreover, some of these types of breaks can sever connectivity, even when a channel can be identified upstream. As the preamble notes, for example, dams cut off flow and store water for any number of reasons, such as flood control, irrigation water supply, and energy generation. Therefore, it is hard to imagine that the agencies can assert categorical jurisdiction for waters behind such dams without first demonstrating that they have significant physical, chemical and biological effects on the downstream traditional navigable waters and not just “a connection.” (p. 23-24)

Agency Response: See summary response 8.3 above on Break in OHWM should sever jurisdiction.

EcoSynthesis Scientific & Regulatory Services (Doc. #14586)

8.370 In my 25 years of field experience with delineation, where short natural breaks interrupt the bed and bank of a tributary, other indicators (such as scouring or sorting of substrate to a coarser texture than prevails in adjoining uplands) show that the flow is indeed continuous. If the flow is so rare (as in, probably not occurring except in 10- or 20-year return interval events) that no evidence of surface flow (or indeed actual negative evidence such as leaf debris carried out onto the landscape and left there in a widely distributed layer, with no central debris-free flow line), then this feature's contribution to downstream water properly falls below the level of significant nexus. (p. 4)

Agency Response: See summary response 8.3 above on Difficulties in determining OHWM, length of break, and contribution of flow.

Metropolitan Water District of Southern California (Doc. #14637)

8.371 **c. The Agencies should clarify that natural or man-made breaks are not subject to CWA jurisdiction**

In column one on page 22203 of the Federal Register notice, the proposed rule states that "natural or manmade breaks would still not sever jurisdiction if a tributary segment with a bed and bank and OHWM could be identified upstream of the break." Metropolitan requests that the Agencies clarify that natural or man-made breaks in tributaries are not also subject to jurisdiction under the CWA. It is not uncommon in small ephemeral drainages in the arid west to find such natural breaks, often extending many hundreds or even thousands of feet between areas that exhibit indicators for an OHWM. The discussion on pages 22202 and 22203 of the Federal Register notice does not explicitly identify these breaks as either subject to CWA jurisdiction or not. The Agencies should expressly state in the rule for the purpose of clarity that these breaks are not jurisdictional. (p. 9)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM.

ERO Resources Corporation (Doc. #14914)

8.372 Many ephemeral and intermittent drainages in the arid West have a discontinuous bed and banks and/or OHWMs (discontinuous features). These discontinuous features are the result of infrequent flow events and are an indicator that such drainages may not have sufficient or consistent flow to connect to a WUS or physically, chemically, or biologically affect the integrity of a WUS. The Corps recognizes this common situation in Section IILB of the Approved JD Form discussed above that states: "[W]here there is a break in the OHWM that is unrelated to the waterbody's flow regime" (i.e., the Corps considers how flow regime relates to jurisdictional features in determining isolation). In many situations under current guidance and policy, the discontinuous nature of these features is substantial enough to "isolate" and render the drainages nonjurisdictional above these substantial breaks in jurisdictional features. Under the proposed rule, a water that otherwise qualifies as a tributary does not lose its status as a tributary if, for any length, there are one or more man-made breaks, or one or more natural breaks so long as a bed and bank and OHWM can be identified upstream of the break. As proposed, the

rule would not consider any break in jurisdictional features, no matter how extensive, as justification to consider reaches above the break in features to be nonjurisdictional. This approach fails to consider the length of the break in relationship to flows that form the features to the overall drainage or the characteristics of the drainage.

For example, consider a 20-mile-long ephemeral drainage with an OHWM and bed and banks for its lower 5 miles with a 10-mile break in jurisdictional features, with the remaining upper 5 miles of drainage with intermittent indicators of an OHWM and a bed and banks. This drainage most certainly has a different probability of connection and physically, chemically, or biologically affecting the integrity of a WUS than the same length of an ephemeral drainage with a 1/8-mile break in jurisdictional features. As proposed, the rule has no approach for making such distinctions in determining the jurisdictional status of ephemeral and intermittent drainages. Unfortunately, such examples are not the exception. Ephemeral and intermittent drainages with substantial breaks in jurisdictional features occur with enough frequency over the landscape of the arid West to render the proposed rule's approach arbitrary.

Substantial breaks in jurisdiction (discontinuous features) can also be indicative of an ephemeral or intermittent drainage with subsurface flow that occurs within the alluvium of the channel. The alluvial flow may be lost before reaching a WUS due to evaporation, consumptive use by riparian and wetland vegetation, diversions by shallow wells, and possibly infiltration to a suballuvial (deep ground water) aquifer. The discontinuous features may also be associated with channels with gradients that flatten and/or broaden. (p. 8-9)

Agency Response: See summary response 8.3 above on Difficulties in determining OHWM, length of break, and contribution of flow and TSD section 7.

Pennsylvania Independent Oil and Gas Association (Doc. #15167)

8.373 If a "break" occurs in the tributary, is the area of the "break" considered to be jurisdictional? Asserting that a tributary still exists when water flows underground, through boulders or otherwise without a bed, bank and OHWM only confuses and complicates the "bright line" categories of jurisdictional waters reportedly sought by the agencies to simplify the jurisdictional determination process. (p. 17)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM.

Defenders of Wildlife and Patagonia Area Resource Alliance (Doc. #16394)

8.374 Defenders also supports the fact that under the proposed definition in (u)(5), a water that otherwise qualifies as a tributary "does not lose its status as a tributary if, for any length, there are one or more man-made breaks... or one or more natural breaks" including a "stream that flows underground." One common trait of western streams is that they may flow above ground in some areas and below ground in others, dependent upon stream flow and substrate. It is common for western streams to flow above ground above impermeable rock and then sink below ground when traversing permeable limestone or alluvial depositions. A stream may travel below ground for a distance and then be forced to the surface by underlying igneous rock. Such underground connections that ultimately

link to waters of the U.S. should be covered under the definition of waters of the U.S. For example, Sonoita Creek is ephemeral where it flows through the town of Patagonia, but it surfaces on the west side of town at The Nature Conservancy's Patagonia-Sonoita Creek Preserve. Contamination of the creek above the underground flow should be considered contamination of a waters of the U.S. because the water surfaces and ultimately links with Lake Patagonia and other waters of the U.S. (p. 6)

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM.

Western Resource Advocates (Doc. #16460)

8.375 *Tributaries above natural and human-caused breaks*

The rule defines the word “tributary” for the first time and explicitly includes within this definition tributaries whose ordinary surface journey is broken either by a culvert or other constructed feature that channels its water under a road or building, or by a natural break in the surface water, e.g., a rock fall that forces the water under its surface.⁵⁴⁰ WRA supports this aspect of the rule. The key inquiry is whether the natural or constructed feature breaks the hydrologic connection between the tributary segments up and down stream. So long as the hydrologic connection is intact, the possibility of pollutants flowing downstream remains, as does the potential benefits of having the tributary's dilution flow reach a larger waterway. Local entities responsible for constructing these sorts of conduits themselves seem to consider the watershed intact notwithstanding the conduit. For example, Two Mile Creek in Boulder County, Colorado is described as:

With its headwaters up what is now the Pine Brook Hills subdivision, Two Mile Creek-- like many small drainages-- is perennial, generally dry through most of its length from July to March. Between Broadway and Edgewood Twomile Creek is hidden from view in underground culverts, but where it emerges, just above the confluence with Goose Creek-- west of Folsom and south of Edgewood-- wild watercress is found.⁵⁴¹

While disconnected, it is none-the-less posted for protection in the community:



⁵⁴² (p. 16-17)

⁵⁴⁰ 79 Fed. Reg. at 22263.

⁵⁴¹ Boulder Area Sustainability Information Network, Two Mile Creek Information (2005), available at <http://bcn.boulder.co.us/basin/watershed/2mile.html>.

⁵⁴² *Id.*

Agency Response: See summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM.

Missouri Coalition for the Environment (Doc. #16372)

8.376 E. Waters That Flow Through Karst Features in Missouri Provide Important Benefits as Waters of the United States.

Missouri also contains a large number of karst features such as sinkholes, karst wetlands, and losing streams, particularly in the southeastern portion of the state.⁵⁴³ Although most of the surface water in these systems is diverted underground, pollution upstream can still impact the quality of downstream segments. The proposed Rule's Overview of Scientific Literature on Aquatic Resource Connectivity and Downstream Effects recognizes the importance and interconnectivity of these waters,⁵⁴⁴ as does the Missouri Department of Conservation.⁵⁴⁵

Because waters in these systems tend to descend below ground and later reemerge via springs, lakes, or other features, "any contaminant which affects ground water quality is likely to affect surface water quality."⁵⁴⁶ These karst features mitigate the effects of floods via surface runoff storage, affect drinking water quality by conveying surface waters to aquifers,⁵⁴⁷ and support a high level of aquatic biodiversity.⁵⁴⁸ The proposed Rule explains that tributaries are still jurisdictional even when they are broken up by underground flow,⁵⁴⁹ but the final rule should also clarify that waters, such as karst wetlands, that have intermittent connectivity through groundwater to downstream jurisdictional waters are also jurisdictional under the CWA.⁵⁵⁰ This categorical inclusion would help protect the important ecological and biological services these features provide. (p. 13-14)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. As described in the summary responses 8.1 and 8.1.2, the final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a

⁵⁴³ See William R. Elliot, *Zoogeography and Biodiversity of Missouri Caves and Karst*, 69 *Journal of Cave and Karst Studies* 135, 136 (2007), available at <https://caves.org/pub/journal/PDF/v69/cave-69-01-135.pdf>.

⁵⁴⁴ 79 Fed. Reg. at 22,235 ("The significant nexus between a tributary and a downstream water is not broken where the tributary flows underground for a portion of its length, such as in karst topography.").

⁵⁴⁵ See, e.g., *Water Quality and Use*, MO. Dep't of Conservation, <http://mdc.mo.gov/your-property/greener-communities/missouri-watershed-inventory-and-assessment/big-piney-river/water-> (last visited Oct. 15, 2014).

⁵⁴⁶ *Id.*

⁵⁴⁷ Sam Woolford et al., *Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States*, River Basin Center at the University of Georgia, at 25-30 (Sept. 2014).

⁵⁴⁸ See Elliot, *supra* note 72, at 151.

⁵⁴⁹ 79 Fed. Reg. at 22,235, 22,263 (explaining that a tributary "does not lose its status as a tributary" even if it includes one or more natural breaks such as "a stream that flows underground").

⁵⁵⁰ As the Mississippi River Collaborative's comments on the proposed Rule advise, when functional interconnectivity—both chemical and biological—is taken into account, karst wetlands such as those present in Missouri should be categorically included in the final rule as waters of the United States. See also Ducks Unlimited, Comment Letter to EPA & Army Corps of Engineers, Docket ID No. EPA-HQ-OW-2011-0880 at 63 (Nov. 5, 2014).

bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See also the summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM for discussion of breaks in OHWM.

O'Neil LLP (Doc. #16559)

8.377 Any final Rule should clarify that areas that constitute "natural or man-made breaks in tributaries" are not subject to jurisdiction under the CWA. It is not uncommon in small ephemeral drainages in arid areas of the western United States to find such natural breaks, often times extending hundreds or thousands of feet between areas that exhibit indicators for an OHWM. For a feature to be classified within the definition of tributary, it ought to be required to have, at a minimum, a bed and banks and an ordinary high water mark (except where a wetland is the tributary in question), because these features generally are the physical indicators of flow. (p. 8)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. As described in the summary responses 8.1 and 8.1.2, the final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See also the summary response 8.3 above on General Comments Opposing and Supporting Approach to Break in OHWM for discussion of breaks in OHWM.

8.4. TRIBUTARIES DISTINGUISHED FROM NON-JURISDICTIONAL GULLIES, RILLS, NON-WETLAND SWALES

Agency Summary Response

Issue: Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale

Several commenters were supportive of the proposed rule’s approach, and stated that certain erosional features, especially gullies, should be covered as jurisdictional. The Agencies determined, based on their scientific and technical expertise that waters meeting the definition of “tributary” in a single point of entry watershed are similarly situated and have a significant nexus because they significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. As such, it is appropriate to conclude covered tributaries as a category are “waters of the United States.” See Technical Support Document. The Agencies limited the tributaries that are “waters of the United States” to those that have both a bed and banks and another indicator of ordinary high water mark. That limitation served as a reasonable basis to consider covered tributaries similarly situated because those physical characteristics indicated sufficient flow that the covered tributaries are performing similar functions and located such that they are working together in the region to provide those

functions to the nearest traditional navigable water, interstate water, or the territorial seas. However, gullies and other erosional features typically do not have both a bed and banks and another indicator of ordinary high water mark because they do not have flow of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. Because the Agencies based their significant nexus determination for covered tributaries in part on the amount of flow indicated where a tributary had both a bed banks and another indicator of ordinary high water mark, the final rule continues to require both physical indicators. Thus, unless a gulley or other erosional feature has both a bed and banks and another indicator of ordinary high water mark, such gulley or erosional feature is not considered a covered tributary.

Many commenters requested that the Agencies explain in detail the definitional difference between an ephemeral water of the U.S. and a non-jurisdictional gulley, rill or non-wetland swale, and asked where this distinction is made in the proposed rule. Several commenters requested that the Agencies define various terms in the rule including gullies, rills, non-wetland swales, and uplands and expressed the need for training on differentiating between gullies and ephemeral streams. Still other commenters requested more clarity in the definition of tributary as the rule provides no meaningful distinction and is arbitrary.

A number of commenters stated that they were concerned about being able to distinguish the difference between regulated streams and exempt erosional features such as gullies and rills. Many commenters were confused why ephemeral streams are being treated differently than gullies, rills and non-wetland swales. Many commenters also stated that they felt that ephemeral streams and ditches with less than perennial flow should not be considered a jurisdictional tributary and should be categorically excluded. These commenters stated that no scientific literature or justification exists to treat ephemeral streams differently than gullies. Other commenters suggested that the rule contain a variance provision because not all headwaters are the same, especially, in the arid West, and some minimal contribution of flow when it rains does not equal a significant nexus sufficient to assert categorical jurisdiction.

The rule's definition of "tributary" retains many elements from the proposed rule, but reflects public comments in several important ways. In particular, the rule focuses on the physical indicators of flow. The rule defines "tributary" by emphasizing physical characteristics created by water flow and requiring that the waterbody contributes flow, either directly or through another water, to a traditional navigable water, interstate water, or the territorial seas. The Agencies recognize that distinctions between ephemeral tributaries and erosional features can be confusing, and understand the commenters' concerns that an ephemeral water that flows very rarely would be considered a jurisdictional tributary. The rule definition of "tributary" responds to these concerns by requiring that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. By relying on these physical characteristics of flow, the final rule will simplify the distinction between jurisdictional tributaries and non-jurisdictional features. The Agencies understand the commenters concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," and it is the agencies' judgment that such a feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of

“ordinary high water mark” and “tributary.” To further emphasize this point, the rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not “waters of the United States.” Because of the clarity provided by the final rule, and the simplified distinction it creates between jurisdictional tributaries and non-jurisdictional features which could include some headwaters, the final rule does not include a variance provision.

Under the rule, ephemeral streams that meet the definition of tributary are “waters of the United States,” because the agencies determined that such streams provide important functions for downstream waters, and in combination with other covered tributaries in a watershed significantly affect the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. As noted by the SAB, and consistent with the scientific literature, tributaries as a group exert strong influence on the chemical, physical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of chemical, physical, and biological processes. See, e.g., SAB 2014b. These significant effects on traditional navigable waters, interstate waters and the territorial seas occur even when the tributary is small, intermittent, or ephemeral. See also the summary responses in Section 9 “Scientific Evidence Supporting the Rule” of the Response to Comments.

In addition, the Science Report concludes that, “[a]lthough less abundant, the evidence for connectivity and downstream effects of ephemeral streams was strong and compelling, particularly in context with the large body of evidence supporting the physical connectivity and cumulative effects of channelized flows that form and maintain stream networks.” Science Report at 6-13. For example, ephemeral headwater streams shape river channels in traditional navigable or interstate waters by accumulating and gradually or episodically releasing stored materials such as sediment and large woody debris. These materials help structure traditional navigable and interstate river channels by slowing the flow of water through channels and providing substrate and habitat for aquatic organisms.

Moreover, the agencies have historically considered ephemeral tributaries to be “waters of the United States.” For example, for many years EPA has reviewed and approved state water quality standards for ephemeral waters under CWA section 303(c), several Corps’ Nationwide Permits under CWA section 404 address discharges of dredged or fill material into ephemeral waters, and the agencies’ definition of “waters of the United States” prior to this rule included all tributaries without reference to flow regime. Thus, the Agencies are not regulating every ephemeral stream; only those that possess both a bed and banks and an additional indicator of ordinary high water mark because they are indicators of sufficient flow to have a significant effect on the chemical, physical, and biological integrity of traditional navigable waters, interstate waters, and the territorial seas. The Agencies believe that requiring the physical indicators of bed and banks and ordinary high water mark will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule.

Several commenters stated that the upper limit of a tributary should be clearly defined, and that the rule should state that a break in OHWM should be deemed the upper limit of jurisdiction. Additional commenters stated that the rule was not clear if surface connections without an OHWM could connect distant WOUS, and that this lack of clarity in the rule will cause an

increase in review time in the office and in the field for the regulators and the regulated public who would need to review distant locations beyond the limits of the project. Another commenter felt that clarification was needed about allowing for excluded features, such as groundwater, gullies and rills, to serve as connections that can render a feature jurisdictional as an “adjacent water” or “other water.”

Gullies, rills and non-wetland swales are not WOUS, and are excluded water features in paragraph (b) of the final rule, because they are erosional features that lack sufficient volume, frequency, and duration of flow to have the physical characteristics of bed and banks and another indicator of ordinary high water mark. Thus, they do not have a significant nexus. Streams with a break in ordinary high water mark can be “waters of the US” under current practice, and the final rule does not change this practice. The upper limit of the tributary is the point where a bed and banks and another indicator of ordinary high water mark cease to be identifiable. The ordinary high water mark establishes the lateral limits of a water, and its absence generally determines when a tributary’s channel or bed and banks has ended, representing the upper limit of the tributary. However, a natural or constructed break in bed and banks or other indicator of ordinary high water mark does not constitute the upper limit of a tributary where bed and banks and another indicator of ordinary high water mark can be found farther upstream. By looking to the presence of a bed and banks and an ordinary high water mark upstream, the rule ensures that a mere break in the ordinary high water mark does not render tributaries with a significant nexus to downstream waters non-jurisdictional.

With regard to surface connections or excluded features, such as groundwater, gullies and rills, features which are not “waters of the US” themselves, can in certain instances, provide a connection from a “water of the US” to a “water of the US” (see Compendium 3 on Adjacency section). Confined surface connections, such as culverts, can be used to demonstrate a connection between stream segments even if there is a break in ordinary high water mark as long as the ordinary high water mark and bed and banks are found upstream of the break. The Agencies believe that requiring the physical indicators of bed and banks and ordinary high water mark will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule. The clarification and simplification provided by the final rule will reduce – not increase – review time in the office and in the field for regulators and the regulated public.

Issue: Need for additional factors and specific guidance and methodology on determining bed and banks and OHWM, especially in the arid West.

A number of commenters requested that the rule contain some type of objective criteria about the significance of a break in the OHWM to recognize that a 1/8 mile break in OHWM versus a 10 mile break has a very different probability of connection and physically, chemically, or biologically affecting the integrity of water of the U.S. This concern was raised especially by commenters from the arid West who described water features that dissipate, as well as water features that have what could be termed an OHWM after flow events but not really be an OHWM. Commenters from the arid West also stated that the proposed rule’s approach is negating the effect of substantial breaks in jurisdiction.

The final rule definition makes clear that a water is considered tributary if it contributes flow, either directly or through another water, to a traditional navigable water, interstate water, or the territorial seas, and that the water has the physical indicators of a bed and banks and an ordinary high water mark. These physical indicators demonstrate there is volume, frequency and duration of flow sufficient to create a bed and banks and an ordinary high water mark, and thus to qualify as a tributary. If a water does not contribute flow, either directly or through another water, to a traditional navigable water, interstate water, or the territorial seas, such water does not qualify as a tributary. Site specific conditions will continue to determine the distance up valley that needs to be evaluated to see if the break in bed and banks and OHWM is temporary or the start of the stream system. These conditions include the size of the stream (larger streams require looking further up valley) and the nature of the break (look to see the up valley end of manmade breaks, streams buried by colluvium and valley bottom alluvial fans). Conversely, where the bed and banks and OHWM simply fade away or abruptly end at a headcut and the substrate, land use and valley characteristics do not change above and below the break, minimal up valley evaluation is necessary. The time it takes for water to make the connection between the waters above and below a break in OHWM will continue to be considered when evaluating breaks in OHWM and is largely dependent on the nature of the break. While there has never been a time limit on connections, times much longer than would occur if the break was not present point to the presence of distinct waterbodies instead of a single waterbody. For a complete discussion of how to address breaks in OHWM see summary response 8.3 above.

A number of commenters suggested that identifying bed and banks can be difficult, especially in the arid West. A number commenters stated that all three indicators of OHWM be required to be present in order to determine the existence of an OHWM, and sought specific criteria for the arid West. The commenters pointed out recent activity by the Corps on OHWM guidance, and stated that such important guidance should have gone through notice and comment rulemaking. Other commenters sought a methodology for identifying OHWM which should be included in the rule.

To increase clarity and address the comments requesting a definition of bed and banks, the preamble in section IV(F) includes an explanation of bed and banks adapted largely from longstanding agencies' practice as well as public comments on the proposed rule. In response to commenters' suggestions that the rule add a definition of "ordinary high water mark," the final rule adds the Corps' existing regulatory OHWM definition to EPA's regulations. Under that existing Corps regulation, indicators of OHWM include characteristics such as shelving, scour, changes in soil characteristics, and destruction of terrestrial vegetation, among others. The comments related to Corps guidance needing to go through notice and comment rulemaking are beyond the scope of this rulemaking and are not addressed further. The preamble notes that several Corps technical manuals are available to help identify OHWM. For areas such as the arid west, the Arid West Field Guide for OHWM manual has been developed for OHWM identification and has been used by the agencies for a number of years. Supporting research and technical reports have also been developed by the Corps. The Agencies are considering the need to develop further guidance or methodologies for identifying ordinary high water mark.

A number of commenters suggested that rule should include the magnitude, duration, and frequency of flow as consideration for distinguishing between exempt erosional features and covered ephemeral tributaries. Other commenters suggested factors the Agencies should

consider in differentiating between excluded erosional features such as gullies and rills, and ephemeral tributaries, including past land use information, historic aerials, indicators of erosional conditions only, alternating sediment depositional segments, the presence of vegetation growing within the feature, the presence of plant litter from previous years, and differentiation within the substrate.

OHWMs are created and maintained because of the presence of flowing water of sufficient volume, frequency, and duration to create those physical characteristics. Erosional features do not have the same flow characteristics and therefore do not have the same indicators as an ephemeral tributary. Some gullies may have been recently formed and over time may develop characteristics of a tributary through sufficient volume, frequency, and duration of flow. Thus, the Agencies believe that the rule, by requiring bed and banks and OHWM, does include consideration of the magnitude, duration, and frequency of flow as consideration for distinguishing between exempt erosional features and covered ephemeral tributaries. The rule definition of “tributary” requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The Agencies understand the commenters concern about distinguishing between exempt erosional features and ephemeral waters that could meet the proposed definition of “tributary,” but it is the agencies’ judgment that such an erosional feature is not a tributary under the rule because it would not form the physical indicators required under the definitions of “ordinary high water mark” and “tributary.” To further emphasize this point, the rule expressly indicates in paragraph (b) that ephemeral reaches that do not meet the definition of tributary are not “waters of the United States.”

With regard to the commenters’ suggested factors that the Agencies should consider in differentiating between excluded erosional features and ephemeral tributaries, the Agencies are including the Corps’ existing definition of ordinary high water mark in EPA’s regulations to provide additional clarity and for ease of use for the public. Existing Corps regulations define ordinary high water mark as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the banks, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. 33 CFR 328.3(e). That definition is not changed by the rule. Because ordinary high water mark indicators include characteristics such as shelving, scour, changes in soil characteristics, and destruction of terrestrial vegetation, among others, as well as remote sensing sources of information or mapping, the Agencies conclude that many – if not most - of the factors identified in the comments are considered in differentiating between excluded erosional features and ephemeral tributaries.

Issue: Lack of clarity problematic for certain sectors including farming, ranching, and mining.

A number of commenters were concerned that inclusion of ephemeral waters that meet the definition of tributary as waters of the U.S. is an expansion of jurisdiction and would cause farmers and ranchers difficulty in determining what they could do on their land. Other commenters were also concerned about irrigation practices and ditches creating WOUS.

The Agencies respectfully disagree that coverage of ephemeral waters that meet the definition of tributary is an expansion of jurisdiction that would cause farmers and ranchers difficulty in determining what they could do on their land. The Agencies have long regulated all tributaries, including ephemeral tributaries, under the CWA (see Section I of the Technical Support Document). The Agencies believe that requiring the physical indicators of bed and banks and ordinary high water mark will help clarify that only ephemeral waters with sufficient flow will meet the definition tributary. This approach will simplify implementation of the final rule. The clarification and simplification provided by the final rule will make it easier – not harder – for farmers and ranchers to determine what they can do on their land. In addition, all of the statutory exemptions in the CWA, including those exempting normal farming, silviculture and ranching practices from the need to obtain CWA section 404 authorization, remain in effect and unchanged by the final rule.

With regard to commenters' concern about irrigation practices and ditches creating WOUS, certain ditch maintenance activities, including those on existing irrigation and drainage ditches, are exempt from CWA section 404 permitting requirements under section 404(f) of the CWA. Section (b)(4) of the final rule also excludes artificially irrigated areas that would revert to dry land should application of water to that area cease. In addition, section (b)(3) of the final rule contains an exclusion for certain ditches even if they otherwise meet the definition of tributary. Ditches with ephemeral or intermittent flow not constructed or excavated in a tributary are not waters of the US. Ditches that do not flow, either directly or through another water, into a traditional navigable water, interstate water, or the territorial seas are not waters of the US. Thus, the Agencies believe that the exclusions contained in the final rule, as well as the existing statutory exemptions under CWA section 404(f) address the concerns raised by the commenters.

Several commenters stated that mining activities and mining reclamation activities often create erosional features that should not be considered tributaries. Because these activities create large areas of disturbed soil, under certain slope and stability considerations such features could arguably form a bed and bank and OHWM. Also, many such activities are already regulated under CWA section 402 (individual or general) permits. These commenters indicated that the approach in the proposed rule will create uncertainty, lead to coverage of more waters than Congress intended, and be arbitrary.

The Agencies believe that requiring the physical indicators of bed and banks and ordinary high water mark is not arbitrary, will help clarify the distinction between covered tributaries and erosional features, and simplify implementation of the final rule for those involved in mining and mining reclamation activities. The Agencies respectfully disagree that coverage of ephemeral waters that meet the definition of tributary will create uncertainty or lead to coverage of more waters than Congress intended. OHWMs are created and maintained because of the presence of flowing water of sufficient volume, frequency, and duration to create the physical characteristics. Erosional features caused by mining activities and mining reclamation activities do not have the same flow characteristics and therefore do not have the same indicators as an ephemeral tributary. The fact that mining activities and mining reclamation activities may already be regulated under CWA section 402 (individual or general) permits has no bearing on whether a feature has the physical indicators of bed and banks and ordinary high water mark such that it would be considered a covered tributary. Additionally, Section I of the Technical Support

Document provides the legal framework under which a ditch could be considered both a point source regulated under CWA section 402 and a water of the United States.

The final rule does not establish any regulatory requirements. Instead, it is a definitional rule that clarifies the scope of “waters of the United States” consistent with the Clean Water Act, Supreme Court precedent, and science. Programs established by CWA sections 402, 404 and 311 all rely on the definition of “waters of the United States.”

Specific Comments

U.S. House of Representatives Committee on Space, Science and Technology (Doc. #16386)

8.378 The word "ephemeral" appears over 75 times in the preamble to the proposed rule, but it is not defined. EPA's Connectivity Report defines "Ephemeral Stream" as "*A stream or river that flows briefly in direct response to precipitation; these channels are above the water table at all times.*" According the preamble to your proposed rule: "*Rills are formed by overland water flows eroding the soil surface during rain storms.*"

a. Please explain in detail definitional difference between an ephemeral water of the U.S. and a non-jurisdictional rill.

b. Where is this distinction made in the proposed rule? (p. 15-16).

Agency Response: See the summary response for Section 8.4. Section VII of the Technical Support Document also discusses the differences between rills and other non-jurisdictional erosional features and ephemeral tributaries that are waters of the United States.

North Carolina Department of Agriculture and Consumer Services (Doc. #14747)

8.379 The proposed rule exempts gullies and swales from jurisdiction; however, neither term is defined in the proposed rule. Will field staff be able to determine where a gully or swale ends and an ephemeral stream or ditch begins? More importantly, will landowners be able to determine if these features exist on their property? The fact that EPA and USACE are requesting comment on the difference between these features only serves to demonstrate the difficulty that landowners will face if ephemeral streams are jurisdictional. (p. 3)

Agency Response: See the summary response for Section 8.4, particularly the subsection titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.” The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. It is the agencies’ judgment that erosional features are not tributaries under the rule, because they would not form the physical indicators required under the definitions of “ordinary high water mark” and “tributary.”

State of Oregon (Doc. #15218)

8.380 ... there is continued uncertainty about the application of the proposed rule to specific geographic and hydrologic conditions. For example, while we appreciate the proposed express exclusion of "[g]ullies and rills and non-wetland swales," at the same time the proposed rules expressly includes all tributaries of waters susceptible of use in interstate commerce. It remains unclear to Oregon how this proposed language may apply to ephemeral streams that some may consider "gullies" and others may consider tributaries. (p. 2)

Agency Response: See the summary response for Section 8.4, particularly the subsection titled, "Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale." The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. It is the agencies' judgment that erosional features are not tributaries under the rule, because they would not form the physical indicators required under the definitions of "ordinary high water mark" and "tributary." Furthermore, erosional features, such as gullies, rills and non-wetland swales, are expressly excluded in paragraph (b) of the final rule. Paragraph (b) also clearly indicates that all such excluded features are not waters of the United States even where they otherwise meet the terms of paragraph (a), which defines "waters of the United States."

Ohio Department of Natural Resources et al. (Doc. #15421)

8.381 2. The agencies request comment on how they could provide greater clarity on how to distinguish between erosional features such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.

MRM: It is of concern that reclamation of unreclaimed areas previously mined for coal and is eligible for the remining incentives offered by the Rahall Amendment to the Clean Water Act [Clean Water Act Section 301(p)], would be negatively impacted by the provisions of the proposal. Nothing in the proposal should be interpreted so as to increase impediments to remining and reclamation of unreclaimed coal strip mining pits, highwalls, and sediment-laden and acid mine drainage impacted streams, as intended by the Rahall Amendment. There have been past incidents where erosional features from pre-law pit impoundments and from mine spoil has been categorized as jurisdictional even though the features clearly do not meet the definition of a "tributary". If so, this would be a disincentive to mine operators to remove the remaining coal from these areas and complete restoration if there are costly mitigation requirements. (p. 11)

Agency Response: The agencies disagree that these types of features or activities should be categorically excluded from consideration as "waters of the United States." The agencies support the goals of remining activities but feel it is more appropriate to encourage these activities through streamlined permitting options, such as Nationwide Permits. The final rule provides greater clarity on distinguishing between covered tributaries and erosional features. See exclusions compendium

(topic 7). The final rule is a definitional rule, and the Rahall Amendment and compensatory mitigation requirements are outside the scope of the rule.

- 8.382 3. The agencies request comment on how they could provide greater clarity on how to distinguish swales, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.

MRM: There has been historical inconsistency among federal agency (ACOE) regions and staff regarding jurisdictional swales and/or ephemeral streams or "tributary". It is recommended that the agency clearly provide a definition and distinction between "swale" from a jurisdictional ephemeral tributary. (p. 11)

Agency Response: See the summary response for Section 8.4, particularly the subsection titled, "Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale."

City of Chesapeake, Virginia (Doc. #9615)

- 8.383 The Rule states that a *tributary* is a WOUS, and a *tributary* may be ephemeral, intermittent or perennial. This statement is in direct conflict with the exemption for ditches that have *less than perennial flow*. Ephemeral and intermittent ditches are not *tributaries* and should not be subject to regulatory oversight under the CWA. The Corps' Nationwide Permit program defines an *ephemeral stream having flowing water only during, and for a short duration after, precipitation events in a typical year; in addition, ephemeral stream beds are located above the water table year-round and groundwater is not a source of water for the stream*. Since runoff from rainfall is the primary source of water for ephemeral stream flow, why are ephemeral streams being regulated any differently than gullies, rills and non-wetlandnonwetland swales? Ephemeral streams as well as ditches with less than perennial flow should be explicitly exempt to regulatory oversight under the CWA. (p. 3)

Agency Response: The final rule provides exclusions for most ditches that are not relocated tributaries or excavated in a tributary. The agencies disagree that ephemeral streams should be categorically excluded from consideration as waters of the United States. See summary response for "Relevance of Flow Regime" in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. The final rule is consistent with the agencies' longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. See also the summary response for "Relevance of Flow Regime" in section 8.1.1 above, particularly the subsection on "Regulation of Man-Altered Streams" and the summary response for section 8.2 above, "Ditches as Tributary." As defined in the final rule, "tributaries" thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b).

County of Henry, Virginia (Doc. #10949)

8.384 The Rule states that a tributary is a WOUS, and a tributary may be ephemeral, intermittent or perennial. Ephemeral and intermittent ditches are not tributaries and should not be subject to regulatory oversight under the CWA. The Corps' Nationwide Permit program defines an "ephemeral stream" as having "flowing water only during, and for a short duration after, precipitation events in a typical year; in addition, ephemeral stream beds are located above the water table year-round and groundwater is not a source of water for the stream." Since runoff from rainfall is the primary source of water for ephemeral stream flow, why are ephemeral streams being regulated any differently than gullies, rills and non-wetland swales? Ephemeral streams as well as ditches with less than perennial flow should be explicitly exempt to regulatory oversight under the CWA. (p. 2)

Agency Response: The final rule provides exclusions for most ditches that are not relocated tributaries or excavated in a tributary. The agencies disagree that ephemeral streams should be categorically excluded from consideration as waters of the United States. See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. Section IV(F) of the preamble to the final rule and section VII of the Technical Support Document discuss tributaries, including man-made or man-altered tributaries. The final rule is consistent with the agencies’ longstanding interpretation of the CWA that a tributary can be a natural, man-altered, or man-made water. See also the summary response for “Relevance of Flow Regime” in section 8.1.1 above, particularly the subsection on “Regulation of Man-Altered Streams” and the summary response for section 8.2 above, “Ditches as Tributary.” As defined in the final rule, “tributaries” thus include waters such as rivers, streams, canals, and ditches not excluded under paragraph (b).

Board of Supervisors, Maricopa County, Arizona (Doc. #14132.1)

8.385 ...the definition of "other waters" includes several words that have conflicting definitions used by the U.S. Department of Agriculture's National Resources Conservation Service or other water entities (i.e. "rill" and "gully" are both excluded from tributary definition in this proposed rule but in other agency definitions they are "intermittent streams"). These sections must be re-worked if the agencies really seek to clarify the reach of WUS. (p. 5)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies are aware that terms such as “gully” and “rill” may have different meanings throughout the country. Therefore, by grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. Regardless of the name they are given locally, waters that meet the definition of tributary are not excluded erosional features.

Washington County Commission, Utah (Doc. #14991)

- 8.386 In the proposed rule, the Agencies specifically request comments regarding recommendations which will provide greater clarity to the proposed definition of jurisdictional tributaries as compared to non-jurisdictional gullies. As stated above, the county has expertise in maintaining roads in an area with frequent and localized flash flooding. Consequently, the county respectfully provides additional information to the Agencies with the intent of showing the need to not include dry washes or arroyos as jurisdictional by rule.

The proposed rule offers little, if any, guidance to differentiate ephemeral tributaries from gullies, merely stating that gullies are erosional features and defining tributaries as having a bed, banks, and high water mark. Additionally, the proposed rule is inconsistent in that it states it seeks to follow current practices, but also implies that ephemeral streams in the arid west ("dry washes" or "arroyos") will be considered tributaries and jurisdictional by rule. However, it is not the current practice of the agencies to regulate dry washes in the county. (p. 3)

Agency Response: See the summary response for Section 8.4.

South Big Horn County Conservation District, Wyoming (Doc. #17264)

- 8.387 The proposed rule describes a tributary as having a bed and banks and normal high water mark. The rule then goes on to exempt rills and gullies. The rule does not define when a rill or gully becomes a regulated tributary, however rills and gullies typically have these same physical features. (p. 2)

Agency Response: See the summary response for Section 8.4, particularly the subsection titled, "Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale."

Virginia Department of Transportation (Doc. #12756)

- 8.388 We are concerned that certain swales, rills, and ephemeral tributaries could be considered jurisdictional despite the attempt to exempt some of these waters. Under the second column of p.22202, the preamble states that a natural or manmade break in the Ordinary High Water Mark does not constitute the upper limit of a tributary. The rule should clearly state when such a break should not be deemed the upper limit of jurisdiction. It is not clear if surface connections without an Ordinary High Water Mark could connect distant WOUS. This lack of clarity in the rule will cause an increase in review time in the office and in the field for the regulators and the regulated public (potentially at distant locations beyond the project limits). (p. 5-6)

Agency Response: Erosional features, including gullies, rills and swales are excluded from consideration as waters of the United States under paragraph (b) of the final rule. In contrast, waters meeting the definition of "tributary," including ephemeral tributaries, and not explicitly excluded in paragraph (b) are waters of the United States. The definition of "tributary" has been clarified in the final rule, and no longer includes ponds, lakes, and wetlands as tributaries. See the summary response for Section 8.3.2 above, particularly the subsection titled, "Relevance of Breaks in OHWM." The agencies are uncertain how to interpret the commenter's

scenario of “surface connections without an Ordinary High Water Mark could connect distant WOUS.”

Association of Clean Water Administrators (Doc. #13069)

- 8.389 A final rule could provide increased clarity for identifying tributaries and adjacent waters if clearer definitions are developed... Terms like rills, gullies and uplands are also not defined...(p. 3)

Agency Response: The final rule includes revised and clarified definitions for “tributary” and “adjacent.” The term “uplands” has been removed from the description of the exclusions for ditches in paragraph (b) of the final rule. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies are aware that terms such as “gully” and “rill” may have different meanings throughout the country. Therefore, by grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. Regardless of the name they are given locally, waters that meet the definition of tributary are not excluded erosional features.

Western Coalition of Arid States (Doc. #14407)

- 8.390 The agencies propose to exclude gullies, rills, and non-wetland swales, but do not propose definitions of those terms. The preamble states that the agencies specifically seek comment on how to distinguish between erosional features, such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.

The agencies should exclude erosional features like rills and gullies from jurisdiction when their formation can be clearly associated with mining, construction or other manmade projects that disturb large areas. These types of activities create expansive areas of disturbed soils and, under certain slope and stability characteristics, are prone to producing erosion that is actively controlled under the §402 Construction General and Industrial General Permits or MS4 permit programs. There is no need to further clarify the definition or description of a non-wetland swale. The agencies are already defining ephemeral tributaries. If a depressed feature does not have a bed, bank and OHWM per agency guidance, it is not a jurisdictional water. Non-wetland swales will not be included in this definition. (p. 16)

Agency Response: Erosional features like rills and gullies are excluded in paragraph (b) of the final rule regardless of their reason for forming.

Western Urban Water Coalition (Doc. #15178.1)

- 8.391 ...As discussed below, determinations of nonjurisdiction for ephemeral and intermittent drainages based on isolation occur in the arid West (SWCA Environmental Consultants 2014a and Corps Approved JD Form). These nonjurisdictional determinations include:

- Ephemeral and intermittent drainages with substantial breaks in jurisdictional features where the break in jurisdictional features makes it unlikely that flows reach a WUS.
- Ephemeral and intermittent drainages with no breaks in jurisdictional features that contain no surface flow during most years due to dry conditions and/or human surface and shallow ground water diversions that reduce streamflow to zero.
- Erosional gullies that do not have jurisdictional features except where they transport irrigation runoff.
- Ephemeral and intermittent drainages where the channel ends in a fan or sheet flows over the landscape and makes it unlikely that flows reach a WUS.
- Ephemeral and intermittent drainages where the channel loses definition due to agricultural or other activities that make it unlikely that flows reach a WUS.
- Ephemeral and intermittent drainages where the channel loses surface or subsurface flow that make it unlikely that flows reach a WUS.
- Ephemeral and intermittent drainages where the channel ends in a closed basin and it is unlikely that flows reach a WUS.

Currently, the channel above these breaks in jurisdiction would be considered isolated and/or lack a significant nexus to a WUS, even if portions of the channel above the breaks in jurisdiction had a bed and banks or an OHWM. These situations occur with enough frequency in the arid West that elimination of the criteria for isolation associated with breaks in jurisdiction and making ephemeral and intermittent drainages jurisdictional by rule would substantially increase the scope of CWA jurisdiction in the arid West.

Many ephemeral and intermittent drainages in the arid West have a discontinuous bed and banks and/or OHWMs (discontinuous features). These discontinuous features are the result of infrequent flow events and are an indicator that such drainages may not have sufficient or consistent flow to connect to a WUS or physically, chemically, or biologically affect the integrity of a WUS. The Corps recognizes this common situation in Section III.B of the Approved JD Form discussed above that states: “[W]here there is a break in the OHWM that is unrelated to the waterbody’s flow regime” (i.e., the Corps considers how flow regime relates to jurisdictional features in determining isolation). In many situations under current guidance and policy, the discontinuous nature of these features is substantial enough to “isolate” and render the drainages nonjurisdictional above these substantial breaks in jurisdictional features. Under the proposed rule, a water that otherwise qualifies as a tributary does not lose its status as a tributary if, for any length, there are one or more man-made breaks, or one or more natural breaks so long as a bed and bank and OHWM can be identified upstream of the break. As proposed, the rule would not consider any break in jurisdictional features, no matter how extensive, as justification to consider reaches above the break in features to be nonjurisdictional. This approach fails to consider the length of the break in relationship to flows that form the features to the overall drainage or the characteristics of the drainage.

For example, consider a 20-mile-long ephemeral drainage with an OHWM and bed and banks for its lower 5 miles with a 10-mile break in jurisdictional features, with the remaining upper 5 miles of drainage with intermittent indicators of an OHWM and a bed and banks. This drainage most certainly has a different probability of connection and physically, chemically, or biologically affecting the integrity of a WUS than the same length of an ephemeral drainage with a 1/8-mile break in jurisdictional features. As proposed, the rule has no approach for making such distinctions in determining the jurisdictional status of ephemeral and intermittent drainages. Unfortunately, such examples are not the exception. Ephemeral and intermittent drainages with substantial breaks in jurisdictional features occur with enough frequency over the landscape of the arid West to render the proposed rule's approach arbitrary.

Substantial breaks in jurisdiction (discontinuous features) can also be indicative of an ephemeral or intermittent drainage with subsurface flow that occurs within the alluvium of the channel. The alluvial flow may be lost before reaching a WUS due to evaporation, consumptive use by riparian and wetland vegetation, diversions by shallow wells, and possibly infiltration to a suballuvial (deep ground water) aquifer. Dryland channels experience high rates of downstream transmission losses because of the porous nature of typical channel bed materials (Graf 1988). The discontinuous features may also be associated with channels with gradients that flatten and/or broaden.

The proposed rule states that “[N]on-jurisdictional geographic features (e.g., nonwetland swales, ephemeral upland ditches) may still serve as a confined surface hydrological connection between an adjacent wetland or water and a traditionally navigable water, interstate water or the territorial sea, provided there is an actual exchange of water between those waters, and the water is not lost to deep groundwater through infiltration (i.e., transmission losses).”

Although not explained in the proposed rule, in practice, the above criteria would only apply to ephemeral or intermittent drainages, ditches, canals, and wetlands because rivers and perennial streams would have defined perennial surface connections to a WUS. This approach to negating the effect of substantial breaks in jurisdiction of ephemeral and intermittent drainages has several problems. First, as discussed above, substantial breaks in jurisdiction (discontinuous features) can be indicative of an ephemeral or intermittent drainage with flows that tend to be lost from the channel alluvium and not reach a WUS. Loss of ground water from these drainages rarely produces a confined or defined connection to a WUS. More commonly in the arid West, the ground water in an ephemeral or intermittent drainage adds to the soil moisture in the immediate vicinity and/or evaporates or is transpired. The water is lost, but not to “deep ground water.” The proposed rule needs to define “deep ground water.” Throughout portions of the arid West, “deep ground water” means ground water that does not reach a river or stream or its associated alluvial aquifer and is referred to as nontributary ground water. It would be very unusual in the arid West for the surface flows of ephemeral or intermittent drainages to contribute significant volumes of water to deep ground water. (p. 9-12)

Agency Response: As discussed further in summary response 8.1, 8.1.1 and 8.1.2 above and in the TSD and Connectivity report the science and agency experience support the decision to determine by rule that all waters meeting the definition of tributary are “waters of the United States,” including ephemeral streams. The final

rule further establishes that for a ditch or other feature to be jurisdictional as a tributary it must have bed and banks and an OHWM and flow directly or indirectly into a (a)(1) – (a)(3) water. Many of the features outlined by the commenter would fail to satisfy one or both of these requirements, and would therefore not be a “tributary” under the final rule. The agencies have long recognized the unique hydrologic and climatic circumstances found in the arid west and have even developed a OHWM manual specifically to address these challenges. This method uses stream geomorphology and vegetation response to the dominant stream discharge and represents the most consistent and repeating pattern associated with “ordinary” events representing OHW in the arid west, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx>. See also the summary responses 8.1.2: Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features above and summary response 8.1.1.

- 8.392 The proposed rule should define the characteristics that distinguish non-jurisdictional areas and features (e.g., uplands, gullies, rills and vegetated swales) from jurisdictional areas and features. This guidance is particularly important in the arid West where the differences between an ephemeral drainage and gullies and rills can be minor. (p. 23)

Agency Response: See the summary response for Section 8.4, particularly the subsection titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.”

California Department of Transportation, Division of Environmental Analysis (Doc. #19538)

- 8.393 The discussion of rills and gullies on pages 22218 and 22219 will cause additional confusion as it describes steep headwater streams, which would be jurisdictional, in the same terms as it defines gullies, which are excluded from jurisdiction. Caltrans recommends that only features with an identifiable OHWM be considered a stream or tributary and that features that are not wetlands and lack an OHWM be excluded from jurisdiction by rule. (p. 3)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies are aware that terms such as “gully” and “rill” may have different meanings throughout the country. Therefore, by grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal.

Arizona Chamber of Commerce and Industry (Doc. #14639)

- 8.394 Although the proposed rule seeks to regulate ephemeral tributaries while exempting “gullies” and “rills” the rule proposes to distinguish between regulated tributaries and exempt gullies and rills using the presence of an ordinary high water mark. This is an

unworkable and improper method for attempting to distinguish between jurisdictional and non-jurisdictional waters in the arid West. (p. 2)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal.

Aluminum Association (Doc. #15388)

8.395 ...because this proposed rule is vague on the actual starting point of WUS, it could be interpreted to pull any storm water that leaves a puddle into the scope of WUS. As explained in the preamble (on p. 22218), the Agencies have decided to continue to exclude “puddles” from the list of waters that are generally not jurisdictional because “‘puddles’ is not a sufficiently precise hydrologic term or a hydrologic feature capable of being easily understood.” Because the term is not specifically included in the excluded waters list and because the proposed rule is so broad, it is possible that storm water that leaves a puddle may still be considered WUS. Also, because the proposed scope of WUS is broad, storm water that drains from an empty field at an industrial complex that enters a ditch through a series of small gullies or through sheet flow may also now be WUS and thus potentially subject to water quality criteria even though no industrial activity is or was conducted in this area. Another concern is that this type of water may traverse many features prior to entering an engineered storm water treatment system such as a pocket wetland, grassed buffer zone, or rip-rap channel. Under the Proposed Rule, this water could potentially be subject to water quality criteria prior to entering such a system thus leaving the discharger in a quandary as to where such treatment should be located and what level of treatment would be required.

Another potential concern is the use of storm sewers to remove storm water from industrial areas. The preamble states:

“the upper limit of a tributary is established where the channel begins...”⁵⁵¹

“A water that otherwise qualifies as a tributary under the proposed definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks such as bridges, culverts, pipes, or dams.”⁵⁵²

As an example, consider a material storage area, which contains material storage racks or other industrial supplies, and from which storm water drains to a series of small gullies that drain to a storm sewer and then to a ditch. Under this broad definition, each of these drainage sequences could be potentially designated as jurisdictional under the proposed rule.

⁵⁵¹ 79 Fed. Reg. 22188, 22202 (Apr. 21, 2014).

⁵⁵² Id.

Another part of the explanation of tributary within the preamble states:

“Also, in many intermittent and ephemeral tributaries, including dry-land systems in the arid and semi-arid west, OHWM⁵⁵³ indicators can be discontinuous within an individual tributary due to the variability in hydrologic and climatic influences.”⁵⁵⁴

It appears that this language is reflecting that a storm water ditch that may dry prior to entering another water body, is still considered to be a “tributary” and consequently a WUS. Delineation should be made that WUS does not begin for storm water until it enters a properly defined tributary to a navigable waterway. Tributaries should be narrowly defined to have the normal bed, bank, and high water mark, and consistently (more than 6 months per year), discharge to a traditional navigable waterway. (p. 6-7)

Agency Response: In response to public comments, puddles are now explicitly excluded in paragraph (b) of the final rule. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. Sheet flow is therefore not grounds to assert jurisdiction under the final rule. Stormwater control features constructed in dry land and ditches with less than perennial flow, unless they are a relocated tributary or excavated in a tributary, are also explicitly excluded in paragraph (b).

National Association of Manufacturers (Doc. #15410)

8.396 Further, the agencies’ proposed jurisdiction over ephemeral streams and some ditches as “tributaries” cannot be reconciled with its recognition that comparable bodies of water have no “significant nexus” to traditional navigable waters. As a matter of basic hydrology, there is no meaningful distinction between an ephemeral stream and “gullies, rills, and nonwetland swails” with respect to their impact on the quality of any traditional navigable waters to which they ultimately connect. Ephemeral streams are categorically treated as a “tributaries” while “gullies, rills, and nonwetland swails” are categorically deemed non-tributaries even though they “may contribute flow” to downstream waters and ultimately traditional navigable waters, 79 Fed. Reg. at 22204; see also *id.* at 22218-19.

The proposed rule provides no explanation for not likewise exempting ephemeral streams, other than the need to “dra[w] lines.” *Id.* at 22218. But the fact that an agency may have to draw lines is not a license to draw inconsistent and arbitrary lines. See *Westar Energy, Inc. v. FERC*, 473 F.3d 1239, 1241 (D.C. Cir. 2007) (“A fundamental norm of administrative procedure requires an agency to treat like cases alike. If the agency makes an exception in one case, then it must either make an exception in a similar case or point to a relevant distinction between the two cases.”). The very reason that the proposed rule provides for finding that “gullies, rills, and nonwetland swails” are generally not “waters of the United States”—that these types of features have only

⁵⁵³ OHWM means ordinary high water mark.

⁵⁵⁴ 79 Fed. Reg. at 22202.

intermittent flow of water, 79 Fed. Reg. at 22218-19—applies just as equally to many streams that are “tributaries” but are always deemed to be “jurisdictional” under the proposal. (p. 16-17)

Agency Response: The agencies disagree that there is not distinction between ephemeral tributaries and erosional features like gullies, rills and non-wetland swales. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.” In addition, see the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

American Council of Engineering Companies (Doc. #15534)

- 8.397 Ephemeral tributaries should be differentiated from erosion features as natural or man-altered drainages with indicators including the existence an ordinary high water mark, occurrence in natural topographic low (i.e., natural watershed landscape position), and soils developed through both alternating erosional and depositional conditions (i.e., sediment transfer). The proposed rule should clearly state that erosional features do not have a significant nexus and describe how to differentiate those features from ephemeral tributaries (i.e., past land use information, lack of consistent visual confirmation of an ordinary high water mark in historic aerials, indicators of erosional conditions only, and lack of alternating sediment depositional segments). (p. 4).

Agency Response: See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.” Erosional features like gullies, rills and non-wetland swales are explicitly excluded from consideration as waters of the United States in paragraph (b) of the final rule. Section IV(F) of the preamble to the final rule describes a number of tools that the agencies and the public may use to help determine whether a water meets the definition of “tributary” or is instead a non-jurisdictional feature.

Business Council of Alabama (Doc. #15538)

- 8.398 The proposed rule mentions the need to make "case-specific analysis" in many situations which conflicts with their goal of providing "greater regulatory certainty" in the final rule. The types of situations that may have to be submitted to the Corps include, but are not limited to, the following:
- a. A pool of open waters or wetlands outside of the floodplain that is connected to WOTUS via a rill. At this time it would be more likely be determined these are isolated, not jurisdictional waters and not WOTUS. If in fact a "rill" or rills are the only conduit source to downstream waters then it seems we have an obvious overreach by the EPA/Corps. A rill is not a water of the U.S or a wetland. If a "rill" is used as a physical

geographic feature to determine a connection to WOTUS then we have an example of unreasonable proximity. EPA has stated in the proposed regulations they are seeking for the final rule to have "greater regulatory certainty" over what is and what is not jurisdictional by rule. The fact that the proposed rule attributes rills as having a hydrological connection to "other waters" and this example could be used to show a "significant nexus" will not result in their goal to have the final rule clarify with "greater regulatory certainty" what is and is not jurisdictional. Rills often times develop due to the lack of or improper implementation of BMPs resulting from on-site construction activity at a project site. These rills could easily be misconstrued to have some "connection" to some wetlands or ponded areas that are up-gradient which contribute little or no surface water to WOTUS. It is apparent that the EPA/Corps is using the most minor of all possible hydrological connections to assert their jurisdiction. (p. 3)

Agency Response: The agencies disagree that efforts to obtain accurate site specific information before making a jurisdictional determination conflicts with the goal of the final rule to provide greater regulatory certainty. Numerous provisions of the final rule enhance this certainty by, for example, defining “tributary” for the first time and specifically excluding many features that before the final rule have only “generally” been considered by the agencies as non-jurisdictional.

GBMC & Associates (Doc. #15770)

8.399 ...Determination of ordinary high water features, including bed and bank, is subjective to interpretation and provide a source of confusion amongst the agencies, districts, consultants, and the general population. The agencies should develop a mechanism for training or adopt a protocol from a reputable organization that would train all involved parties to identify ordinary high water features, particularly bed and bank, and that would differentiate between stream features and erosional features such as gullies and scour marks. One of the goals of the training should be to ensure a consistent interpretation of what a tributary is. (p. 6)

Agency Response: The term “ordinary high water mark” has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. See the summary response for Section 8.4, particularly the sub-section titled, “Need for additional factors and specific guidance and methodology....” In regards to training support, the agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications by developing and publishing technical manuals explaining OHWM and regional considerations, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Federal Water Quality Coalition (Doc. #15822.1)

8.400 **8. Gullies and rills.**

Under the proposed rule, gullies and rills would not be jurisdictional. However, neither term is defined. According to the preamble: “Gullies are relatively deep channels that are

ordinarily formed on valley sides and floors where no channel previously existed.” “Rills are formed by overland water flows eroding the soil surface during rain storms.”⁵⁵⁵ By contrast, “ephemeral streams” often would be jurisdictional. But again, although the term is used 75 times, the preamble does not define it. EPA’s Draft Connectivity Report defines “ephemeral stream” as: “A stream or river that flows briefly in direct response to precipitation; these channels are above the water table at all times.”⁵⁵⁶ As a result, gullies and rills could be considered ephemeral streams. All are erosion features that carry water only when it rains. The agencies recognize they have not clearly distinguished between these features, even though one is categorically jurisdictional and the others are categorically exempt.⁵⁵⁷ Even if not jurisdictional themselves, gullies and rills may be used to establish a connection and turn isolated water into jurisdictional water.⁵⁵⁸ The expansion of jurisdiction to reach ephemeral streams, the lack of definitions, and the use of gullies and rills to make jurisdictional determinations have caused significant uncertainty about the status of these features. (p. 20)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.” In addition, see the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

8.401 9. Non-wetland swales.

Non-wetland swales are not jurisdictional. However, it is difficult to distinguish a swale from an ephemeral stream. According to the agencies: “Swales are distinct from streams in that they are non-channelized, shallow trough-like depressions that carry water mainly

⁵⁵⁵ 79 Fed. Reg. at 22218.

⁵⁵⁶ See Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence (September 2013 External Review Draft, EPA/600/R-11/098B) (hereinafter, “Draft Connectivity Report”), at Glossary.

⁵⁵⁷ “The agencies request comment on how they could provide greater clarity on how to distinguish between erosional features such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.” 79 Fed. Reg. at 22219.

⁵⁵⁸ “Examples of confined surface water hydrologic connections that demonstrate adjacency are swales, gullies, and rills.” 79 Fed. Reg. at 22210. It appears that the skidder rut that was described in Congressional testimony could meet this definition and be used to establish jurisdiction. See *supra* n. 16.

during rainstorms or snowmelt.” 79 Fed. Reg. at 22219. Like gullies and rills, the agencies propose to use non-wetland swales to establish connections that would make other water jurisdictional. EPA recognizes that the distinction between a non-jurisdictional swale and a jurisdictional ephemeral stream is very vague. *Id.* As a result, landowners will not know if a swale on their property is considered a jurisdictional water or not. As with gullies and rills, the expansion of jurisdiction to reach ephemeral streams, the lack of definitions, and the use of non-wetland swales to make jurisdictional determinations have caused significant uncertainty about the status of these features. (p 20-21)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that non-wetland swales, like other erosional features, lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.” In addition, see the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters.

Water Advocacy Coalition (Doc. #17921.1)

8.402 2. The tributary definition does not provide clarity, but creates confusion.

In addition to its broad reach, the tributary definition is problematic because it relies on vague language and confusing concepts, including the following:

...

- Tributaries versus erosional features: The preamble acknowledges the difficulty in distinguishing between tributaries, which are categorically jurisdictional under the proposed rule, and erosional features, such as gullies, which are categorically excluded from jurisdiction. 79 Fed. Reg. at 22,218. Both erosional features and ephemeral drainages are characterized as small features that typically only carry water during precipitation events. How will regulators distinguish between ephemeral drainages and gullies or rills? Given the difficulty in distinguishing between these two types of features, the agencies’ assertion of jurisdiction over one feature but not the other is arbitrary and not supported by science. (p. 47, 49)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a

non-jurisdictional gully, rill or non-wetland swale.” In addition, see the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

8.403 **3. There is confusion over what is an erosional feature that is excluded.**

The agencies propose to exclude gullies, rills, and non-wetland swales, but do not propose definitions of those terms. The preamble states that the agencies specifically seek comment on “how to distinguish between erosional features, such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.” 79 Fed. Reg. at 22,219. Again, this raises many questions:

- How are regulators and regulated entities to identify gullies, rills, and non-wetland swales?
- What is the difference between erosional features and ephemeral drainages? The agencies do not provide any scientific basis for distinguishing between them.
- Indeed, if these features are so similar, why are erosional features categorically excluded and ephemeral drainages categorically jurisdictional? Neither should be jurisdictional.

The confusion over when these predominantly dry features are excluded erosional features will likely result in a substantial number of requests from the regulated community to verify that a particular feature is erosional. Given the subjective nature of erosion, to obtain regulatory certainty, it will likely be deemed too risky for the regulated public to decide on their own that only non-jurisdictional erosion exists at their site. Without further clarification of this issue, the Corps and EPA should expect a large number of future requests to verify the presence of an erosional feature versus a potentially regulated tributary.

Even more confusingly, the reasons given in the preamble for not listing “puddles” as “waters of the United States” seem similarly applicable for ephemeral drainages. The preamble states that puddles are not waters of the United States because a puddle “exists for only a brief period of time before the water in the puddle evaporates.” 79 Fed. Reg. at 22,218.176 But the same is often true of ephemeral drainages, which are categorically jurisdictional under the proposed rule. Why are ephemeral drainages jurisdictional, and puddles are not? The agencies ask for comment on the distinction between these features and ephemeral and intermittent streams, but they do not provide much information on which to comment. The agencies should exclude ephemeral streams from jurisdiction, as well as erosional features like gullies, rills, and non-wetland swales. This would eliminate substantial confusion over the distinction between erosional features and ephemeral drainages. (p. 72-73)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical

characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.” In addition, see the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. The agencies have never considered puddles to meet the minimum standard for being a water of the United States.

National Association of Home Builders (Doc. #19540)

8.404 **4. The Proposed Rule Draws an Arbitrary Distinction between Erosional Features and Ephemeral Drainages.**

The Agencies propose to exclude gullies, rills, and non-wetland swales, and yet do not provide definitions for any of those terms. The preamble states that the Agencies specifically seek comment on “how to distinguish between erosional features, such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.”⁵⁵⁹ Indeed, this raises many questions:

- How are regulators and the regulated community to identify gullies, rills, and nonwetland swales? is the difference between erosional features and ephemeral drainages? The Agencies provide no scientific basis for distinguishing between them.
- Indeed, if these features are so similar, why are erosional features categorically excluded and ephemeral drains are categorically jurisdictional? After all, all rivers and streams exist because the force of flowing water has eroded sediment downstream to form a channel. Dr. Luna Leopold, one of the most noted river scientist of the modern era, put it best when he and his colleagues described rivers as the “gutters down which flow the ruins of continents.”⁵⁶⁰

The different treatment of these predominantly dry features appears to be entirely arbitrary. The Agencies should exclude ephemeral streams from jurisdiction as well as erosional features like gullies, rills, and non-wetland swales. Indeed, the USGS even recognizes gullies as “synonymous with ephemeral [streams].”⁵⁶¹ (p. 117)

⁵⁵⁹ *Id.* at 22,219.

⁵⁶⁰ Leopold, L.B., M.G. Wolman, J.P. Miller. *Fluvial Processes in Geomorphology*. San Francisco: Freeman, 1964. Print.

⁵⁶¹ USGS National Hydrography Dataset Newsletter Vol. 5, No. 4, February 2006 by Jeff Simley.

Agency Response: The agencies do not believe that the distinction between ephemeral tributaries and erosional features is arbitrary. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.” In addition, see the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Pennsylvania Coal Alliance (Doc. #13074)

- 8.405 h. Erosional features and swales – As acknowledged in the Proposed Rule, it is difficult to distinguish between an erosional feature or gully and a jurisdictional water, with potentially the only difference being the length of time that the features have existed.²⁰ This distinction is even more difficult with the inclusion of all ephemeral streams as tributaries. The PCA requests clarification of the distinction between these features to minimize confusion and subjective determinations. (p. 15-16)

Agency Response: See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.”

Newmont Mining Corporation (Doc. #13596)

- 8.406 1. Status under the Current Regulations

Some, but certainly not most, of the ephemeral drainages and intermittent streams on Newmont’s properties have been deemed jurisdictional by the Corps. In determining the jurisdictional status of these streams, in recent years, the Corps has relied on the framework set forth in the 2008 Guidance. Pursuant to that Guidance, streams that flow for less than three months per year (which would include most of the ephemeral drainages and intermittent streams on Newmont’s properties) are not considered per se jurisdictional. Rather, the Corps must determine on a case-by-case basis whether these streams, considered alone (and not in combination with other “similarly situated” streams in the area), have a significant impact on the chemical, physical, and biological integrity of a TNW. In making this determination, the Corps looks at the frequency and duration of flow of the drainage in question, the distance to the nearest TNW, evaporation and precipitation rates in the area, and other factors potentially relevant to whether the drainage in question significantly impacts a TNW. Importantly, pursuant to the 2008 Guidance, “small washes characterized by low volume, infrequent, or short duration flow,” would generally not be deemed jurisdictional waters. See 2008 Guidance at 1, 8, 11. This describes to a tee the vast majority of the ephemeral and intermittent drainages on Newmont’s properties. (p. 28-29)

Agency Response: Section I of the Technical Support Document, discusses the historic scope of the existing regulatory definition of waters of the United States. See the summary response for “Relevance of Flow Regime” in section 8.1.1 of this

RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Arizona Mining Association (Doc. #13951)

8.407 The “contribute flow” standard, particularly as applied to arid environments, fails to account for the fact that even when there might be a limited physical connection between an ephemeral wash and a TNW, the wash functions solely as a potential physical conveyance of water and potential sediment similar to other erosional features such as gullies and rills. However, under the proposed rule, gullies and rills are exempt while ephemeral washes, if determined to meet the definition of a tributary, will be subject to CWA jurisdiction. Remarkably, the agencies do not even attempt to provide any workable method for distinguishing between potentially jurisdictional tributaries and non-jurisdictional gullies and rills. Rather, the agencies generically suggest that gullies and rills are newer in geologic time and “typically lack an OHWM.” 79 Fed. Reg. at 22218. However, such a generic explanation is not workable or even meaningful for the arid West. As noted above, erosional channels/washes can form during a single “flashy” storm event in arid landscapes and appear to have OHWM indicators, even though the channel is newly created and not representative of “ordinary” flow. There is no logical reason or basis in the proposed rule for attempting to distinguish between dry desert washes in the arid West and exempt gullies and rills, making the proposed rule legally and scientifically flawed. (p. 13)

Agency Response: See the summary response for Section 8.4. See the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

8.408 Features with discontinuous OHWMs also are common in arid landscapes. Pursuant to the proposal (33 C.F.R. § 328.3(c)(5)), lack of a continuous OHWM does not apparently foreclose a presumed tributary relationship so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. In some cases, there may be a relatively clear connection between upstream and downstream portions of the same tributary despite intervening absence of an OHWM (e.g., where water is conveyed briefly through a culvert). In other cases, however, the connection may be less clear or nonexistent. One such example is a small channel on relatively steep slopes that subsequently enters a flat area and essentially dissipates as a defined channel. The small channel in this example evidences indicia of flow, and it could be regulated by the rule. There may be other channels with what the agencies consider to be an OHWM downstream of the point where the original channel dissipates, but there may not be any

true connection between the upstream and downstream features. In such a case, the channel that dissipates should not be considered a regulated tributary (or should qualify as an exempt gully or rill), but it is not clear if this would be the case under the proposal. (p. 12-13)

Agency Response: See the summary responses for Section 8.4 and 8.3.

Freeport-McMoRan Inc. (Doc. #14135 and Doc. #14135.1)

8.409 **VI. As applied to the arid west, the Proposed Rule would deem numerous gullies and rills to be categorically jurisdictional tributaries.**

The Proposed Rule purports to maintain the established practice of excluding gullies and rills from the scope of jurisdictional waters.⁵⁶² The Proposed Rule concludes that gullies and rills are not waters of the United States because “the agencies have by longstanding practice generally considered [these features] not to be ‘waters of the United States.’”⁵⁶³ As a result, under the Agencies’ formulation a key dividing line between jurisdictional and non-jurisdictional waters will be the point where a tributary becomes a gulley or a rill. The Proposed Rule recognizes the difficulty in determining where tributaries begin even in humid systems and specifically requests comment on how to distinguish between jurisdictional tributaries and non-jurisdictional features, such as gullies and rills.⁵⁶⁴

In the preamble to the Proposed Rule, the only differentiation that the Agencies seem to provide between jurisdictional tributaries and non-jurisdictional gullies and rills is that gullies and rills “typically lack an OHWM.”⁵⁶⁵ The preamble further notes that these features are distinguished because “time has shaped streams into geographic features distinct from gullies and rills.”⁵⁶⁶ Thus, it seems that the Agencies have determined that the distinction between jurisdictional and non-jurisdictional features should be drawn where it is possible to locate physical features that are indicative of the establishment of equilibrium conditions that create a tributary. However, the Corps’ own work in the arid west clearly demonstrates that the presence of ordinary high water marks in arid channels does not bear any relationship to anticipated present or future flows.⁵⁶⁷ Due to the highly erodible nature of soils in the arid west, a single flow event could cause erosion that looks like an “ordinary” high water mark, meaning that it is the result of an event that is far from ordinary.⁵⁶⁸ As a result, the Agencies logic in distinguishing between jurisdictional and non-jurisdictional features based on the presence of an “ordinary” high water mark does not hold in the arid west. The inevitable consequence of this fact is that the application of the Proposed Rule’s bright-line definition of tributaries will illegally assert jurisdiction over non-jurisdictional gullies and rills. In the absence of bright line criteria,

⁵⁶² 79 Fed. Reg. at 22,218.

⁵⁶³ *Id.*

⁵⁶⁴ *Id.* at 22,204.

⁵⁶⁵ *Id.* at 22,218.

⁵⁶⁶ *Id.*

⁵⁶⁷ Robert W. Lichvar et al., Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of “Waters of the United States” in Arid Southwestern Channels, EDRC/CCREL TR-06-5 (2006).

⁵⁶⁸ Technical Comments at 7.

we believe the Agencies can and should identify factors defining a sufficient flow to traditional navigable waters to be regulable, including magnitude, duration and frequency of flow[.] (Doc. #14135, p. 7-8)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.” In addition, see the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters. In addition, see summary response 8.1.2.

8.410 3. Tributaries and Gullies in the Proposed Rule

Anywhere on the face of the earth is hydrologically connected to oceans;⁵⁶⁹ during rain events even gutters on houses have a hydrologic connection to traditional navigable waters because they deliver water and any other materials to downstream waters. Thus, at the most basic, many features (such as gutters) are simply hydrologic conveyance features. Gutters, concrete ditches, pipes, etc. are similarly hydrologic connections to downstream waters, but are *inert* hydrologic conveyance features.

Other hydrologic conveyance features are formed by natural runoff: gullies, washes, arroyos, and rills for instance. These are not restricted to arid landscapes, as gullies and rills are also prominent in humid areas, particularly agricultural and deforested areas. Importantly, the proposed rule exerts jurisdiction over tributaries, but explicitly does not exert jurisdiction over gullies or rills. From the proposed rule [underline added]:

The term *tributary* means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section.

Based on this definition, the necessary features of a tributary are both

1. Discernible bed and banks and
2. an ordinary high water mark (OHWM)

Along with this definition is the fact that the federal rule excludes gullies and rills, which even though they act as a contributor of flow, sediment, and materials to downstream waters, are not considered tributaries, and thus not considered jurisdictional waters.

Section J below discusses in more detail the agencies’ proposed rule excluding specific waters and features from the definition of “waters of the United States.”

⁵⁶⁹ This is setting aside internally drained basins.

Of importance with respect to tributaries is the exclusion of gullies, rills, non-wetland swales, and certain ditches. These features are not considered tributaries under this proposed rule, even though rills and gullies and non-wetland swales (as described in Section J), may contribute flow to a tributary in systems with steep side slopes.

Agency Response: Exclusions for ditches and other features have been revised and clarified for the final rule. As a result, the agencies believe that most ditches that are not relocated tributaries or excavated in a tributary will not be jurisdictional waters of the United States. The exclusions also indicate that erosional features not meeting the definition of “tributary” will not be waters of the United States.

- 8.411 The agencies acknowledge the lack of clarity about tributaries and gullies several times in the new rule:

The agencies request comment on how they could provide greater clarity on how to distinguish between erosional features such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.

The agencies request comment on all aspects of the proposed definition of tributaries and in particular on whether and how this definition can be revised to provide increased clarity as to the distinction between jurisdictional tributaries, as defined, and nonjurisdictional features such as gullies, rills and non-wetland swales. The agencies seek comments on how to provide greater regulatory certainty as to which specific aquatic features are jurisdictional tributaries, and which are not. Commenters should explain how any suggestions are consistent with the Clean Water Act, applicable case law, and the scientific literature regarding connectivity of aquatic features.

Thus, based on the rhetoric of the proposed rule, it is important to more carefully constrain “ephemeral tributaries” and to assess the potential precision (or lack thereof) for “Ordinary High Water Marks” in arid landscapes, as such marks are a necessary component in the proposed rule for distinguishing between a “tributary” and a “gully” or “rill.” It is also important to suggest mechanisms by which federal agencies can provide greater certainty in their definitions of these different features, as we will see that Ordinary High Water Marks are not reliable indicators of frequency or magnitude of flows, or of hydrologic connectivity, in arid landscapes. (Doc. #14135.1, p. 4-6)

Agency Response: See the summary response for Section 8.4. In addition, see the summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly the subsection on jurisdiction over intermittent and ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. The Corps and EPA also plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the arid west, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254>

[/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx](#) for updates.

8.412 5. Implications of Proposed Rule for Arid Landscapes

In sum, due to the processes which shape arid channels, it is unlikely that snapshot indicators will be applicable for identifying OHWM in arid landscapes, and thus rapidly assessing the extent of jurisdictional waters. Rather than relying on what the Corps' own laboratories find to be inconsistent indicators, it is more viable and defensible to develop systematic analyses across a range of relevant processes from which to assess jurisdictional waters or, more preferably and more realistically, to use empirical data to establish hydrological connections, along with establishing relationships between hydrology and geomorphic patterns, e.g., frequency-magnitude of flow events and their relationships with geomorphic patterns and forms on the landscape. Given the wide variability from site-to-site (see case study below), such empirical data would need to be collected at fairly local scales while such relationships are being developed and tested to be applicable locally.

The current approach to mapping claimed tributaries based on the OHWM⁵⁷⁰ does not appear to be in conflict with the proposed rule, nor do there appear to be aspects of the proposed rule that would merit a change in the current regulatory approach to jurisdictional waters as has been used in the Los Angeles District. Instead, in the absence of reliable bright line indicators, the practice appears to be that the “significant nexus” test is used to distinguish, somewhat arbitrarily, between claimed “tributaries” without flow and those where flow may be more defensibly supported. In fact, given the admitted and documented uncertainty by Corps researchers as described above, *the current reliance in the Approved Jurisdictional Determination on OHWM may be unmerited, and where OHWMs are present, represent too expansive of an extent of jurisdictional waters.* At a minimum, the agencies' reliance on OHWM in arid landscapes is a tenuous basis for distinguishing tributaries from gullies or rills, and thus a tenuous basis for asserting jurisdiction over a particular feature. When OHWMs are identified, we can conclude that any jurisdictional waters—meaning waters in which there is an ordinary occurrence of flow—are a geographic subset of that area, and likely a very small subset. That is, certain waters with an OHWM should not be jurisdictional. As a result, both the current approach in the Los Angeles District and the proposed definition of tributary will result in a mapped identification of tributary and determination of jurisdictional waters that is too broad.

Distinguishing between gullies and tributaries for regulatory purposes in arid landscapes will be plagued with uncertainty. The Corps recognized this in 2004, when they stated that “Whatever approach is taken to delineate the OHWM [in arid regions], the transitory nature of desert rivers must be recognized and the flexibility provided to adjust OHWM delineations over time.”⁵⁷¹

In lieu of readily available rapid indicators, a refined regulatory approach to the determination of jurisdictional waters in the arid west requires data at the relevant scale

⁵⁷⁰ Approved Jurisdictional Determination Form, Los Angeles District, as of September 2013.

⁵⁷¹ Page 79 in Lichvar and Wakeley, 2004.

(i.e., at the scale of small, truly headwater tributaries). Moreover, in these uncertain arid systems, there should be greater reliance on empirical data rather than surrogate indicators for the assertion of jurisdiction. Arid landscapes are not formed by processes similar to humid landscapes and should not be regulated as if they were. (Doc. #14135.1, p. 9-10)

Agency Response: See the summary responses for Sections 8.4 and 8.1.2. Scientists at the U.S. Army Corps of Engineers, Engineer Research and Development Center perform research aimed at improving OHWM delineation practices across the country. Two regional OHWM delineation manuals and a number of supporting research and technical reports have been developed to date. In addition, see the TSD section 7.A.

The Mosiac Company (Doc. #14640)

- 8.413 An additional discrepancy in the proposed rule exists in distinguishing ephemeral and intermittent tributaries (which are jurisdictional under the proposed rule) from gullies, rills, and non-wetland swales (spelled out as non-jurisdictional under the proposed rule). Both gullies and rills are defined in the proposed rule as erosional features that typically only carry water during precipitation events (79 Fed. Reg. at 22,218-22,219). They are typically deeper than they are wide, with very steep banks, formed by longitudinal (incising) erosional forces and lack an ordinary high water mark (OHWM) (79 Fed. Reg. at 22,218). Additionally, wetland swales are defined as shallow, non-channelized trough-like depressions that carry water mainly during rainstorms or snowmelt (79 Fed. Reg. at 22,219). In contrast, streams (this term is presumably used interchangeably with tributary) are characterized by the presence of bed and banks and an OHWM (Fed. Reg. at 22,219). Small, intermittent, and ephemeral conveyances are similar to gullies, rills, and non-wetland swales in that they also only carry water following rain events or snowmelt. The only difference between them, according to the agencies' definitions of each, is the presence of a bed, bank, and OHWM, which is largely a function of the geography, topography, and soil composition where they are located. However, proposed rule makes a categorical distinction that water features with a bed, bank, and OHWM are jurisdictional, and those without are not. No scientific literature or justification is provided for why the presence of a bed, bank, and OHWM determines that a given water feature meets the significant nexus standard for jurisdiction and affects the chemical, physical, and biological integrity of traditional navigable waters. rills, and non-wetland swales have been excluded from jurisdiction based on longstanding practice by the agencies (79 Fed. Reg. at 22,218). In determining that these features are not waters of the U.S., the agencies previously have referenced the *Riverside Bayview* and the plurality *Rapanos* Supreme Court decisions wherein the Court gave deference to the agencies given the difficulty in determining where waters end, and acknowledged that certain features were not the focus of the CWA (79 Fed. Reg. at 22,218). Given that the agencies have long held that gullies, rills, and non-wetland swales are categorically non-jurisdictional, and small, intermittent, and ephemeral systems are functionally identical (differing only in the presence of a bed, bank, and OHWM according to the proposed rule), there is no scientific or legal basis to assert that small, intermittent, and ephemeral conveyances should be jurisdictional by rule. (p. 21-22)

Agency Response: See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

National Mining Association (Doc. #15059)

8.414 To the extent the Agencies move forward with the current proposal, they must adopt the following changes in any final rule:

... 6) The Agencies should revise their approach to ephemeral waters by:

a. Clarifying in the regulatory text, preamble, and appendices that if an ephemeral water does not meet the full definition of “tributary” contained in the rule, it is excluded from CWA jurisdiction and cannot be brought in as jurisdictional under an “adjacency,” “other waters” or any other determination.

b. Should the Agencies continue to categorically assert jurisdiction over all ephemeral channels meeting the definition of “tributary” – which as discussed below NMA believes is not supported by the science – the Agencies should require that an ephemeral channel have a bed, bank, and all three primary ordinary high water mark (OHWM) indicators from the Corps’ August 2014 guidance,⁵⁷² in addition to contributing flow to an (a)(1) through (a)(4) water, to be considered a tributary. Additionally, the Agencies should require that all three indicators be continuous from the confluence of the ephemeral channel and intermittent or perennial channel up to its delineated upstream boundary – where all three indicators are no longer perceptible upstream, jurisdiction must end.

c. Developing criteria for arid regions - including empirical data evidencing flow (magnitude, duration, and frequency to traditional navigable waters), distance from traditionally navigable waters, etc. – that could be used as possible additional considerations in distinguishing between ephemeral channels and erosional features in such regions.

... (p. 3, 5-6)

Agency Response: Paragraph (b) of the final rule clearly states that all excluded features outlined therein, including most ditches and all erosional features such as gullies, rills and non-wetland swales, that do not meet the definition of “tributary,” are not jurisdictional waters of the United States, even where they otherwise meet the terms of paragraph (a), which defines “waters of the United States.” The definition of “tributary” in the final rule requires that flow must be of sufficient

⁵⁷² Mersel K. Matthew, et al., August 2014, “A Guide to Ordinary High Water Mark Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coastal Region of the United States.”

volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. As described in Section IV(F) of the preamble to the final rule, the upper limit of a tributary is the point where a bed and banks and another indicator of OHWM cease to be identifiable. See the summary response for Section 8.4. Scientists at the U.S. Army Corps of Engineers, Engineer Research and Development Center have been performing research aimed at improving OHWM delineation practices across the country for over a decade. Two regional OHWM delineation manuals and a number of supporting research and technical reports have been developed to date.

8.415 III. Tributaries and Erosional Features.

In the preamble to the proposed rule, the Agencies recognize the difficulty in distinguishing between non-jurisdictional ephemeral features (gullies, rills, non-wetland swales) and ephemeral tributaries that are per se jurisdictional.⁵⁸ Likewise, a recent guidance document issued by the U.S. Army Engineer Research and Development Center (ERDC) declares that “ordinary high water mark (OHWM) delineation in non-perennial (i.e., intermittent and ephemeral) streams can be especially challenging.”⁵⁹ NMA members are well aware of these difficulties and share the widespread concern over the Agencies’ assertion of jurisdiction over all ephemeral tributaries. NMA provides the following in response to the Agencies’ request for comments on how they might provide additional clarity concerning how to distinguish between erosional features and tributaries:

A. Ephemeral Waters that are Not Tributaries Should be Expressly Excluded from Jurisdiction

In recent weeks, the Agencies have indicated that if an ephemeral water does not meet the definition for “tributary” contained in the rule, it is excluded from CWA jurisdiction. In other words, if the channel (defined by a bed, banks and OHWM) of an ephemeral drainage does not physically connect to a tributary system and contribute flow to an (a)(1) through (a)(4) water, it is not a tributary, and it cannot be brought in as jurisdictional under an “adjacency” or “other waters/significant nexus” determination.

While NMA supports this position, the regulatory text does not make this point clearly, and there are several statements in the preamble that appear to directly contradict it. The Agencies should add a sentence to the definition of “tributary” that unambiguously states that ephemeral waters that do not meet the definition of “tributary” are not “waters of the United States” under either the “adjacent” or “other waters” provisions. Additionally, the Agencies must revise several sections of the preamble and appendices to reflect their intent and avoid confusion. The highlighted language in the paragraphs below needs to be clarified to explicitly state that ephemeral waters not meeting the definition of “tributary” cannot be jurisdictional under other sections of the proposed rule, including those pertaining to “adjacency” and “other waters” :

P. 22204 (emphasis added) –

Waters that do not contribute flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of the proposed regulation are not considered jurisdictional as tributaries under the CWA. **However, even if**

such waters are not “tributaries,” they may be jurisdictional under other paragraphs of the proposed rule.

Pgs. 22,211 and 22,212 (emphasis added) –

Of additional concern was that the existing descriptive list of types of “other waters” includes some waters that would be jurisdictional under one of the proposed categories of “waters of the United States” that would be jurisdictional by rule, such as tributary streams. The agencies want to avoid questions of whether an intermittent stream that meets the definition of tributary also needs a separate significant nexus analysis. Under the proposed rule, that tributary stream does not require the significant nexus analysis. Removing the list of water types does not imply that any of the waters listed in the existing regulation are never jurisdictional under the proposed rule. **When one of the waters on the current enumerated list does not fall under a proposed category for jurisdiction (for example, adjacent waters under (a)(6) or tributaries under (a)(5)), those waters would be jurisdictional if found to have a significant nexus under proposed paragraph (a)(7) on a case- specific basis.**

Appendix A (emphasis added) –

Where waters are not considered tributaries (e.g. waters in a solely intrastate closed basin that does not contain a traditional navigable water, interstate water, or a territorial sea, or a connection thereto) or where waters, including wetlands, do not meet the proposed regulatory definition of adjacent, **they should be evaluated to determine whether they are (a)(7) waters.**

B. Additional Language is Needed to More Clearly Differentiate Between Jurisdictional Ephemeral Tributaries and Non-Jurisdictional Ephemeral Features

In addition to clarifying that ephemeral features not meeting the definition of “tributary” are not jurisdictional under the rule, the Agencies should also include additional considerations for distinguishing between ephemeral tributary streams and non-jurisdictional ephemeral features. Specifically, in light of the admitted difficulties in differentiating between tributaries and, for example, gullies and rills, NMA recommends that the Agencies require the presence of a bed, bank, and all three primary indicators from the 2014 Corps OHWM Guidance.⁵⁷³ In addition, we recommend that these indicators must be continuous from the confluence of the ephemeral tributary and intermittent or perennial channel up to its delineated upstream boundary to assert federal jurisdiction over an ephemeral stream. In other words, where the three indicators are no longer perceptible upstream, jurisdiction must end. Furthermore, because OHWM is not an appropriate indicator of flow in certain arid regions, NMA recommends that the Agencies establish some level of flow-based metrics, including magnitude, duration and frequency of flow to traditional navigable waters, for use as possible additional

⁵⁷³ Mersel K. Matthew, et al., August 2014, “A Guide to Ordinary High Water Mark Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coastal Region of the United States.”

considerations in distinguishing between ephemeral channels and erosional features that could more clearly guide regulatory determinations in such regions.⁵⁷⁴

Pursuant to the Agencies' express request for comment on this issue, this approach would help ensure that gullies, rills, and non-wetland swales are excluded from inappropriate jurisdictional designations as contemplated by the proposed rule. However, as discussed in detail in WAC's comments, there is not a sound scientific basis for establishing the requisite "significant nexus" to assert jurisdiction over all ephemeral features with a bed, bank, and OHWM that contribute flow to an (a)(1) through (a)(4) water, even where the three primary OHWM indicators are continuously present. NMA's recommendations in this section should not be interpreted as endorsing the Agencies' contentions in this regard, but rather address the specific question of how to better differentiate between ephemeral drainages and rills, gullies and non-wetland swales should the Agencies nevertheless categorically assert jurisdiction over all ephemeral channels that meet the definition of "tributary."

As described in more detail in the attached comments from GEI Consultants, one of the primary indicators of an ephemeral channel, along with a bed and banks, is the presence of an OHWM. As explained in the Corps Regulatory Guidance Letter (RGL) 05-05, the OHWM is determined by identifying those physical characteristics that correspond to the line on the shore established by fluctuations of water.⁵⁷⁵ The Corps itself admits, however, that OHWM determinations are complex and difficult with respect to perennial channels, and are even more challenging in the context of inherently unstable ephemeral channels, as OHWM indicators rely on a certain amount of geomorphic stability. As such, a rigorous set of criteria is needed to provide consistency in such determinations where, as is the case in the proposed rule, such determinations are central to establishing federal CWA jurisdiction.

To help minimize subjectivity in making OHWM determinations in the context of ephemeral channels, and thus increase the clarity and regulatory certainty that the rule aims to provide, all three primary OHWM indicators proposed by the Corps – namely, 1) a break in slope; 2) a change in bed sediment; and 3) vegetation patterns – must be present in a continuous fashion from the confluence of the ephemeral and seasonally inundated channels back up to the ephemeral channel's upstream boundary. Without the presence of these continuous, perceptible indicators, it is unclear how the Agencies would distinguish between the most dynamic and episodic landscape features, including gullies and rills, and actual tributaries with an established landscape position and flow pattern. Additionally, as compared to current regulatory practice,⁵⁷⁶ if, as suggested in the August 2014 OHWM Guidance, only one – or even no – primary indicator is required to establish an OHWM, jurisdiction would drastically expand, which the Agencies repeatedly state is not the intent of the rule. Furthermore, in certain arid regions with highly erodible soils and naturally sparse vegetation, even all three indicators can occur after a single storm event. Additional criteria in such regions could therefore help

⁵⁷⁴ NMA is not recommending the development of such metrics for non-arid regions.

⁵⁷⁵ See Regulatory Guidance Letter, 05-05, Ordinary High Water Mark Identification, December 7, 2005.

⁵⁷⁶ See RGL 05-05 at 3 (Corps clearly stating that, to the maximum extent practicable, more than one characteristic should be present).

distinguish between erosional features and ephemeral tributaries, including empirical data evidencing flow (magnitude, duration, and frequency to traditional navigable waters), distance from traditionally navigable waters, etc.

Finally, NMA has substantial concerns with respect to the Corps' development of the recent OHWM guidance documents outside the scope of the "waters of the United States" rulemaking process in light of the fact that the information contained in those documents will significantly impact the implementation of the final rule. Whether a tributary is a water of the United States under the proposed rule depends in large part on the presence of an OHWM. Likewise, under existing regulations, OHWM is used to place limits on the extent of jurisdiction.⁵⁷⁷ Understanding how an agency identifies an OHWM is therefore critical to understanding the extent of federal CWA jurisdiction.⁵⁷⁸ Inconsistent with past agency practice,⁵⁷⁹ the new policy was developed without any public awareness and quietly posted on the Corps' website. Such action is inconsistent

⁵⁷⁷ See 33 C.F.R. 328.4.

⁵⁷⁸ See, e.g., RGL 05-05, issued pursuant to a Memorandum of Agreement between the Corps and EPA.

⁵⁷⁹ The Corps' failure to provide the regulated public with any advance notice that the policies concerning how to determine OHWM were being updated is inconsistent with the Corps' past revisions of similar technical documents associated with delineating the limits of CWA jurisdiction. See, e.g., U.S. Army Corps of Engineers Alaska District, *Special Public Notice: Draft Alaska Regional Supplement to the 1987 Wetland Delineation Manual* (Public Notice No. SPN 2005-10) (June 28, 2005); U.S. Army Corps of Engineers Alaska District, *Special Public Notice: Final Version of the Alaska Regional Supplement to the 1987 Wetland Delineation Manual* (Public Notice No. SPN-2006-445-FINAL) (Oct. 26, 2007); U.S. Army Corps of Engineers Portland District, *Special Public Notice: Field Testing the Arid West Supplement: Draft Arid West Regional Supplement to the 1987 Wetland Delineation Manual* (Sept. 2, 2005); U.S. Army Corps of Engineers Baltimore District, *Special Public Notice: Publication and One-Year Trial Implementation Period of the Atlantic and Gulf Coastal Plain Interim Regional Supplement to the 1987 Wetland Delineation Manual* (Public Notice No. 08-77) (Dec. 9, 2008); U.S. Army Corps of Engineers Philadelphia District, *Special Public Notice: Final Atlantic and Gulf Coastal Plain Regional Supplement to the 1987 Wetland Delineation Manual* (Public Notice No. CENAP-OP-R) (Dec. 20, 2010); U.S. Army Corps of Engineers, *Environmental Assessment and Finding of No Significant Impact for the Caribbean Regional Supplement to the 1987 Wetland Delineation Manual* at 3 (Undated); U.S. Army Corps of Engineers Philadelphia District, *Public Comments and Responses: Draft Interim Eastern Mountains and Piedmont Regional Supplement to the 1987 Corps of Engineers Wetland Delineation Manual* at 1 (Undated); U.S. Army Corps of Engineers Philadelphia District, *Special Public Notice: Final Eastern Mountains and Piedmont Regional Supplement to the 1987 Corps of Engineers Wetland Delineation Manual* (Public Notice No. CENAP-OP-R) (May 4, 2012); U.S. Army Corps of Engineers Galveston District, *Public Notice: Request for Public Input on Proposed Wetland Indicators and Data Collection Procedures for Draft Great Plains Regional Supplement to the 1987 Wetland Delineation Manual* (Sept. 27, 2006); U.S. Army Corps of Engineers, *Environmental Assessment and Finding of No Significant Impact for the Hawaii and Pacific Islands Regional Supplement to the 1987 Wetland and Delineation Manual* at 4 (May 6, 2009); U.S. Army Corps of Engineers Louisville District, *Public Notice: Draft Midwest Regional Supplement to the 1987 Wetland and Delineation Manual* (Public Notice No. LRL-2007-785-asb) (June 26, 2007); U.S. Army Corps of Engineers, *Environmental Assessment and Finding of No Significant Impact for the Northcentral and Northeast Regional Supplement to the 1987 Wetland and Delineation Manual* at 3 (Undated); U.S. Army Corps of Engineers Philadelphia District, *Public Notice: Announcement of Version 2.0 of the Northcentral and Northeast Regional Supplement to the Corps of Engineers Delineation Manual* (Public Notice No. CENAP-OP-R) (Feb. 14, 2012); U.S. Army Corps of Engineers Omaha District, *Special Public Notice: Notice of Availability and Request for Public Comments: Draft Western Mountains & Valleys Regional Supplement to the 1987 Wetland Delineation Manual* (Apr. 20, 2007).

with the concepts of due process and transparency in rulemaking.⁵⁸⁰ To remedy this problem, the Agencies must, prior to the promulgation of a final rule, officially notice the revised OHWM criteria as part of the current rule-making proceedings and provide the public with the opportunity to comment on them and understand their potential implications with respect to the scope of CWA jurisdiction. (p. 26-30)

Agency Response: Paragraph (b) of the final rule clearly states that all excluded features outlined therein, including most ditches and all erosional features such as gullies, rills and non-wetland swales that do not meet the definition of “tributary,” are not jurisdictional waters of the United States, even where they otherwise meet the terms of paragraph (a), which defines “waters of the United States.” The definition of “adjacent waters” has been revised and clarified in the final rule, and specific limitations have also been placed on the evaluation of “case specific” waters. See sections IV(G) and IV(H) of the preamble, respectively. As described in Section IV(F) of the preamble to the final rule, the upper limit of a tributary is the point where a bed and banks and another indicator of OHWM cease to be identifiable. See the summary response for Section 8.4. The term “ordinary high water mark” has been defined in Corps regulations since 1986, and used by Corps Districts nationwide to determine the lateral limits of jurisdiction over non-tidal water bodies for the CWA section 404 permitting program. Scientists at the Corps’ Engineer Research and Development Center have been performing research aimed at improving OHWM delineation practices across the country for over a decade. Two regional OHWM delineation manuals and a number of supporting research and technical reports have been developed to date. See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions.

Halliburton Energy Services, Inc. (Doc. #15509)

- 8.416 The proposed definition of tributary is an expansion of jurisdiction from current practice that has meaningful consequences. For example, in the arid west, under current application of the regulations most ephemeral drainages, ditches, and depressions do not require a jurisdictional determination at all - in practice, the Corps does not extend jurisdiction to these features. Perhaps the exclusions for gullies, swales and other erosional features will be appropriately expansive, but the rule and the preamble lack that clarity. For other features, photographic documentation of breaks in the OHWM of

⁵⁸⁰ See *Portland Cement Assoc. v. Ruckelshaus*, 486 F. 2d 375, 385 (U.S. App. D.C. 1973)(“It is not consonant with the purpose of a rule-making proceeding to promulgate rules on the basis of inadequate data, or on data that, critical degree, is known only to the agency.”)

drainages are regularly used to establish the limits of federal jurisdiction, limits that are currently recognized by the Corps. (p. 4)

Agency Response: Section I of the Technical Support Document, discusses the historic scope of the existing regulatory definition of waters of the United States. See summary response for “Relevance of Flow Regime” in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The exclusions in paragraph (b) of the final rule have been revised to clearly exclude most ditches and all erosional features such as gullies, rills and non-wetland swales that do not meet the definition of “tributary,” from consideration as waters of the United States.

Alpha Natural Resources, Inc. (Doc. #15624)

8.417 **V. THE AGENCIES SHOULD PROVIDE A CLEAR METHODOLOGY TO DIFFERENTIATE TRIBUTARIES FROM NON-JURISDICTIONAL EROSIONAL FEATURES IN APPALACHIA**

The preamble to the proposed rule acknowledges the practical difficulties of distinguishing jurisdictional ephemeral tributaries⁵⁸¹ from non-jurisdictional erosional features such as gullies. See 79 Fed. Reg. 22,218-19. Currently, Corps’ personnel throughout Appalachia exhibit internal inconsistency when determining whether features are either jurisdictional streams or non-jurisdictional gullies. This lack of consistency places a considerable burden on Alpha and others seeking jurisdictional determinations in the region. Accordingly, the agencies should clarify that features that fail to satisfy all of the elements of a “tributary” are not per se jurisdictional.

The proposed rule defines a “tributary” as a water that 1) has a bed and banks and an ordinary high water mark; and 2) contributes flow, either directly or through another water, to downstream navigable waters. 79 Fed. Reg. 22,263. To help the Corps’ field inspectors in Appalachia more accurately and consistently distinguish between jurisdictional “tributaries” from non-jurisdictional features, Alpha encourages the agencies to expand the list of criteria that must be present for a feature to qualify as a “tributary.”

While a “tributary” must “contribute flow,” the mere presence or absence of a bed and banks and an ordinary high water mark, without more, is often insufficient to allow headwater tributaries to be differentiated from non-jurisdictional erosional features. Alpha encourages the agencies to require additional indications of regular flow to be present in order for a feature to be deemed a “tributary.” For example, features within which vegetation is growing or plant litter from previous years is still present and undisturbed do not “contribute flow” to downstream waters in sufficient quantities or with sufficient regularity to warrant federal regulation.

⁵⁸¹ Alpha supports the position of the Waters Advocacy Coalition that the agencies lack a sound scientific basis for their determination that any ephemeral feature satisfying the proposed definition of a “tributary” has a per se “significant nexus” to traditional navigable waters. Alpha’s comments regarding how the agencies can better differentiate erosional features from ephemeral tributaries is not an endorsement of the agencies’ position that all ephemeral tributaries are per se jurisdictional.

A water feature’s substrate can also provide insight into whether it is a tributary or a non-jurisdictional erosional feature. As the preamble explains, “time has shaped streams into geographic features distinct from gullies and rills.” 79 Fed. Reg. 22,263. For this reason, Appalachian streams that regularly carry flow and have been doing so for many years typically contain substrate consisting of sand, fine gravel, or cobble, while recently-created erosional features have substrates of exposed soil. Similarly, tributaries that were established naturally over time follow the natural topography of the land while erosional features are more recently formed, often as a byproduct of an identifiable disturbance to the landscape.

Finally, the agencies should clarify that even when a water feature possesses the necessary attributes of a jurisdictional tributary, this “tributary” classification terminates at the point upstream where those necessary features are no longer clearly definable. (p. 12-14)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.” As described in Section IV(F) of the preamble to the final rule, the upper limit of a tributary is the point where a bed and banks and another indicator of OHWM cease to be identifiable. As the commenter highlights, substrate type is used in the identification of OHWM, however it is primarily evaluated by comparing it to the banks and surrounding soil.

Dominion Resources Services, Inc. (Doc. #16338)

8.418 ...To the extent the agencies move forward with the proposal, we make the following recommendations:

...

- The proposed rule explicitly exempts “gullies and rills” while considering ephemeral tributaries as jurisdictional. The preamble recognizes the difficulty in distinguishing between these two categories of features in the field. To the extent that the rule considers ephemeral features WOTUS, we request the rule and preamble clearly establish how these features will be differentiated. (p. 7-8)

...

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume,

frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.”

Alameda County Cattlewomen (Doc. #8674)

8.419 It is also necessary for the agency to articulate their definition of "ditches," and provide a clear indication of the difference between a ditch and a gully. The agencies exclude gullies, but there are many features on the landscape where it is unclear whether the feature will be a regulated ditch, or an unregulated gully." The agencies explanation in the preamble regarding gullies is inadequate for landowners to adequately distinguish them from regulated tributaries." The agencies' explanation says that gullies are younger than streams and lack an OHWM. First, how do agencies' propose that a landowner will know the age of the stream/gully and at what age does the gully become a stream? (p. 11)

Agency Response: See the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark.

Montana Farm Bureau Federation (Doc. #12715)

8.420 ...what qualifies as an "erosional feature." The Agencies claim erosional features will be non-jurisdictional, unlike jurisdictional ephemeral tributaries. Unfortunately, this rule does not provide a way for farmers, ranchers, or anyone else really, a way to determine the difference. Without clarity, farmers and ranchers are forced to either A) assume that any ephemeral drainage that carries any amount of water, no matter how much, how little, or for any period of time would be considered a jurisdictional "tributary," not as an erosional feature, which common sense would lead one to formerly believe, B) ask the Corps for a jurisdictional determination on what could be countless low spots, which could be a time consuming and tedious process, or C) take a chance that any of the regular day to day farming and ranching practices that must be carried out on or near these locations could lead to an "unlawful" discharge carrying penalties much too great to be absorbed by any farm or ranch. Farmers and ranchers consider water quality to be a very important part of their operations and desire to do the right thing in all situations. They simply deserve clarity and ability to carry out their farming and ranching practices in order to grow food for the world. They should not be forced to treat land as water. (p. 3)

Agency Response: Erosional features are described in section IV(I) of the preamble. Also see the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.” The definition of “tributary” in the final rule

requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. In addition, all statutory exemptions in the CWA, including those exempting normal farming, silviculture and ranching activities from the need to obtain authorizations under CWA section 404, remain in effect and unchanged by the final rule.

- 8.421 4. If the Agencies persist in promulgating a rule that allows jurisdiction over ephemeral waterways, the Agencies must distinguish between ephemeral waterways and erosional features and clarify when ephemeral waterways are jurisdictional.
- a. The Proposed Rule should state that ephemeral waters are fed in part by a natural groundwater source, whereas erosional features are fed solely by surface run-off.
 - b. The Proposed Rule should clarify that no erosional features will be regulated.
 - c. The Proposed Rule should clarify that ephemeral waters are only jurisdictional while they contribute flow to Section (a)(1) through (a)(4) waters, meaning the bed and banks of a dry ephemeral waterway would not be regulated. (p. 8)

Agency Response: The final rule asserts that ephemeral features meeting the definition of “tributary” are jurisdictional. The definition of “tributary” does in fact require that the water “contributes flow, either directly or through another water (including an impoundment identified in paragraph (a)(4)...), to a water identified in paragraphs (a)(1) through (3)...” In contrast, all ephemeral erosional features not meeting the definition of “tributary” are not waters of the United States, as indicated in paragraph (b) of the final rule. Longstanding agency practice defines ephemeral streams as those that have flowing water only in response to precipitation events in a typical year, and are always above the water table.

North American Meat Association and American Meat Institute (Doc. #13071)

- 8.422 ...[T]he preamble discusses the challenge attendant to distinguishing between tributaries and erosional features, such as gullies, which are categorically excluded from jurisdiction.⁵⁸² Both erosional features and ephemeral drainages are small features that typically only carry water during precipitation events, raising questions about how regulators will distinguish between ephemeral drainages and gullies or rills, resulting in arbitrary and inconsistent decision-making. (p. 6-7)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks

⁵⁸² 79 Fed. Reg. at 22,218.

sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.”

Kennewick Irrigation District, Kennewick, Washington (Doc. #13571)

- 8.423 A clear definition needs to be included in the final version of the rule for "gullies", "rills", and "non-wetland swales." The rule should recognize that in irrigated lands, features that could be considered to be "gullies", "rills" and "non-wetland swales" were once formerly dry in a natural state, but now commonly convey irrigation water due to operational spills and seepage. The rule should then continue to clearly exempt these features. (p. 5)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies believe that erosional features lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.” In addition, see the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule.

Kansas Agriculture Alliance (Doc. #14424)

- 8.424 Tributaries Cannot be Categorically Included in WOTUS

...

With this illegal and all-encompassing definition of tributary, Kansas farmers, ranchers, and agricultural service providers will be forced to obtain section 404 and 402 CWA permits to conduct ordinary farm activities like applying fertilizers and pesticides or constructing and maintaining farm ponds. As written any erosional feature in a field or pasture that has a bed, bank, and ordinary high water mark (OHWM) (i.e. “clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means”)⁵⁸³ means a farmer or rancher could face a draconian civil penalty for ordinary farm activities. Whether or not this is the agencies “intent” is irrelevant given the plain language of the proposed rule, especially when considered with the citizen suit sections of the CWA.⁵⁸⁴ (p. 4)

⁵⁸³ 33 C.F.R. § 328.3(e).

⁵⁸⁴ See 33 U.S.C. § 1365 (allowing a civil action by “any person”).

Agency Response: The agencies disagree that tributaries cannot be categorically considered waters of the United States. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. Section I of the Technical Support Document discusses the legal basis of the final rule, including consistency with the statute and Supreme Court decisions. The agencies believe that erosional features, such as gullies, rills and non-wetland swales, lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark that are required under the definition of "tributary." The final rule excludes most ditches and all erosional features such as gullies, rills and non-wetland swales that do not meet the definition of "tributary." In addition, artificial lakes and ponds created in dry land and used primarily for such uses as stock watering, irrigation, etc. are also explicitly excluded. Finally, all statutory exemptions in the CWA, including those exempting normal farming, silviculture and ranching activities from the need to obtain authorizations under CWA section 404, remain in effect and unchanged by the final rule.

Georgia Paper & Forest Products Association (Doc. #14924)

8.425 The impacts of the proposed rule that we specifically draw your attention to include the following.

...

5) Ditches, gullies, rills, and ephemeral streams should only be covered by the rule as jurisdictional waters if they also meet the definition of wetlands, as discussed above, i.e. they meet all three of the wetlands criteria in the 1987 USACE guidelines. (p. 2, 3)

Agency Response: The agencies disagree. Gullies and rills are in fact explicitly excluded from consideration as waters of the United States in the final rule. Paragraph (b) of the rule also explicitly excludes most ditches that are not relocated tributaries or excavated in tributaries. In contrast, ephemeral streams meeting the definition of "tributary" are waters of the United States. See summary response for "Relevance of Flow Regime" in section 8.1.1 of this RTC, particularly subsections on jurisdiction over intermittent and ephemeral waters and the legality of asserting jurisdiction over ephemeral waters. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion.

North Carolina Farm Bureau Federation (Doc. #15078)

8.426 The proposed rule fails to provide a meaningful way to distinguish "erosional features," which the Agencies claim will be non-jurisdictional, from jurisdictional ephemeral tributaries. The Agencies explain:

Rills are less permanent on the landscape than streams and typically lack an OHWM, whereas gullies are younger than streams in geologic age and also typically lack an OHWM; time has shaped streams into geographic features distinct from gullies and rills. The two main processes that result in the formation of gullies are downcutting and headcutting, which are forms of longitudinal (incising) erosion. These actions ordinarily result in erosional cuts that are often deeper than they are wide, with very steep banks, often small beds, and typically only carry water during precipitation events. The principal erosional processes that modify streams are also downcutting and headcutting. In streams, however, lateral erosion is also very important. The result is that streams, except on steep slopes or where soils are highly erodible, are characterized by the presence of bed and banks and an OHWM as compared to typical erosional features that are more deeply incised.

(79 Fed. Reg. at 22,218-19 (citations omitted)). Explanations such as this are worse than unhelpful to the regulated public, whose land features will be deemed to be "tributaries" or "erosional features" based on the discretion and subjective judgment of the Agencies' staff. The proposal requests comment on how the Agencies could provide "greater clarity" on how to distinguish erosional features from ephemeral tributaries and requests comment on how to distinguish swales from ephemeral tributaries **If the rule is revised, the way to provide more clarity in this case is to state that no ephemeral streams, ephemeral features or ephemeral waters of any kind are "waters of the US", thereby eliminating the need to distinguish erosional features and swales from ephemeral tributaries.** (p. 7-8)

Agency Response: The agencies disagree that ephemeral streams, waters and features should be categorically excluded from waters of the United States. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. The agencies believe that erosional features, such as gullies, rills and non-wetland swales, lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark, which are required under the definition of "tributary." The final rule excludes most ditches and all erosional features such as gullies, rills and non-wetland swales that do not meet the definition of "tributary." See the summary response for Section 8.4, particularly the sub-section titled, "Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale."

Missouri Farm Bureau Federation (Doc. #15224)

8.427 ...the proposed rule fails to provide a meaningful way to distinguish "erosional features," which the Agencies claim will be non-jurisdictional, from jurisdictional ephemeral tributaries. As a result, farmers will be forced to either (1) presume that an ephemeral drainage that carries water only when it rains is a jurisdictional tributary, or (2) seek a jurisdictional determination from the Corps, or (3) take a chance that their activities near

or in such features may result in unlawful discharges carrying civil penalties of up to \$37,500 a day. This is not clarity. (p. 3)

Agency Response: The agencies believe that erosional features, such as gullies, rills and non-wetland swales, lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark that are required under the definition of “tributary.” The final rule excludes most ditches and all erosional features such as gullies, rills and non-wetland swales that do not meet the definition of “tributary.” Finally, all statutory exemptions in the CWA, including those exempting normal farming, silviculture and ranching activities from the need to obtain authorizations under CWA section 404, remain in effect and unchanged by the final rule

National Alliance of Forest Owners (Doc. #15247)

8.428 **B. The Agencies Should Expand the Exclusions for Erosional Features to Cover Ephemeral Drainages.**

The proposed rule categorically excludes several erosional features (gullies, rills, and non-wetland swales) from the definition of “waters of United States,”⁵⁸⁵ and NAFO agrees that these features should remain non-jurisdictional. The Agencies should extend the exclusion to cover ephemeral drainages on the same grounds. Even the Agencies seem to acknowledge the similarities between these features and the difficulty in distinguishing between excluded erosional features and jurisdictional tributaries. Yet, the Agencies are unable to articulate a meaningful justification for the differential treatment apart from noting the absence of an ordinary high water mark in the excluded features.⁵⁸⁶ But the ordinary high water mark concept has long befuddled regulators and is not a reliable basis for distinguishing between jurisdictional and non-jurisdictional features.⁵⁸⁷

In addition, the Agencies felt the need to clarify in the preamble that puddles are not jurisdictional waters, but the very same rationale for excluding puddles applies to ephemeral drainages.⁵⁸⁸ Specifically, the Agencies explained that puddles that “form[] on pavement or uplands immediately after a rainstorm, snow melt, or similar event . . . cannot reasonably be considered a water body or aquatic feature at all, because usually [they] exist[] for only a brief period of time before the water in the puddle[s] evaporates or sinks into the ground. Puddles of this sort obviously are not, and never have been thought to be, waters of the United States subject to CWA jurisdiction.”⁵⁸⁹ This rationale applies with equal force to ephemeral drainages, yet the Agencies categorically assert jurisdiction over them as tributaries.

If the Agencies decline to exclude ephemeral drainages from the definition of “waters of the United States,” they should at least include some sort of variance provision rather than categorically assert jurisdiction over all ephemeral drainages. Just because a

⁵⁸⁵ 79 Fed. Reg. at 22,263.

⁵⁸⁶ See *id.* at 22,218-19.

⁵⁸⁷ See *supra* Part II.A.

⁵⁸⁸ See 79 Fed. Reg. at 22,218.

⁵⁸⁹ *Id.*

regulator is able to identify a bed, banks, and ordinary high water mark on ordinarily dry lands and determine that, when it rains, there will be some minimal contribution of flow to a jurisdictional water does not mean there is a significant nexus to that jurisdictional water to support CWA jurisdiction over the ephemeral feature. Not all headwaters are equal and thus, the categorical assertion of jurisdiction over all tributaries is unsupportable. (p. 23-24)

Agency Response: Puddles do not contribute flow either directly through another water to downstream traditional navigable waters, interstate waters or the territorial seas; thus firmly distinguishing puddles from ephemeral tributaries. The agencies' position in regard to tributaries, including ephemeral tributaries, is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. The agencies believe that erosional features, such as gullies, rills and non-wetland swales, lack sufficient volume, frequency, and duration of flow to create the physical characteristics of bed and banks and an ordinary high water mark, which are required under the definition of "tributary." See the summary response for Section 8.4, particularly the sub-section titled, "Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale." See also summary response 6.0 on ditches.

American Forest & Paper Association (Doc. #15420)

8.429 C. Proposed Exemption for Gullies, Rills, and Non-wetland Swales

The Proposal includes an exemption for "gullies and rills and non-wetland swales" ((122.2)(b)(5)(vii)). The Proposal does not define "gully," "rill," or "swale," but the Preamble talks in terms of lacking features such as an Ordinary High Water Mark (OHWM) and distinct bed and banks. See 79 Fed. Reg. at 22218-19. That explanation must be included in the regulation itself. It would be helpful as well if EPA provided a qualitative aspect to the definition: for example, that they are natural topographic features that may carry water at times. The agencies requested comment on how a gully or non-wetland swale is differentiated from an ephemeral stream (suggesting that the latter would not be exempt.). In addition to not having all of the necessary three characteristics of OHM, distinct bed, and defined banks, it may be appropriate to describe gullies and swales as being of limited length. Similarly, the agencies' statement (79 Fed. Reg. at 22219) that a gully or swale may, even if exempt, provide a hydrological connection between a wetland and a tributary of a navigable water, so as to make the wetland subject to CWA jurisdiction, should only apply if there is a relatively short distance between the wetland and the navigable water. Otherwise, the theoretical effect of the wetland on the navigable water through the gully or swale is too attenuated to form the basis for CWA jurisdiction. (p. 10)

Agency Response: The exclusions in paragraph (b) of the final rule have been revised and clarified. While the proposed rule excluded "gullies and rills and non-wetland swales," the agencies intended that all erosional features would be excluded. Thus, the final rule states that "erosional features, including gullies, rills and other ephemeral features that do not meet the definition of tributary, non-wetland swales,

and lawfully constructed grassed waterways” are not waters of the United States. Section IV(I) of the preamble to the final rule does make clear, however, that “...while the waters listed in the exclusions [in paragraph (b)] are never ‘waters of the United States,’ they can serve as a hydrologic connection that the agencies would consider under a case-specific significant nexus under paragraphs (a)(7) and (a)(8).”

Jensen Livestock and Land LLC (Doc. #15440)

8.430 ...the agency has failed in the first instance of providing the public with a clear description of a “ditch.” Considering that some ditches will be jurisdictional while “gullies” and “rills,” along with (b)(3) and (4) ditches are excluded, it is of utmost importance to have a clear indication of what the agencies would categorize a water feature as. At present, the proposed rule fails to provide such descriptions. The discussion of gullies and rills in the preamble is inadequate for a landowner to be capable of distinguishing the features. (p. 22-23)

Agency Response: See the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule. In addition, section IV(I) and section IV(F) of the preamble discuss non-jurisdictional ditches and jurisdictional ditches, respectively. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies are aware that terms such as “gully” and “rill” may have different meanings throughout the country. Therefore, by grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.”

Iowa Farm Bureau Federation (Doc. #15633.1)

8.431 The rule provides no clarity of when a land feature is a “tributary” or when it is an excluded gully, rill or non-wetland swale. The rule’s preamble describes time and OHWM as the key factors for making the distinction, but provides no duration, frequency or magnitude component. It makes no distinction of when a flow path or channel ceases to be a tributary.⁵⁹⁰ The terms “gully, rill and non-wetland swale” were deliberately left undefined leaving landowners in the tenuous position of having to prove their property does not contain a tributary. Because the terms are left undefined in the wake of an expanded tributary definition, the effect of the rule is to significantly narrow the exclusion as a practical matter. (p. 5)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical

⁵⁹⁰ 69 Fed. Reg. 22218-19.

characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies are aware that terms such as “gully” and “rill” may have different meanings throughout the country. Therefore, by grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. As described in Section IV(F) of the preamble to the final rule, the upper limit of a tributary is the point where a bed and banks and another indicator of OHWM cease to be identifiable. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.”

Montana Stockgrowers Association (Doc. #16937)

- 8.432 In reviewing documentation by the Montana Department of Environmental Quality (DEQ), this uncertainty also exists between potential jurisdictional waters and erosional features. The DEQ, *Guidelines on Erosional Features*, states: *Swale: -In cross section, a generally broad, shallow feature where run off may become concentrated. A thalweg and a floodplain are generally not discernable.* A swale is specifically excluded as a WOTUS, but waters within a floodplain would be considered a WOTUS. If these two features are “generally not discernable,” landowners will be faced with considerable uncertainty and face potential ramifications as they conduct their operations on a daily basis. In addition, this same document defines a gully as: *Gully: -An erosional feature caused by concentrated but intermittent flow of water usually during and immediately following large run off events.* Once again, gully is exempted, but an intermittent stream is considered a WOTUS. Our organizations assert that only stream features with “relatively permanent, standing or continuous” flow, pursuant to Justice Scalia’s plurality opinion in *Rapanos* should be included in the definition of “tributary.” This would limit the number of features that can be considered “tributaries” to those that could actually have a significant impact on the water quality of downstream waters, pursuant to the decision in *Rapanos*. It would also provide needed clarity to the ranching community.

We assert that intermittent and ephemeral features should NOT be considered “waters of the U.S.” because these features are best regulated by states and localities, and were not intended by Congress to be regulated by the federal government. We recommend the agencies should include in the exclusion, water features that have a bed and bank and in which water flows only briefly during and following a period of rainfall in the immediate locality. In addition, the term “tributary” to most landowners in Montana is going to be a flowing feature like a river, creek, or stream. Ponds and wetlands are not what most would consider a “tributary” and therefore we request the agencies to remove ponds, wetlands and any other non-flowing feature from inclusion in the definition of “tributary.” (p. 7)

Agency Response: Non-wetland swales are not waters of the United States, regardless of where they are located on the landscape. The agencies’ interpretation of the scope of the CWA in the final rule is informed by the best available peer-reviewed science, policy judgments and legal interpretations as to which waters have

a “significant nexus” with traditional navigable waters, interstate waters, and the territorial seas. The “significant nexus” standard articulated and refined in recent Supreme Court opinions is the touchstone for the agencies’ interpretation of the CWA’s jurisdictional scope. The agencies disagree that intermittent and ephemeral tributaries should not be waters of the United States. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. Section I of the Technical Support Document describes the consistency of the final rule with both the statute and judicial decisions, including those of the U.S. Supreme Court. See the summary responses in sections 8.1 and 8.2 above for discussions concerning the revised definition of “tributary” in the final rule, which now omits wetlands, lakes and ponds.

Greene County Farm Bureau (Doc. #17007)

- 8.433 We are also concerned that gullies, rills and non-wetland swales will be considered regulated features even though they are generally deemed to be exempt when they are within fields. Those exact same features have been regulated in construction projects, such as when roads are built or repaired. It is also our understanding that the agencies may still conduct on-site reviews of some gullies, rills, and non-wetland swales to determine whether they may be declared to actually be a tributary and not an exempt feature or to review the amount of flow they may carry. (p. 2)

Agency Response: Gullies, rills and other ephemeral features that do not meet the definition of “tributary” and non-wetland swales are explicitly excluded in paragraph (b) of the final rule. These features will not be waters of the United States.

Agribusiness Association of Kentucky et al. (Doc. #18005)

- 8.434 The proposed rule fails to provide a meaningful way to distinguish "erosional features," which the Agencies claim will be non-jurisdictional, from jurisdictional ephemeral tributaries. The Agencies explain:

Rills are less permanent on the landscape than streams and typically lack an OHWM, whereas gullies are younger than streams in geologic age and also typically lack an OHWM; time has shaped streams into geographic features distinct from gullies and rills.

The two main processes that result in the formation of gullies are downcutting and headcutting, which are forms of longitudinal (incising) erosion. These actions ordinarily result in erosional cuts that are often deeper than they are wide, with very steep banks, often small beds, and typically only carry water during precipitation events. The principal erosional processes that modify streams are also downcutting and headcutting. In streams, however, lateral erosion is also very important. The result is that streams, except on steep slopes or where soils are highly erodible, are characterized by the presence of bed and banks and an OHWM as compared to typical erosional features that are more deeply incised.

79 Fed. Reg. at 22,218-19 (citations omitted). Explanations such as this are worse than unhelpful to the regulated public, whose land features will be deemed to be "tributaries" or "erosional features" based on the discretion and subjective judgment of Agency staff. The proposal requests comment on how the Agencies could provide "greater clarity" on how to distinguish erosional features from ephemeral tributaries. *Id.* at 22,219. We are left wondering how the Agencies could possibly provide less clarity. (p. 7)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The agencies are aware that terms such as “gully” and “rill” may have different meanings throughout the country. Therefore, by grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.”

Department of Public Works, City of Chesapeake, Virginia (Doc. #5612.1)

8.435 ...Since runoff from rainfall is the primary source of water for ephemeral stream flow, why are ephemeral streams being regulated any differently than gullies, rills and non-wetland swales? Ephemeral streams as well as ditches with less than perennial flow should be explicitly exempt to regulatory oversight under the CWA. (p. 3)

Agency Response: The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.” Paragraph (b) of the rule also excludes most ditches that are not relocated tributaries or excavated in tributaries. See the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule.

Duke Energy (Doc. #13029)

8.436 Tributaries: The definition for tributaries should be reexamined and several key changes should be made:

- ...Revise the definition to include only perennial and intermittent streams. Ephemeral waters should be excluded, as proposed for erosional features that only flow in response to precipitation events (i.e. gullies, rills and nonwetland swales). (p. 12)

Agency Response: The agencies disagree that ephemeral tributaries should be excluded from waters of the United States. The agencies’ position in regard to

tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.”

- 8.437 ...the definition of tributary does not provide any clarification on how to distinguish between a jurisdictional ephemeral drainage and a non-jurisdictional erosional feature (i.e. a gully). These features will most likely look and function very similarly, as they typically only carry water following precipitation events. It is also unclear how one would differentiate between a jurisdictional ephemeral ditch which may qualify for an exclusion. (p. 26)

Agency Response: See the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.” The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule.

Southern Company (Doc. #14134)

- 8.438 As a final example of the practical deficiencies inherent in the agencies’ proposed approach, the new definition of “tributary” is likely to create confusion concerning jurisdiction over features such as gullies, rills, and swales as the agencies provide no discerning hydrologic or physical features that would distinguish them from jurisdictional ditches. Indeed, in the preamble, the agencies indicate that gullies and rills “typically” (but not always) lack an OHWM. 79 Fed. Reg. at 22218. Accordingly, it will be exceedingly difficult, if not impossible, in the field to clearly distinguish jurisdictional tributaries (particularly ephemeral features) and exempt gullies, rills, and non-wetland swales. It is worth noting that the Corps during the pendency of this rulemaking released two new guidance documents regarding OHWM, which is critical to the definition of “tributary” under the current proposal.⁵⁹¹ Although the proposal states that the agencies are not changing the OHWM through the proposal, it is troubling that these guidance

⁵⁹¹ See *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in Western Mountains, Valley, and Coast Region of the United States* (Aug. 2014), available at <http://acwc.sdp.sirsi.net/client/search/asset/1036027>; and see also *A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification* (Aug. 2014), available at <http://acwc.sdp.sirsi.net/client/search/asset/1036026>.

documents were issued independent of the rulemaking, without notice and comment, on a key element of the proposal. At a minimum, these changes should be subject to notice and comment requirements of the Administrative Procedure Act. (p. 36)

Agency Response: See the summary response for Section 8.4, particularly the subsection titled, “Distinction between an ephemeral water and a non-jurisdictional gully, rill or non-wetland swale.” The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. Scientists at the Corps’ Engineer Research and Development Center have been performing research aimed at improving OHWM delineation practices across the country for over a decade. Two regional OHWM delineation manuals and a number of supporting research and technical reports have been developed to date. See also summary response 8.1.2 above.

EcoSynthesis Scientific & Regulatory Services (Doc. #14586)

8.439 ...the combination of the principle that there is no bed-and-bank feature that is too small to be a tributary water of the U.S. and the wording “for any length” means that the Proposed Rule inevitably will regulate all gullies and minor erosion rills along with consensus tributaries. It also means that many or all roadside drainage ditches would be regulated as waters.

Regulating features whose surface water, during the brief periods when it is present, subsequently mixes with an incomparably greater volume of groundwater, over a great distance, before it could possibly contribute to other distant surface waters, is functionally the same thing as changing the CWA to regulate groundwater. I assume that is not the intent of the Proposed Rule, but that is the actual effect of its language. This is open to inevitable and successful legal challenge. At what point does “for any length” end? Are all of the hydrologic sinks in Nevada now to be regulated because somewhere at lower elevation, perhaps 10-50-100 miles away, there is a tributary, which the sink inflow channels are connected to via underground flow “for any length”?

Although it is a slippery slope to try to quantify any limit on the “for any length,” and I do not have a specific suggestion of replacement language, I suggest some alternatives to consider. For one thing, I unequivocally support retaining the “for any length” standard for constructed manmade features such as culverts, including large box culverts underneath cities. This is scientifically justified because, for practical purposes these features have essentially 100 percent transmissivity of the surface waters that enter the upslope end: there is no significant mixing with groundwater. It seems correct also to retain the standard for constructed features without a manmade bed (such as arch culverts), which essentially remain the same surface tributary although there is a piece of construction bridging it somewhere above. Whether inches above, or many feet, this is still a continuous tributary.

Where the breaks in surface flow are natural, I would suggest that even slight evidence of surface flow, such as a continuous stringer of coarse sand or gravel albeit lacking a bed and bank should be interpreted as evidence of connectivity. Even where the natural break is loamy, or at least not significantly coarser than the surrounding uplands, “for any length” casts much too wide a net to withstand legal challenge. I would suggest that the overall feature would need to be substantially continuous, or the natural breaks would need to be no longer than some multiplier of average channel (OHWM) width up- and down-stream of the break. Functionally, a natural break only about 10 times the channel width probably doesn’t interrupt connectivity for the preponderance of annual discharge. But such a break 100 times longer than the channel width probably does mean that there is not substantial connectivity of the up-valley channel with the lower valley one. A rigid numerical standard would inevitably result in excessive case-by-case attention, but establishing a rule of thumb or concept, and suggesting that the burden of providing evidence bearing on connectivity or lack thereof falls upon the delineation requestor might provide an avenue for making site-specific determinations efficiently. If the delineation report fails to provide any such evidence whatsoever, then the Definition defaults to the “for any length” standard.

Though the actual Definition states that a channel can only be a tributary if it has both bed and bank and an OHWM, it would be very useful for the Rule as a whole to emphasize that where a bed and bank is present, but not an OHWM or other characteristic such as continuous stringer of wetland vegetation, then that feature is not a tributary. Thus, a landscape feature in silty materials, with 1) a vertical bank only at the top and not down at the level where water actually flows, 2) a loamy bed not consistently scoured to sandy or gravelly surface texture, and 3) vegetated by strictly upland vegetation (common examples that I observe widely in such features include squirreltail grass, sagebrush, rabbitbrush, and various upland or FACU non-native species), would provisionally be excluded as a tributary. Such a feature segment might serve to connect other features to establish their jurisdiction, analogously to other discussion within the Rule, but would otherwise be a non-tributary channel. Thus, where there is a long distance where there is no bed and bank, then an arroyo-form feature such as described above, then no bed and bank again, with no OHWM in either type of feature, this would be a non-tributary feature. An approach of this kind should successfully differentiate between washes that do and do not have significant connectivity. (p. 3-4)

Agency Response: Paragraph (b) of the final rule explicitly excludes erosional features, including gullies, rills and other ephemeral features that do not meet the definition of “tributary,” as well as most ditches that are not relocated tributaries or excavated in a tributary. See the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule. Paragraph (b) of the final rule also makes clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, a gully, ditch or any other excluded feature may not be considered waters of the United States under any other provision of the rule. See summary response 8.3 above for discussion of discontinuity of OHWM. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and

an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule.

- 8.440 Another facet of the discussion above, definitely applicable in the arid West and possibly elsewhere, pertains to the geomorphic history of the features one observes today. In some cases, major precipitation events that occur very rarely may form a bed and bank where there is no surface flow at any time for years on end. Functionally, these features are actually gullies rather than tributaries, but this is not always easy to determine by appearance, except that genuine tributaries exhibit evidence of surface flow continuously, or nearly so, to the next larger downstream water. The Proposed Rule states that it intends to exclude gullies, but, in practice, the Rule’s language would include them.

In other features, the channel landforms date to centuries past (e.g., Little Ice Age or even Last Glacial Maximum), when wet periods occurred in, for example, the Intermountain Region. If evidence that surface flow still regularly occurs can be discerned, it is a tributary, albeit perhaps a much smaller one that the landform suggests. But in a relict feature where there is no evidence of surface flow at present, one questions the nexus with downstream water quality.

Often, non-tributary channels (which have a pronounced bed and bank but are separated from a downstream jurisdictional water by a significant distance of upland) occur on mountain slopes with shallow soils, in areas where the topography results in them being subject to brief intense rainfall events. The downslope soils may be paleo alluvial landforms or even currently active alluvial fans with high permeability. The fact that these channels are not tributary is often evidenced by the fact that they terminate downslope in debris flows (sometimes containing quite large particles) that are deposited first to one side, then to the other, below the channel, at the point on the slope where the water percolates and becomes groundwater. This is routinely seen in the field or even in close examination of NAIP imagery.

Wetland delineation procedures, and indeed the concept of ordinary high water mark, have always considered whether the hydrologic conditions occur on a regular basis, whether within each calendar year, or from year to year. The definition of tributary should consider this too. In some climatic areas, it is possibly not correct to restrict the definition only to features that exhibit surface flow every year, because even large arroyos may not experience flow every year (though they exhibit flow indicators such as stringers of gravel here or there within a defined area). But many small features that flow rarely and do not have a continuous bed and bank or other surface flow indicators (scouring to sandy or gravelly texture at the flow line within valley-shaped topography) to the next larger tributary have questionable connectivity.

Essentially, this is the issue of discriminating between gullies (non-jurisdictional) and ephemeral tributaries (jurisdictional by rule), about which the Proposed Rule specifically requests comment. The simplest resolution is to state that an ephemeral tributary exhibits evidence of regular surface flow (in at least a few years every decade) for nearly the entirety of its length to a confluence, whereas a gully (non-tributary channel) terminates downslope by percolating into lower gradient or different textured soils. If it does not terminate, then every event that is sufficient to cause surface flow at all will contribute that flow to the downstream water, ergo it is an ephemeral tributary. The connectivity

report explains successfully why ephemeral tributaries that flow ordinarily have the significant nexus that is required by the Rapanos decision, but if the definition of such tributaries is expanded to include all features that ever flow, no matter how rarely or under no matter how extreme of an event, and furthermore includes features that are disjunct “for any length,” then it becomes impossible to objectively justify that same finding when, under such precipitation events, the majority of the watershed also has just as much of a nexus to downstream water quality.

It is correct for requests for (non-) jurisdictional determination of the kinds of features discussed above to be required to include sufficient background information (soils, climate) and extensive, detailed observations from the field, sometimes including comprehensive sets of georeferenced photographs. The details may vary by District or ecoregion, but an applicant or requestor should have an opportunity to make a showing that one or more features are non-tributary channels, if he or she clearly explains the threshold applicable to determining that features (or hypothetical features, if none are present within the study area) are in fact tributary. (p. 4-5)

Agency Response: The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Bed and banks can be naturally formed by repeated flow of water or artificially constructed out of rock, concrete, etc, however both bed and banks and another indicator of OHWM must be found before a water can be called a tributary under the rule. The agencies have concluded that flow of a sufficient volume, frequency, and duration create and maintain the physical characteristics of tributaries, such as bed and banks and another indicator of OHWM. The Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. While the Rule does contain exclusions for ephemeral features that do not meet the definition of tributary, such as gullies, rills, and non-wetland swales, ephemeral waters that have the physical characteristics of a tributary, including bed and banks and OHWM, are not excluded from jurisdiction. The preamble to the final rule and the Exclusion Compendium 7 provide in depth discussion of each of the exclusions. See summary response 8.3 for discussion of breaks in OHWM. See also TSD section 7 rationale supporting the final rule. In addition, the final rule has not changed the long standing practice of jurisdictional determination expiring after five years, providing temporal certainty, without ignoring the evolution of land and water features over time. Jurisdictional determinations are case specific and not done in response to hypothetical proposals.

ERO Resources Corporation (Doc. #14914)

- 8.441 The proposed rule needs to clearly define the difference between tributaries and erosional features. It is unclear in the proposed rule how erosional features (gullies, rills, non-wetland vegetated swales) would be differentiated from tributaries, particularly in the arid West where ephemeral tributaries flow only briefly during and shortly after snowmelt or storm events. Erosional features can have physical characteristics similar to a bed and banks, and perhaps even an OHWM, at least after a flow event. Ephemeral drainages may

not have a continuous bed and banks, and/or a continuous OHWM. This guidance is particularly important in the arid West where the differences between an ephemeral drainage and gullies and rills can be minor. (p. 18)

Agency Response: See summary response for section 8.4.

American Public Power Association (Doc. #15008)

8.442 **G. The Proposed Rule Provides No Basis for Distinguishing Between Erosional Features and Small Ephemeral Features.**

The agencies propose to regulate ephemeral drainages, but exclude gullies, rills, and non-wetland swales, while failing to define any of these key terms. 79 Fed. Reg. at 22,219. Instead, the agencies seek comment on “how to distinguish between erosional features, such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.” Id. The different treatment of these predominantly dry features appears to be arbitrary and the agencies do not provide any scientific basis for distinguishing between them.

The proposed approach stands to cause chaos in the field resulting in confusion and delay as regulators struggle to distinguish between regulable ephemeral drainages and unregulated gullies, rills, and non-wetland swales. Indeed, if these features are so similar, why are erosional features categorically excluded and ephemeral drainages are categorically jurisdictional? The agencies should exclude ephemeral drainages from jurisdiction as well as erosional features like gullies, rills, and non-wetland swales. (p. 10-11)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. In addition, see the summary response for Section 8.4, particularly the sub-section titled, “Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale.”

Colorado River Water Conservation District, Colorado (Doc. #15070)

8.443 The terms "gully" and "rill" should be specifically defined to avoid additional confusion. (p. 2)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under

this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See summary response for section 8.4.

Association of Metropolitan Water Agencies et al. (Doc. #15157)

8.444 For the rulemaking to achieve its goal of increased clarity, the final rule language should communicate both where WOTUS starts and where WOTUS ends. In explaining the agencies’ intent, the EPA’s and Corps’ subject-matter experts refer to current guidance and preamble language. However, guidance and preamble do not have the force of law, and existing guidance will likely be replaced after the rule is finalized in favor of interpretation of the revised rule language as it is written. Consequently, in addition to the definitions listed above, the final rule language should provide a clear basis for:

1. Distinguishing between a tributary and water infrastructure such as stormwater ditches and swales. ... (p. 3)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. The point at which waters of the United States begin and end is based on the presence of those features identified in paragraph (a) of the rule. For example, as described in Section IV(F) of the preamble to the final rule, the upper limit of a tributary is the point where a bed and banks and another indicator of OHWM cease to be identifiable. See summary response 7.4.4. about stormwater features and 6.0 about ditches.

Pennsylvania Independent Oil and Gas Association (Doc. #15167)

8.445 In the Proposed Rule, EPA admits the difficulty in distinguishing between an erosional feature or gully and a jurisdictional water. EPA indicates that the only difference between these features may be the length of time that they have existed. 79 Fed. Reg. 22,218-22,219: This type of distinction would undoubtedly cause confusion and subjective determinations. PIOGA requests clarification of the distinction between these features. (p. 18)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See summary response for section 8.4.

Wisconsin Electric Power Company and Wisconsin Gas LLC (Doc. #15407)

8.446 F. The Proposed Rule Provides No Basis for Distinguishing Between Erosional Features and Small Ephemeral Features.

The agencies propose to regulate ephemeral drainages, but excluded gullies, rills, and non-wetland swales while failing to define any of these key terms. 79 Fed. Reg. at 22,219. Instead, the agencies seek comment on “how to distinguish between erosional features, such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.” Id. The different treatment of these predominantly dry features appears to be arbitrary and the agencies do not provide any scientific basis for distinguishing between these. (p. 7)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See summary response for section 8.4. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion.

Southern Environmental Law Center et al. (Doc. #13610)

8.447 **Agency Comment Request:** *The agencies’ request comment on . . . the definition of tributaries and provide a clear explanation of their lateral and upstream extent.*

Comment: . . . To the extent that there is concern that such a definition would cover insignificant features such as puddles, gutters, and upland roadside ditches, the agencies could define waters to exclude such features. Or preamble language could be drafted to address this issue. (p. 13)

Agency Response: Exclusions of various features from consideration as waters of the United States have been revised and clarified for the final rule. Paragraph (b) of the final rule outlines all of those excluded features, and they are also described in section IV(I) of the preamble to the final rule.

8.448 **Agency Comment Request:** *The agencies’ request comment on . . . how [other features in a tributary system should be treated.*

Comment: The overall approach used in this proposed rule should apply in this context too— define what is jurisdictional and what is not. Gullies, rills, and non-wetland swales could be considered either non-jurisdictional components of the tributary system or simply not part of the tributary system. Either way, they should be defined as lacking the characteristics that make the other components of the tributary system jurisdictional. Such discussion should also point out that although such features may not be considered jurisdictional for purposes of Section 404, they may still be considered point sources

under Section 402, as well as surface connections to establish significant nexus. (p. 13-14)

Agency Response: Gullies, rills, and non-wetland swales are all explicitly excluded from consideration as waters of the United States under paragraph (b) of the final rule. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. Section I of the Technical Support Document provides the legal framework under which a ditch could be considered both a point source and a water of the United States.

Center for Biological Diversity, Center for Food Safety, and Turtle Island Restoration Network (Doc. #15233)

8.449 With respect to your treatment of gullies and rills, and their distinction with streams, we have already observed that streams (and tributaries) may not necessarily be characterized by OHWMs and that in many regions, such erosional features are of critical importance.. Accordingly, that characteristic is not reasonably available to distinguish a gully from a stream as you suggest, even if the exclusion of such erosional features of recent origin is scientifically warranted. 79 Fed. Reg. 22218-19. While there may be other methods of distinguishing erosional features from streams, as above, the conservation groups question the necessity of rendering these distinctions at all when the (a)(7) significant nexus requirement suffices to ensure that an “other water” generally will not receive WOTUS status where it retains no real potential to affect a traditionally jurisdictional water body. (p. 11)

Agency Response: See summary response for section 8.4. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. Paragraph (b) of the final rule explicitly excludes erosional features, including gullies, rills and other ephemeral features that do not meet the definition of “tributary.” Paragraph (b) of the final rule also makes clear that the features identified therein “are not waters of the United States even where they otherwise meet the terms of paragraphs (a)(1) through (a)(8)” of the rule. Thus, a gully, ditch or any other excluded feature may not be considered waters of the United States under any other provision of the rule.

Natural Resources Defense Council et al. (Doc. #15437)

8.450 2. “The agencies request comment on all aspects of the proposed definition of tributaries and in particular on whether and how this definition can be revised to provide increased

clarity as to the distinction between jurisdictional tributaries, as defined, and non-jurisdictional features such as gullies, rills and non-wetland swales.”⁵⁹²

We view this request for comment as an extension of the prior one. Again, we support the concept of including real aquatic features, and excluding those things that are not the result of the regular presence of water over a long period of time. Accordingly, where features that could be classified as “gullies,” “rills,” or “non-wetland swales” in fact are permanent aquatic features that actually convey water that reaches downstream navigable or interstate waters, they should be treated as tributaries and protected as such. The agencies have received some advice from the SAB to develop this distinction further; in its review of the Connectivity Report, the SAB differentiated between “erosional features like rills and gullies, which are initiated by human or natural disturbance, and longer-term, integrated headwater channels with more ecologically effective connectivity to downstream waters,” and points EPA to studies that provide information “on the transition from gullies to headwater streams.”⁵⁹³ (p. 61-62)

Agency Response: The final rule differentiates erosional features like gullies, rills and non-wetland swales from intermittent and ephemeral tributaries. While erosional features that do not meet the definition of “tributary” in the final rule are explicitly excluded from consideration as waters of the United States, ephemeral and intermittent tributaries are categorically considered waters of the United States. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. See summary response for section 8.4.

Association of State Floodplain Managers, Inc. (Doc. #19452)

8.451 We also recognize the complexity of drawing a line between regulated tributaries and unregulated man-made upland ditches, especially since many ditches were formed by modification of natural streams. However, this is a long standing problem. If uncertainty regarding jurisdiction in complex situations is not entirely resolved by the proposed rule, still the rule does not exacerbate the problem. A number of states have developed criteria that provide straight forward solutions to addressing these distinctions in a regulatory program, and we suggest that the federal agencies consult with the states to develop consistent criteria to distinguish between highly altered streams, regulated ditches and unregulated ditches. (p. 4)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. See summary response for section 8.4. Waters that meet the definition of “tributary” are categorically waters of the United States, unless they are excluded in

⁵⁹² 79 Fed. Reg. at 22,203.

⁵⁹³ SAB Connectivity Review at 31.

paragraph (b) of the final rule. See the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule.

The Association of State Wetland Managers (Doc. #14131)

- 8.452 **6. The proposed rule recognizes the importance of protecting and managing stream networks in totality – including tributaries – to maintain the physical, chemical, and biological integrity of navigable waters.**

...

We recognize the complexity of drawing a line between regulated tributaries and unregulated man-made upland ditches, especially since many ditches were formed by modification of natural streams. However, this is a long standing problem that is not exacerbated by the proposed rule.

A number of states have developed criteria that provide straight forward solutions to addressing these distinctions in a regulatory program, and we suggest that the federal agencies consult with the states to develop consistent criteria to distinguish between highly altered streams, regulated ditches and unregulated ditches. We also recommend that the federal agencies consult with the states to develop or revise field procedures for identifying streams on a regional basis. (p. 3, 4)

Agency Response: Agency Response: Cooperative federalism is a hallmark of the Clean Water Act. The agencies will continue to work with our regulatory partners on timely development of necessary training and guidance, including the process for documentation of jurisdictional waters, as appropriate, to build upon existing working relationships, to inform stakeholders, and to ensure successful implementation of this rule. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. Waters that meet the definition of “tributary” are categorically waters of the United States, unless they are excluded in paragraph (b) of the final rule. See the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule.

Texas Wildlife Association (Doc. #12251)

- 8.453 **The Proposed Rule Fails to Provide Clarity or Predictability**

... allowing for exempted features, such as groundwater, gullies and rills to serve as connections that can render a feature jurisdictional “adjacent water or “other water.” (p. 4)

Agency Response: The final rule differentiates erosional features like gullies, rills and non-wetland swales from intermittent and ephemeral tributaries. While erosional features that do not meet the definition of “tributary” in the final rule are explicitly excluded from consideration as waters of the United States, ephemeral and

intermittent tributaries are categorically considered waters of the United States. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. See summary response for section 8.4. Section IV(I) of the preamble to the final rule states clearly that while the waters listed in the exclusions in paragraph (b) of the final rule are never waters of the United States, they can serve as a hydrologic connection that the agencies would consider under a case-specific significant nexus under paragraphs (a)(7) and (a)(8).

8.454 **F. The Proposed Rule Provides No Basis for Distinguishing Between Erosional Features and Small Ephemeral Features.**

The agencies propose to regulate ephemeral drainages, but excludes gullies, rills, and non-wetland swales while failing to define any of these key terms. 79 Fed. Reg. at 22,219. Instead, the agencies seek comment on "how to distinguish between erosional features, such as gullies, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional." *Id.* The different treatment of these predominantly dry features appears to be arbitrary and the agencies do not provide any scientific basis for distinguishing between them.

The proposed approach stands to cause chaos in the field resulting in confusion and delay as regulators struggle to distinguish between regulable ephemeral drainages and unregulated gullies, rills, and non-wetland swales. Indeed, if these features are so similar, why are erosional features categorically excluded and ephemeral drainages categorically jurisdictional? The agencies should exclude ephemeral drainages from jurisdiction as well as erosional features like gullies, rills, and non-wetland swales. (p. 6)

Agency Response: See summary response for section 8.4. The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. By grounding the definition of "tributary" in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a "tributary" or a non-jurisdictional "erosional feature" will be minimal. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. In addition, see the summary response for Section 8.4, particularly the sub-section titled, "Distinction between an ephemeral water and a non-jurisdictional gulley, rill or non-wetland swale."

Wyoming Outdoor Council (Doc. #16528)

- 8.455 We recognize that under the proposed rules some tributary waters could be excluded from the definition of waters of the United States. This would include gullies, rills, non-

wetland swales, and certain ditches. 79 Fed. Reg. at 22204. That said, it should be recognized that these exclusions are carefully defined, and if they are not met, a water should still be considered a tributary. See, e.g., *id.* at 22219 (pointing out that some features are called "gullies" when this is not true in a technical sense and "such streams where they are tributaries under the proposed definition would be considered "waters of the United States" regardless of the name they are given locally," and also pointing out that some swales can meet the regulatory definition of a wetland). (p. 3)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. This will also help mitigate inconsistent terminology used to identify various features of the landscape across the country. Only non-wetland swales are categorically excluded in the final rule.

- 8.456 We feel these defined exclusions and exemptions should be granted with great caution since it is possible that these activities and features could still qualify as waters of the United States.

Nominally excluded gullies can in fact be tributaries despite local mischaracterizations, 79 Fed. Reg. at 22219. Wetland swales can be adjacent waters. *Id.* Some ditches can be waters of the United States because they meet the definition of a tributary. *Id.* Jurisdictional ditches may include but are not limited to:

Natural streams that have been altered;

Ditches that have been excavated in "waters of the United States," including wetlands;

Ditches that have a perennial flow; and

Ditches that connect two or more "waters of the United States."

Id. at 22203. It is important for the agencies to ensure that activities and features such as these are not excluded as waters of the United States if the CWA objective of restoring and maintaining the chemical, physical, and biological integrity of the Nation's waters is to be met. (p. 10-11)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. Wetland swales are not categorically excluded features under the final rule. Only non-wetland swales are categorically excluded in the final rule. See the summary response for section 6.2, “Excluded Ditches” in this RTC for a discussion of how the proposed exclusions for ditches were edited and clarified for the final rule.

Office of the Governor, State of Utah (Doc. #16534)

8.457 B. Gullies, Rills and non-wetland swales

The state is also concerned about the exemption for "gullies, rills and non-wetland swales."⁵⁹⁴ These are exempted, but no definition is given for them. The Merriam-Webster diction defines "gully" as "1: a trench which was originally worn in the earth by running water and through which water often runs after rain. 2: a small valley or gulch."⁵⁹⁵ The same dictionary offers this definition for 'rill', "channel made by a small stream."⁵⁹⁶ "Swell" is then defined as "a low-lying or depressed and often wet stretch of land."⁵⁹⁷ In the West, there are examples of gullies and rills which meet the common dictionary definition of said features, but will also have a bed, bank, and ordinary high water mark. They can also contribute flow during certain times of the year. These features could qualify it as a tributary under the definition of tributary found in the proposed rule. (See Exhibit B) Once again, the Proposed Rule in its current form creates too much uncertainty. (p. 8)

Agency Response: The final rule differentiates erosional features like gullies, rills and non-wetland swales from intermittent and ephemeral tributaries. While erosional features that do not meet the definition of "tributary" in the final rule are explicitly excluded from consideration as waters of the United States, ephemeral and intermittent tributaries are categorically considered waters of the United States. The agencies' position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies' conclusion. The definition of "tributary" in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered "tributary" under this rule. By grounding the definition of "tributary" in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a "tributary" or a non-jurisdictional "erosional feature" will be minimal. This will also help mitigate inconsistent terminology used to identify various features of the landscape across the country. See the summary response for Section 8.4.

U.S. Senators Jeff Flake and John McCain (Doc. #1377)

8.458 We find EPA's attempt to limit federal jurisdiction by excluding gullies, rills, and swales from the definition of "waters of the U.S." encouraging, though more clarity is needed on what these exclusions actually encompass. We would find any distinctions drawn between such features and small ephemeral washes troubling. Due to the lack of vegetation resulting in clearer evidence of flow than would occur in mare highly

⁵⁹⁴ See 79 Fed. Reg. 22263.

⁵⁹⁵ Merriam-Webster's Collegiate Dictionary, eleventh edition, 2004.

⁵⁹⁶ *Id.*

⁵⁹⁷ *Id.*

vegetated areas, similar features that may ultimately be considered by EPA swales or rills in other parts of the country would likely be determined to have an ordinary high water mark and therefore subject to regulation in the arid Southwest. (p. 2)

Agency Response: The final rule differentiates erosional features like gullies, rills and non-wetland swales from intermittent and ephemeral tributaries. While erosional features that do not meet the definition of “tributary” in the final rule are explicitly excluded from consideration as waters of the United States, ephemeral and intermittent tributaries are categorically considered waters of the United States. The agencies’ position in regard to tributaries is rooted in a science-based conclusion that such waters have a significant nexus either individually or in the aggregate with traditional navigable waters, interstate waters, and the territorial seas. Section VII of the Technical Support Document discusses the science supporting the agencies’ conclusion. The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See the summary response for Section 8.4.

Environmental Technology Consultants (Doc. #2597)

8.459 What is the difference between a gully or rill and a seasonal stream? The new definitions would appear to find a significant nexus between navigable waters and the seasonal streams that feed them, however gullies and rills and non-wetland swales appear to be excluded from the definition. We need field actionable definitions for these terms. (p. 1)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See the summary response for Section 8.4. Scientists at the Corps’ Engineer Research and Development Center have been performing research aimed at improving OHWM delineation practices across the country for over a decade. Two regional OHWM delineation manuals and a number of supporting research and technical reports have been developed to date.

Whitman, Requardt & Associates, LLP (Doc. #1330)

8.460 I support the rulemaking’s attempt to clearly define the issue of jurisdiction of ephemeral tributaries, ditches and erosion gullies. Our experience in the field is that under current rules and guidance, in some cases, the COE is taking jurisdiction over ditches and erosional gullies, using the CWA guidance concerning the presence of a “OHW mark, or bed and bank”. Similar to the extensive effort made to date to define wetlands from non-

wetlands, a similar effort should be made to provide clear guidance concerning the difference between a natural ephemeral channel, a jurisdictional ditch, a nonjurisdictional ditch and a erosional gully...

The Rulemaking makes the statement that gullies are easily distinguished from natural ephemeral channels. While I would agree, we are finding a number of COE staff who are taking all forms of “channels” – regardless of origin, age, landscape position, etc. that might be used to differentiate between gullies and tributaries. The key issue seems to be with the definition of a “OHW” mark and “Bed and Bank”. Gullies can be considered to have a bed and bank (sides and bottom), and because gullies are scour features, they can be said to have a “OHW” mark. The rule making is correct in excluding gullies from jurisdiction, but more guidance is needed to help permittees and agency staff consistently separate gullies from tributaries. (p. 1)

Agency Response: The definition of “tributary” in the final rule requires that flow must be of sufficient volume, frequency, and duration to create the physical characteristics of bed and banks and an ordinary high water mark. If a water lacks sufficient flow to create such characteristics, it is not considered “tributary” under this rule. By grounding the definition of “tributary” in the final rule to the above referenced specific physical features, the agencies believe that confusion regarding whether a feature is a “tributary” or a non-jurisdictional “erosional feature” will be minimal. See the summary response for Section 8.4. Scientists at the Corps’ Engineer Research and Development Center have been performing research aimed at improving OHWM delineation practices across the country for over a decade. Two regional OHWM delineation manuals and a number of supporting research and technical reports have been developed to date.

8.5. SUPPLEMENTAL COMMENTS ON TRIBUTARIES

Specific Comments

Anonymous (Doc. #3300.1)

8.461 Case 3 Local Streets with Curb and Gutter

My question here is does curb and gutter, which contributes a significant amount of flow to receiving tributaries, now become a nexus and become Waters of the United States? It sounds a little far-fetched but when you consider the volumes of flow contributing to wetlands, estuaries and tributaries it questions where to proposed rule starts and stops with adjacent contributing factors. (p. 4)

Agency Response: Curb and gutter has never been a waters of the U.S. and the final rule does not change that. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary.

L. Banks (Doc. #5554.2)

- 8.462 5. I also believe the use of the word 'tributary' in the proposed rule could easily be interpreted to extend jurisdiction right up the field ditches to the water furrows. Again EPA stated in the public meeting that they needed the authority to regulate water off the farm-this would have then to include the use of the land, since water in the tribs results as runoff from the land. (p. 1)

Agency Response: Waters of the U.S. have always been limited to water features, which has not changed in the final rule. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. See response to comments 6 about ditches and 7 about exclusions and exemptions for certain agricultural and stormwater activities.

Anonymous (Doc. #7447)

- 8.463 The CWA has achieved most of the goals originally set forth and we are happy for that. The new (and expanded) definition of waters of the US would regulate every draw, wash, gully and dip in the country. Where are the because by definition, all lands and almost every square foot of land would be under the jurisdiction of the EPA. In the original act, waters of the US were perennial and NAVIGABLE. Let's keep it that way or at least define and map all waters that are perennial and run at a minimum of 'X' cps. We need a scientifically defined standard. Once the minimal qualification is defined (for example, all perennial streams exceeding one cubic foot per second) and mapped, then all other waters would be regulated by the state. If a defined stream was found to be impaired, the EPA could work with the state to find and correct the problem. This would be a very manageable solution. (p. 1)

Agency Response: See summary response section 8.1.2: Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features for a discussion of the longstanding regulation of non-perennial streams. Jurisdictional determinations are conducted on a case by case basis and expire after five years because the hydrologic, climatic and fluvial circumstances of any one site change over time, resulting in changes to the extent of jurisdiction. See responses to scientific basis for definition of tributary and distinction from rills and gullies.

Office of the Administrator, Science Advisory Board, U.S. Environmental Protection Agency (Doc. #7531)

8.464 Tributaries

There is strong scientific evidence to support the EPA's proposal to include all tributaries within the jurisdiction of the Clean Water Act. Tributaries, as a group, exert strong influence on the physical, chemical, and biological integrity of downstream waters, even though the degree of connectivity is a function of variation in the frequency, duration, magnitude, predictability, and consequences of physical, chemical and biological processes.

The Board advises the EPA to reconsider the definition of tributaries because not all tributaries have ordinary high water marks. An ordinary high water mark may be absent

in ephemeral streams within arid and semi-arid environments or in low gradient landscapes where the flow of water is unlikely to cause an ordinary high water mark. The Board advises the agency to consider changing the wording in the definition to “bed, bank, and other evidence of flow.” In addition, tributaries are not typically defined to include lentic systems (e.g., lakes, ponds, wetlands). Thus, the EPA may want to consider whether flow-through lentic systems should be included as adjacent waters and wetlands, rather than as tributaries. (p. 2)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters as suggested. As noted in the comment, the Connectivity Report supports the scientific conclusion that all features that meet this definition of tributary impact the physical, chemical, and biological integrity of downstream waters and therefore have a significant nexus to (a)(1) through (3) waters. For a further discussion of the limits of CWA jurisdiction in regards to tributaries and the use of OHWM see the TSD.

The agencies did not conclude that other evidence of flow would be a sufficiently specific or identifiable in the field to establish tributaries as a category of waters that is similarly situated with a significant nexus to (a)(1) through (3) waters. On the other hand, the agencies have decades of experience with the identification of OHWM across the country and are familiar with functions streams with OHWM support and their importance to downstream waters while making relatively permanent and significant nexus determinations since 2008. The identification of OHWM across the country and especially in the west has been the focus of significant effort for more than a decade and resulted in the creation of several technical guides and background documents which have improved the accuracy and consistency of OHWM determinations while also expanding the agencies’ familiarity with the various indicators of flow and OHWM found in rivers and streams across the western U.S.

Board of Douglas County Commissioners, Castle Rock, CO (Doc. #8145)

- 8.465 Under the Proposed Rule, a tributary (e.g., manmade or natural ditch/channel/culvert) is jurisdictional if it has a bed, bank, and an OHWM. This jurisdiction is not affected by extremely rare flow or disconnected surface flow to downstream WOUS. This approach ignores the highly variable regional surface hydrology characteristics. Certainly, the Proposed Rule could provide allowances for semi-arid Colorado landscapes where features may have concentrated surface runoff once every two years, but do not require the same CWA protection as seasonal waterways. (p. 15)

Agency Response: See summary response in Sections 8.1 and 8.1.1 Relevance of flow regime.

Terry E. Branstad, Governor, State of Iowa et al. (Doc. #8377)

- 8.466 [T]he definitions will increase confusion and invite inconsistency of approaches for making jurisdictional determinations. For example, tributaries are defined as “contributing flow” to other waters. It would be more appropriate to clearly state that tributaries should have perennial or relatively permanent flow in order to be considered jurisdictional, to avoid the potential expansion of jurisdiction which such a broad definition invites. (p. 6)

Agency Response: See summary response in Section 8.1.1 Relevance of flow regime.

Southern California Association of Governments (Doc. #8534.1)

- 8.467 The rule notes that the uplands within floodplains are never Waters of the U.S., but without requiring the physical presence of a defined OHWM, jurisdictional areas could easily be expanded. Indeed this already takes place in practice as different regulators interpret OHWM differently; some as a mark from a 2-year storm, others as a mark from a 20 year event. (p. 2)

Agency Response: Waters of the U.S. have always been limited to water features, which has not changed in the final rule. See summary response section 8.1.2: Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features for a discussion of how regional variation in hydrology, climate and other factors continue to guide the agencies’ identification of OHWM.

B. Forman (Doc. #9065)

- 8.468 As we compare the reach of the proposed WOTUS with the landscape of South Dakota, it quickly becomes apparent that most of these features should not fall under the scope of the Clean Water Act. Many of these “waters” are actually landscape features that are dry most of the time, or have water in them for only short periods of time. Many are too remote to merit the type of regulatory burden that would imposed by the Clean Water Act. Dry drainage features will never be fishable and swimmable and do not need to be made jurisdictional in order for us to work together to protect the quality of waterways that are clearly jurisdictional. (p. 1)

Agency Response: See summary response section 8.1.2: Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features. See responses distinguishing rills, gulleys and landscape features.

Michael Richard (Doc. #9291)

- 8.469 Wetlands which meet the three criteria (wetland hydrology, vegetation and soils) and are not exempt (e.g. a stock tank), should be considered a jurisdictional wetland. It is my hope as an ecologist and as an environmental consultant that the proposed rule uses the overwhelming scientific data documenting the interconnectedness of wetlands to do away with the “isolated” wetland designation. As a scientist, I believe the data demands regulations and guidance be changed to support the initial goal of the CWA; improved water quality and wetland conservation.

Despite the science supporting a unified hydrologic cycle, today wetlands designated as “non-jurisdictional” or isolated are be impacted without regulatory issue, ad nauseum. Wetlands currently considered isolated play an important role in supporting the physical, chemical and biological integrity of the landscape: and yet they are removed from regulation under USACE current guidance (Gibbons, 2003). (p. 1)

Agency Response: See executive summary of the Preamble for discussion of the legal limitations on the scope of waters of the U.S.

8.470 Physical, Chemical and Biological Connections

The hydrologic cycle is a basic tenet of science taught early in schools and generally accepted as truthful. The hydrologic cycle demonstrates the interconnectedness of all waters through subsurface and surface connections (NOAA, Retrieved 9/30/2014). Research shows that “isolated” wetlands are connected by subsurface pathways, and such connections are significant (Devito, K.J., et al 1996).

The field of hydrogeology specifically studies the connections and subsurface pathways through which water moves. Examples of the interconnectedness of wetlands with groundwater are overwhelming and obvious; disregard for this data by regulations and agencies is shameful. If contaminants were introduced into a wetland, pollution of groundwater and nearby streams is the immediate concern. This is the basic scientific concept upon which many pollution control programs and environmental regulations: Storm Water Pollution Prevention Plans, National Pollutant Discharge Elimination System and Texas Surface Water Quality Standards.

Biological connections between wetlands are widely documented but largely discounted by regulations. Herpetofauna are the most documented due to their biological ties to aquatic habitats and noteworthy sensitivity to water quality (Gibbons, 2003). Wetlands may be surrounded by uplands and “geographically isolated,” yet still play a part in the overall function of the landscape. Reptiles, amphibians, birds and mammals using an isolated wetland are not confined to a single wetland and are known to migrate between aquatic resources. Similarly, isolated wetland are a refuge for certain species and may contain rare and unique assemblages (i.e., vernal pools, pocosins, etc). (p. 1)

Agency Response: See TSD section 7 on for discussion of the connections between tributaries and downstream waters and section 8 for discussion of connections to adjacent waters.

RiverStone Group, Inc. (Doc. #10742)

- 8.471 Contrary to the claims of the EPA and the Corps, the proposed rule will actually cause more confusion than clarity. The agencies "categorical" inclusion of all tributaries defined by an observed "mark" on the landscape and its regulation of wetlands and waters adjacent to tributaries based on vague "neighboring," "riparian," "floodplain" and "shallow subsurface" connection criteria makes it virtually impossible to know what areas are regulated and what areas are not. (p. 2)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if

one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

County of Henry, Collinsville, Virginia (Doc. #10949)

- 8.472 The concept of groundwater should be further explained and defined with the Rule as it relates to jurisdictional connections. Furthermore, the Rule proposes to regulate features within the upper reaches of the watershed that would not previously have been subject to CWA jurisdiction via non-jurisdictional connections. This new approach may extend regulatory oversight of the CWA over features that were not previously regulated: therefore, the County does not support the expansion of regulatory oversight under the CWA further into the watershed through confined surface hydrologic connections or shallow subsurface groundwater connections. (p. 2 – 3)

Agency Response: Waters of the U.S. has never included groundwater and does not cover groundwater under the final rule. See summary response section 8.1.2: Use of OHWM inappropriate/appropriate – will lead to over/under coverage of features for discussion of the historic and current extent of waters of the U.S.

Anonymous (Doc. #11304)

- 8.473 Secondly, the definition of a tributary that includes wetlands is perhaps ecologically sound, but is confusing in the context of the rule because wetlands lack an OHWM, bed and banks. I agree with the alternative of separating wetlands from the tributary definition and leaving wetlands to be under jurisdiction as "adjacent waters." Though I personally can see possible connections over "debris piles, boulder fields or a stream that flows underground," I think further definition for these vague land breaks could be useful for the proposal as well. (p. 1)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. Regarding the discussion of connections, the Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications through the development of OHWM delineation manuals which describe the range of site conditions and regionally specific factors to consider when evaluating breaks in OHWM.

Anonymous (Doc. #11350)

- 8.474 The proposed rule clarifies the types of ditches that are excluded from jurisdiction; however, it is possible that ditches currently identify as non-jurisdictional may in the

future be found jurisdictional waters of the U.S. under the proposed rule. In the same respect, man-made drainage canals that are currently not considered jurisdictional could be considered jurisdictional under these rules. We request clarification as to the application of these rules on these ditches and canals given the proposed definitions of tributaries, adjacent waters, other waters and traditional navigable waterways.

Request clarification on what it means to contribute flow. (p. 1)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See summary response 6.1 for discussion of flow in ditches and canals and summary response 6.2 for a discussion of excluded ditches.

T. Walsh (Doc. #11437)

8.475 1. I agree that the connectivity science supports designating all tributaries to traditional navigable waters as Waters of the United States.

2. I agree that the connectivity science supports designating wetlands adjacent to or neighboring (i.e., in the floodplain/riparian area) traditional navigable waters and their tributaries as Waters of the United States. (p. 1)

Agency Response: Comment noted.

Anonymous (Doc. #11481)

8.476 The new rule indicates that ditches that do not contribute flow, either directly or through another water, to a traditional navigable water, interstate water, the territorial seas or an impoundment of a jurisdictional water are not considered jurisdictional under the new rule, however the term ditch and swale can be used interchangeably and there is no technical distinction made between the two in the new rule. The following excerpt is confusing and seems to contradict the previous exemptions of ditches/swales that do not contribute flow:

Non-wetland natural and man-made swales would not be waters of the United States under this proposal. In certain circumstances, however, swales include areas that meet the regulatory definition of wetlands. Swales generally are considered wetlands when they meet the applicable criteria in the Corps of Engineers Wetland Delineation Manual and the appropriate regional supplement to that Wetland Delineation Manual. Wetland swales would be evaluated as adjacent waters under proposed (a)(6) or as other waters under proposed (a)(7) depending upon whether they meet the proposed definition of adjacent. Swales are distinct from streams in that they are non-channelized, shallow trough-like depressions that carry water mainly during rainstorms or snowmelt. Report at A-19. Swales typically lack the OHWM that is characteristic of jurisdictional streams. The agency’s request comment on how they could provide greater clarity on how to

distinguish swales, which are excluded from jurisdiction, and ephemeral tributaries, which are categorically jurisdictional.

Swales that carry water during rainstorms or snowmelt oftentimes contribute flow either directly or through another water to a TNW, Interstate water, territorial seas, or impoundments of a jurisdictional water. So in this regard, although swales may not have OHWM, they would be regulated. (p. 1 – 2)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM, such as wetland swales, are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. This change simplifies the field evaluation by focusing on the field characteristics, OHWM and bed and banks or a delineated wetland, which then determine the jurisdictional review standard to apply, adjacency or tributary. See summary response 6.1 for discussion of flow in ditches, summary response 6.2 for a discussion of excluded ditches, and summary response 8.1 for general discussion of tributaries.

Norton County Road & Bridge (Doc. #11746)

8.477 Expansion of Jurisdiction

We disagree with numerous statements in the federal register that the proposed definition that the regulatory jurisdiction is narrower than that under the existing regulations. While there are some proposed exemptions, such as ditches in uplands, these exemptions were unofficially in place already and were never considered waters of the US except under unusual circumstances. The inclusion of all tributaries as waters of the US is a major expansion of actual practice. Typically ephemeral channels upstream of the blue lines on a USGS contour map were normally not considered waters of the US by the general public. On occasion a 404 permit would be requested on larger projects, but the general public ignored any federal jurisdiction, and to our knowledge the Corps and EPA has seldom pursued private land owners that failed to get a permit for work on these headwater ephemeral channels. So in our view the proposed definition of waters of the US will include all ephemeral channels and doubles or triples the actual miles of channels regulated. (p. 1)

Agency Response: See summary response 8.1.1 and 8.1.2 for discussion of the historic and current extent of jurisdiction in headwater and ephemeral streams. The extent of federal jurisdiction does not change based public perception or actions taken in violation of the regulatory requirements.

8.478 Waters of the US designation for ephemeral channels:

We disagree with your attempt to include all of a reach of an ephemeral channel as waters of the US. Following an ephemeral channel up the watershed it eventually becomes an erosional feature that rarely carries water, and when it does the water quality is predominantly based on the quality of the water reaching the channel and physical,

biological and chemical processes in the channel are minimal due to contact time so there is no significant nexus to downstream water quality.

The proposed regulations based on this faulty study made a giant leap to all tributaries, because they treated the tributary as an undividable unit rather than a linear system. There was no scientifically valid threshold determined where along a tributary there is a significant nexus to downstream water quality. (p. 2)

Agency Response: See summary response 8.1 and 8.1.1.

8.479 Ordinary High Water

The definition of a tributary is based on having a bed and bank plus an ordinary high water mark. On ephemeral channels there is rarely water in the channel so an ordinary high water mark is usually speculation. This matter is so confusing to Corps staff that the determination of ordinary high water is buried somewhere in regulatory guidance letters. Usually in first order ephemeral channels the ordinary high water mark cannot be determined and current practice is to say if the tributary (no matter how small) has banks that it has an ordinary high water mark. This bureaucratic isolated decision, that if a channel has banks it has an ordinary high water mark, greatly extended the upstream extent of ephemeral tributaries to what are basically gullies or erosional features. By current interpretation a 1 ft. wide and 1 ft. deep channel is considered waters of the United States by regulators, but what citizen would believe that the federal government claims jurisdiction to such a small featured. Since the ordinary high water mark is so important on determining if a channel is considered waters of the US that this definition should be open for public comment and peer review. (p. 2)

Agency Response: The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. See also summary response to comments 8.1.2.

Anonymous (Doc. #11761)

8.480 It can also be argued that geographically isolated wetlands in the northern Great Plains region are in fact connected to other jurisdictional waters by groundwater connectivity (Van der Kamp and Hayashi 1998, 2009; Whigham and Jordan 2003; Winter and LaBaugh 2003), by surface water connectivity following intense precipitation events (Leibowitz 2003a,b; Leibowitz and Vining 2003; Winter and LaBaugh 2003). In areas of rolling topography, characteristic of the western Prairie Pothole region, isolated wetlands can connect to adjacent surface-water bodies during periods of abundant precipitation and high water levels. In areas of relatively flat topography, surface water connectivity among wetlands is often temporal during unusual precipitation events. It has been clearly demonstrated that southern Great Plains playas are important zones of recharge to the High Plains aquifer and are not strictly evaporative pans (Cronin and Myers 1964; Osterkamp and Wood. 1987; Gurdak and Roe 2009; 2010). (p. 1)

Agency Response: See TSD section 8 for discussion of adjacent waters and section 9.A for discussion of five subcategories of waters that are similarly situated.

Jack Kearns (Doc. #11860)

8.481 Preserving wetlands through regulation is extremely important these days, but any proposed rule must conform to case law. Current post-Rapanos cases require that a wetlands have a significant nexus to downstream water quality, demonstrated by evidence of flowing water, bed and bank, OHWM. See generally Kerns, Cry Me a Nexus, National Wetlands Newsletter, volume 36, Number 5, Sept/Oct 2014. I do not believe that case law supports federal jurisdiction of wetlands connected by an ephemeral flowing tributary to a downstream TNW. On page 22202 of the Federal Register Vol. 79, No. 76, the proposed rule preamble states “The flow in the tributary may be ephemeral...” I do not think it can be proven that an ephemeral tributary will have sufficient flow, over time, to show significant pollutant flow downstream, and I would not want to defend the agency on such a position. See the recent case of *US. Hamilton*, 952 F. Supp. 2d 1271 (D. Ct. Wyoming 2013). “Permanence under the plurality test refers to whether flow exists in a channel over a period of time...what matters is not the amount of water flowing in a given channel but whether water is flowing in that channel.” Ephemeral flow in a tributary is so minimal over time that downstream water quality will not be significantly affected. Even intermittent tributaries may be difficult to prove under the evidentiary proof (agency documentation) now required in the administrative record. (p. 1)

Agency Response: See summary response 8.1.2.

Vicki Watson (Doc. #12081)

8.482 I also feel strongly that any streams that have a bed, bank, and Ordinary High Water Mark should be included in the definition of the “waters of the United States.” (p. 1)

Agency Response: The final rule requires the presence of both bed and banks and another indicator of OHWM to qualify as a tributary.

Office of the Board Attorney, Board of Supervisors Jackson County, Mississippi (Doc. #12262)

8.483 **I. The proposed rule could drastically increase the number of Jackson County-owned public infrastructure ditches subject to the Clean Water Act.**

EPA and the Corps take the position that the proposed definition is fully consistent with long-standing practice and historical implementation. 79 Fed. Reg. at 22192. However, the new definition adds a number of new and unclearly defined terms that could trigger per se CWA jurisdiction over publicly-owned infrastructure ditches.

For example, the proposed rule would effectively expand the reach of CWA jurisdiction by dictating that all “tributaries” and “adjacent waters including wetlands” have a significant nexus and therefore are categorically jurisdictional. 79 Fed. Reg. at 22193. The proposed rule broadly defines “tributaries” as any water that is “physically characterized by the presence of a bed and banks and ordinary high water mark” or any wetland lake or pond regardless of its physical characteristics that “contributes flow either directly or through another water to waters of the United States.” 79 Fed. Reg. at 22201. Under this new provision, many man-made conveyances, including ditches, could become automatically jurisdictional without a case-by-case analysis or any regard to whether its flow is perennial, intermittent, or ephemeral. 79 Fed. Reg. at 22199, 22203-04. (p. 2)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See summary response 8.1.1 and 6.1 for the relevance of flow and summary response 6.2 for excluded ditches.

- 8.484 The proposed rule also states that a wetland may be considered "neighboring" and thus "adjacent" if the ditch connects the wetland to a tributary. Id. When combined with the automatic jurisdictional grant for the previously-described tributaries, it becomes unclear how currently exempt ditches would be distinguishable from jurisdictional ditches. Thus, rather than clarifying, the proposed rule will, at best, add to the confusion and uncertainty surrounding the meaning of "waters of the United States," particularly in regards to streets, gutters, roadside and drainage ditches, and flood channels. At worst, it would—intentionally or unintentionally—lead to the unnecessary and unjustified regulation of many more ditches. (p. 3)

Agency Response: See summary response 6.2 for a discussion of excluded ditches and TSD section 8.B for discussion of connections for neighboring waters.

Mesa County, Colorado Board of County Commissioners (Doc. #12713)

- 8.485 **Normally Dry Tributaries:** In Mesa County, many tributaries to TNWs have flow only during and immediately following precipitation events. These ephemeral tributaries may be considered jurisdictional under the current regulations, if there is a "significant nexus" to a receiving TNW. For a feature that conveys small volumes of flow very infrequently (such as once or twice a year) to a large receiving TNW, the USACE could make a determination that the feature does not have a "significant nexus" and therefore is not WOUS. Under the Proposed Rule, this discretion would be taken away from the USACE and all tributaries, regardless of the flow regime, would be considered WOUS. In Colorado, many small ephemeral drainages would likely be considered WOUS under the Proposed Rule, and impacts to them would likely require Section 404 permitting. As discussed above additional permitting can be very expensive and time consuming for projects. (p. 3)

Agency Response: See summary response 8.1.1.

Milan Township Board of Trustees (Doc. #13044)

- 8.486 For example,

- Wetlands should not be considered “tributaries” in the final rule, as they should have to meet “adjacency” or “significant nexus” tests associated with “adjacent” or “other waters” to be considered “waters of the U.S.” (p. 1)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if

one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

Jason Reott (Doc. #13199)

8.487 I suggest EPA/Corps change the proposed WOTUS rule in the following manner:

- Under Sec. 328.3(a)(6), and all pertinent sections, deletion of the words “All waters, including.” This change still allows EPA/Corps to find adjacent water bodies, such as lakes or ponds, to be waters of the United States through determination of a significant nexus to the tributary system, under 328.3(a)(7) but not by rule. As amended, the section would read:

328.3(a)(6) ” Wetlands adjacent to a water identified in paragraphs (a)(1) through (5) of this section; and⁵⁹⁸ ”

After accepting my suggestion, EPA/Corps will be able to:

- Continue to protect traditionally navigable waters of the United States;
- Continue to protect wetlands adjacent to traditionally navigable waters;
- Continue to protect wetlands adjacent to non-navigable tributaries of traditionally-navigable waters where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months);
- Continue to protect wetlands that directly abut such tributaries.

Additionally, EPA/Corps will have jurisdiction by rule to:

- Protect all natural tributaries, as defined in the rule (“The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or indirectly, to a water identified in paragraphs (a)(1) through (4)”) ⁵⁹⁹; and
- Protect “other waters,” including “isolated wetlands,” lakes, ponds and nearby bodies of water with a significant nexus to any tributary, as decided on a case-by-case basis.

(Bold type indicates consistent with the EPA/Corps’ Joint Memorandum dated Dec. 2, 2008⁶⁰⁰ - i.e., pre-WOTUS rule jurisdiction) (p. 2)

⁵⁹⁸ 79 FR 22863

⁵⁹⁹ 79 FR 22263 (April 21, 2014), Sec. 328.3(a)(5), emphasis in original

⁶⁰⁰ Environmental Protection Agency/Army Corps of Engineers, “Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States* & *Carabell v. United States*,” p. 1, (June 5, 2007) available at <http://www.epa.gov/owow/wetlands/pdf/RapanosGuidance6507.pdf>

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. For further discussion see summary response 8.1.

NRG Energy, Inc. (Doc. #13995)

8.488 Because tributaries would always be considered jurisdictional under the proposed rule, NRG believes that the inclusion of specific language in the rule supporting continuation of the waste treatment system exclusion, as well as other "waters" formally excluded from the definition of “Waters of the U.S.”, is necessary.

As such, NRG requests that the above final sentence from the "tributary" definition be revised as follows:

"A tributary, including wetlands, can be a natural, man-altered, or manmade water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals and ditches not excluded in paragraph (t)O), (2), (3). (4J or (5) of this section." (p. 4)

Agency Response: The final rule provides additional clarity by specifically identifying waters that are excluded from the definition of waters of the U.S. in (b)(1)-(7). See summary responses in section 7 for the specifics of each type of excluded feature.

Todd Wilkinson (Doc. #13443)

8.489 The rule and the definition of "ephemeral" streams would now include streams that do not typically flow. In fact areas that may only flow after heavy rains once every few years would now be Waters of the U.S. Expanding regulations to ephemeral streams is a clear expansion. As proposed the definition used in the rule can be used in conjunction with one another so that if an area isn't a water body it may be a tributary. If it is isolated and does not contribute direct flow, flow might still be indirect, the shallow subsurface water beneath it may be connected to a water body, or it might be in a floodplain, riparian area or watershed and become significant when combined. This conjunctive definitional interpretation will make it virtually impossible for landowners to determine if their land is jurisdictional under the revised WOTUS definition. (p. 1 - 2)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a

significant nexus to (a)(1) through (3) waters. Dry lands have not historically nor are now waters of the U.S. For further discussion of the historic and current extent of jurisdiction in relation to ephemeral streams see summary response 8.1.1.

Newmont Mining Corporation (Doc. #13596)

8.490 Many Ephemeral and Intermittent Drainages Could Be Deemed “Tributaries”: It is highly questionable, to say the least, whether ephemeral and intermittent drainages in the arid and semi-arid West that flow for at most a few days or weeks every year or every few years, and where the flow may reach a TNW or a tributary thereof once every decade, have or could have any impact on a TNW located scores of miles away, let alone a significant impact. As the WAC comments show, the Agencies lack any sound scientific basis for concluding that such drainages could have any such significant adverse impact on a TNW. Nonetheless, under the Proposal, it appears that all such ephemeral and intermittent drainages would be deemed “tributaries” and therefore per se jurisdictional if they physically connect with, and contribute even one drop of surface flow to, a TNW or its major tributaries. Thus, the Proposal defines the term “tributary” to mean any “water physically characterized by the presence of a bed and banks and ordinary high water mark” and “which contributes flow, either directly or through another water,” to a TNW. See, e.g., paragraph (c)(5) at 79 Fed. Reg. 22263. Moreover, a “tributary” as so defined does not lose its status as a tributary if, for any length, there are one or more natural breaks (such as a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. *Id.*

In Newmont’s meetings with Corps and EPA officials, those officials stated that ephemeral and intermittent drainages are jurisdictional under the Proposal, regardless of how infrequently flow is actually observed from the drainage to a seasonal or perennial stream (even if only once every decade or several decades), so long as the drainage has a bed and banks and an ordinary high water mark, and it physically connects (without losing its channel definition) to a TNW or tributary to a TNW. EPA and Corps officials were adamant that the bed, banks, and ordinary high water mark are physical manifestations that the drainage has a high enough volume, frequency, and duration of flow that it “contributes flow” to a TNW or tributary system. See also, 79 Fed. Reg. 22202 (stating these features “generally are physical indicators of water flow”). Thus, in the Agencies’ view, regulators need not demonstrate that an ephemeral or intermittent drainage actually “contributes flow” – even one drop of water – to a TNW to be considered a jurisdictional “tributary”; rather, so long as the drainage has the physical characteristics defined by the Agencies as indicating flow, and the drainage channel connects by surface to a TNW or a tributary of a TNW, it is per se jurisdictional. This approach fails to conform with the morphogenesis of certain features in the Great Basin, where some drainages are established during very rare (hundreds of years) extreme precipitation events.

The Agencies’ assertion of jurisdiction over all such “tributaries” is a reversal of the position taken in the 2008 Guidance, and is directly contrary to Justice Kennedy’s “significant nexus” test set forth in the *Rapanos* decision. It is also contrary to the *Rapanos* plurality’s concept of a “tributary,” which requires that streams flow continuously at least seasonally to be considered per se jurisdictional. In Newmont’s

view, the Agencies' position in the 2008 Guidance that only "relatively permanent" tributaries are per se jurisdictional is reasonable, while the definition of a tributary in the Proposal is not. Drainages that rarely flow, and in particular ephemeral or intermittent drainages that flow once every decade or so, cannot rationally be said to affect in all cases, much less to significantly affect, the chemical, physical, or biological integrity of a downstream TNW, which in the arid/semi-arid West would be many, many miles away. To the extent the Agencies are relying on the U.S. EPA Draft Report: "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of Scientific Evidence" (Docket No. EPA-HQ-OA-2013-0582 (November 6, 2013)) to support the proposed definition of "tributary," Newmont notes that, as explained in the WAC comments, the science underlying this Report deals mostly with areas of the U.S. where ephemeral and intermittent drainages do experience significant flows on an annual basis, not with the arid/semiarid West.

As such, and as we discuss more fully below, we believe that the Agencies must, at a minimum, exclude ephemeral and intermittent drainages from the category of per se jurisdictional waters and include flow volume and duration requirements when determining on a case-by-case basis the jurisdictional status of particular ephemeral and intermittent drainages. Absent such changes to the Proposal, there is a significant chance that many ephemeral and intermittent drainages on Newmont's properties that no regulator would ever heretofore have considered as even potentially jurisdictional (because their flow is so small that they could not, under any stretch of the imagination, significantly affect a downstream TNW), might now be regulated as "tributaries." (p. 29-32)

Agency Response: See summary response 8.1 and 8.1.1. and responses in TSD and elsewhere that explain the legal and technical basis for the definition of tributary.

Southern Environmental Law Center et al. (Doc. #13610)

8.491 If a water is outside the floodplain and riparian areas, the Corps should be able to use best professional judgment to claim the water as jurisdictional as long as there is a chemical, physical, or biological connection. (p. 44)

Agency Response: See TSD section 8.B.

D. Fleming (Doc. #13654)

8.492 Ordinary High Water

The definition of a tributary is based on having a bed and bank plus an ordinary high water mark. On ephemeral channels there is rarely water in the channel so an ordinary high water mark is usually speculation. This matter is so confusing to Corps staff that the determination of ordinary high water is buried somewhere in regulatory guidance letters. By current interpretation a 1 ft. wide and 1 ft. deep channel is considered waters of the United States by regulators, but what citizen would believe that the federal government claims jurisdiction to such a small featured. Since the ordinary high water mark is so important on determining if a channel is considered waters of the US that this definition should be open for public comment and peer review. (p. 1 – 2)

Agency Response: The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Ephemeral streams have historically been regulated under the CWA and OHWM has been identified and used to determine the lateral extent of jurisdiction in these ephemeral streams. See summary response to comments 8.1.2 for further explanation.

8.493 Tributary Definition

We object to the definition of a tributary as it extends definition of waters of the US upstream to erosional features, and stretches of a channel that are merely short term conduits for surface water that have no significant nexus to downstream water quality. (p. 2)

Agency Response: See summary response 8.1. and responses that distinguish landscape features like gullies and rills.

Tamara Choat (Doc. #13701)

8.494 If the proposed rule cannot be dropped, the following concerns and recommendations should be addressed.

1. Remove the expansion of the Clean Water Act to intermittent and ephemeral non-navigable streams, which are defined as tributaries and per se jurisdictional under the proposed rule.
2. Remove the inclusion of ditches in the definition of tributary. (p. 1)

Agency Response: Waters of the U.S. has historically included intermittent and ephemeral streams and some ditches. The final rule clarifies the extent of tributaries by adding additional context and field indicators to the definition and specifically identifying the features that excluded from the definition of waters of the U.S in (b)(1) – (7). See summary response 8.1 for further discussion of the definition of tributaries and 8.1.1 for the relevance of flow regime.

8.495 Air emissions from industrial plants - In recent years, EPA has argued that a point source discharge occurs under the Clean Water Act when an industrial plant or other facility vents or emits dust or other materials to the ground outside, where they are carried by rainfall or snow runoff into jurisdictional waters. In EPA's view, the facility (which is itself the point source) makes a regulated discharge when it exhausts dust or other airborne materials from an enclosed facility to the ground where rainwater carries it to receiving waters. Under the proposed rule, in many cases EPA would not even need to show that stormwater has carried materials to a current WOTUS. Instead, by regulating parts of the facility grounds as ephemeral tributaries or adjacent waters, the agency may claim an unlawful discharge simply by showing that air emissions have been deposited to the on-site features themselves. (p. 22)

Agency Response: The definition of discharge and point source are outside the scope of this rule and a case specific analysis of permitting requirements of a facility are also outside the scope of this rulemaking effort. The exclusion of certain stormwater features from the definition of waters of the U.S. is discussed in the summary response 7.4.4.

8.496 “Tributary”

The Agencies’ proposed definition of “tributary” is extraordinarily vague and overbroad. The definition would cover just about anything that conveys water and is not otherwise ruled out by narrow exclusions. A “tributary”:

- Need only demonstrate the bare minimum evidence of a water’s flow through any channel, a bed, bank and ordinary high water mark;
- Can be anything that “contributes” even the tiniest amount of water;
- May only “contribute” water infrequently, e.g., during rare, extreme precipitation events;
- May only contribute water to major waters by an “indirect” route through another “water,” which in turn also could convey only small, infrequent flows via indirect routes; and
- Can include even “upland” ditches, if they include areas that can be characterized as “wetland” anywhere along their entire length, or if they occasionally receive stormwater overflow from any “wetland” or other water.

In essence, the definition of “tributary” will cover virtually anything (not explicitly excluded) where water flows enough to make a mark (ordinary high water mark, which can be nothing more than disturbed vegetation or soil) that is capable of “contributing” any amount of flow (even a trickle) to a downstream location that eventually connects to larger water bodies.

Is a ditch a “tributary”? In most cases, yes. This rulemaking is the first time the Agencies’ have specifically included ditches within the definition of “tributary.” Like many other aspects of the proposal, however, the jurisdictional coverage of ditches is unclear. The proposal provides, in part, that: “[a] tributary ... includes water such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraphs (b)(3) or (4) of this section.” 79 Fed. Reg. 22,207. Most industrial, municipal, and agricultural ditches will not be excavated wholly in uplands, drain only uplands, and have less than perennial flow. Most ditches will also eventually contribute some sort of flow to larger waters. This is precisely why ditches exist in the first place—to carry water away. Therefore, most ditches will meet the definition of a tributary and would not be excluded from CWA permitting requirements. (p. 27 – 28)

Agency Response: Waters of the U.S. has historically included intermittent and ephemeral streams and some ditches. The final rule clarifies the extent of tributaries by adding additional context and field indicators to the definition and specifically identifying the features that excluded from the definition of waters of the U.S in (b)(1) – (7). See summary response 8.1 for further discussion of the definition of tributaries and 8.1.1 for the relevance of flow regime. See summary response 6.2 for excluded ditches.

Big Horn County State of Wyoming (Doc. #14571)

8.497 The proposed rule includes expansive new definitions of tributaries, neighboring, and adjacent waters. These definitions are crucial to the implementation of the proposed rule,

and will be covered below for their potential impact on Big Horn County. However, the proposed rule explicitly reads that waters which qualify under these new definitions would be jurisdictional waters of the United States, by rule no additional analysis would be required. Such a blanket declaration of jurisdictional authority establishes a presumption that every stream, dry creek bed and ditch not explicitly exempted by the rule (another area of significant confusion) is automatically a water of the U.S. even if it cannot be immediately determined to meet the new qualifications of jurisdictional water. (p. 3)

Agency Response: The final rule clarifies the extent of tributaries by adding additional context and field indicators to the definition and specifically identifying the features that excluded from the definition of waters of the U.S in (b)(1) – (7). See summary response 8.1 for further discussion of the definition of tributaries and 8.1.1 for the relevance of flow regime. See summary response 6.2 for excluded ditches.

Waters of the United States Coalition (Doc. #14589)

8.498 [T]he proposed changes to the definitions of “adjacent waters” and “neighboring” will reach numerous waters that were previously outside the jurisdiction of the Clean Water Act. We request that ACOE’s jurisdiction be limited to the ordinary high water mark (“OHWM”) of traditional navigable waters and natural streams tributary thereto. A broad definition that covers multiple types of features that may or may not have an OHWM will only create confusion. The rule notes that uplands within floodplains are never waters of the U.S., but without requiring the physical presence of a defined OHWM, jurisdictional areas could easily be expanded. (p. 15)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. Dry lands have not historically nor are now waters of the U.S.

The Clean Energy Group Waters Initiative (Doc. #14616)

8.499 [T]he proposed definitions of tributary should be revised as follows to make clear that the wastewater treatment exclusion applies regardless of other aspects of the rule, with additions in **underlined bold** and deletions shown in ~~strikethrough~~.⁶⁰¹⁶⁰²

⁶⁰¹ Additionally, please see recommended language in the following section regarding a distinct exemption or exclusion for reserve cooling water impoundments, canals, and water conveyances, which are not traditionally considered part of a waste treatment system but also should not be considered WOTUS.

⁶⁰² Our proposed revisions include additional changes to the definition of “tributary” that are addressed later in these comments.

(5) Tributary. The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section **provided that hydric soils or hydrophytic vegetation are present**. In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (a)(1) through (3) of this section **provided that hydric soils or hydrophytic vegetation are present**. A water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break. **However, these interrupted portions are not considered a jurisdictional tributary.** A tributary, including wetlands, can be a natural, man-altered, or man-made water and includes waters such as rivers, streams, lakes, ponds, impoundments, canals, and ditches not excluded in paragraph (b)(1), (3), or (4) or (6) of this section. **Man-made structures with engineered bed, banks and top of banks that are not created from jurisdictional waters or whose construction pre-dates the Clean Water Act are not considered a jurisdictional tributary.** (p. 6)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. The agencies will continue to assert jurisdiction over manmade and man-altered waters which fit under the definition of tributary, unless specifically excluded in (b)(1)-(7). The agencies did not add a requirement for hydric soils or hydrophytic vegetation for (a)(1) through (a)(4) waters to serve as a connection in the tributary network as suggested in the comment above, such a restriction is not supported by the science. The Connectivity Report and agency experience support the treatment of manmade and man-altered systems as laid out in the final rule, for further discussion see the TSD.

State of Oklahoma (Doc. #14773)

8.500 I also disagree with the determination that ephemeral streams should be subject to the proposed WOTUS rule. Similar to the floodplain definition, the ephemeral definition provided in the proposed WOTUS rule is inconsistent with Oklahoma's definition of ephemeral streams in our water quality standards. These differing definitions are examples of the confusion created by the proposed WOTUS rule and would add an additional burden on landowners, developers and other stakeholders who will be required to operate between conflicting technologies. (p. 2)

Agency Response: See summary response 8.1 for further discussion of the definition of tributaries and 8.1.1 for the relevance of flow regime.

Patti Buck (Doc. #14825)

8.501 As an example, you now have included my agricultural ditches into the category of “tributaries?” This is inappropriate. The two exclusions you have provided for ditches are not adequate to alleviate the enormous burden you just placed on the entire agriculture community. “Ditches” should not be waters of the U.S. Farm ponds should not be waters of the U.S. Dry washes, dry streambeds, and ephemeral streams should not be waters of the U.S. (p. 1)

Agency Response: See summary response 8.1 for discussion of the definition of tributaries and 8.1.1 for the relevance of flow regime. See summary response 6.2 for excluded ditches.

Clean Water Action (Doc. #15015)

8.502 **We strongly support the Agencies’ proposal to categorically include all tributaries, regardless of size or frequency of flow, within the jurisdiction of the Clean Water Act.** Tributaries have a direct impact on the physical, chemical and biological integrity of downstream waters, and this decision is grounded in the best available peer-reviewed science, as summarized in EPA’s draft Connectivity of Streams and Wetlands to Downstream Waters, which is a synthesis of over 1,000 peer-reviewed studies. This determination has also been found to be scientifically sound by the Science Advisory Board (SAB) panel that reviewed the proposed rule.⁶⁰³

Headwater streams provide most of the flow to downstream streams and rivers. Intermittent and ephemeral streams may only flow during parts of the year, but they support water quality in downstream waters by filtering pollutants and capturing nutrients. Headwaters and intermittent and ephemeral tributaries make up 60 percent of the stream miles in the continental U.S.⁶⁰⁴ Indeed, scientists have discovered that even when streams lack surface flows, they are “critical conduits for water, energy, material, and organisms” and “shallow subsurface flows may often connect dry parts of a stream or river,” thus providing critical water supply to downstream perennial streams or rivers.⁶⁰⁵

Headwater and seasonal streams also feed the drinking water sources of 117 million Americans⁶⁰⁶. Clarifying that all tributary streams, regardless of size or frequency of flow, are covered under the CWA will restore protections to hundreds of thousands of miles of streams that one in three Americans depend on for drinking water.⁶⁰⁷ (p. 2 – 3)

⁶⁰³ U.S. EPA Science Advisory Board, Science Advisory Board (SAB) Consideration of the Adequacy of the Scientific and Technical Basis of the EPA’s Proposed Rule titled “Definition of Waters of the United States under the Clean Water Act,” EPA-SAB-14-007, (Sept. 30, 2014) (hereinafter “SAB Rule Review Letter”), available at <http://yosemite.epa.gov>.

⁶⁰⁴ <http://water.epa.gov/type/rsl/streams.cfm>

⁶⁰⁵ Acuna, et al, “Why Should We Care About Temporary Waterways?” Science Vol. 343 (March 7, 2014)

⁶⁰⁶ http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm , Last accessed November 12, 2014.

⁶⁰⁷ *Id.*

Agency Response: See summary response 8.1 for discussion of the definition of tributaries and 8.1.1 for the relevance of flow regime.

- 8.503 **We recommend that the definition of “tributaries” be broadened to ensure that all tributaries across a range of regional and climatic variations are categorically protected under the CWA.** Under the current proposal, a tributary must possess an ordinary high water mark (OHWM) to be considered jurisdictional, even though the agencies acknowledge in the preamble for the rule that in low-gradient and arid regions the presence of an OHWM or even bed and bank may be discontinuous or difficult to observe.⁶⁰⁸ Ephemeral streams and even some intermittent streams frequently lack an obvious OHWM because “the climate of the region drastically influences the hydrology, channel-forming processes, and distribution of OHWM indicators such that delineations can be inconsistent and problematic.”⁶⁰⁹ Even in non-arid regions, Army Corps of Engineers staff have found delineating non-perennial streams relying solely on the presence of an OHWM to be a challenge.⁶¹⁰

Intermittent and ephemeral streams account for over 60% of the stream miles in the continental United States.⁶¹¹ In arid and semi-arid states like Arizona, New Mexico, Nevada, Utah, Colorado and California over 81% of streams are classified as ephemeral or intermittent.⁶¹² These seasonal and rain dependent streams feed our nation’s public drinking water sources, and not just in states like Arizona where they account for 79% of drinking water sources, but even in non-arid states like Arkansas they account for 65% of the stream miles in Source Water Protection Areas.⁶¹³ Nationally, intermittent and ephemeral streams account for 58% of the total stream miles in Source Water Protection Areas.⁶¹⁴ It is imperative that the definition of tributaries be written broadly enough so it is clear that all tributaries in Source Water Protection Areas are protected by the CWA, regardless of whether or not they possess an identifiable OHWM.

Our concern about this narrow legal definition of tributaries is shared both by members of the SAB panel that reviewed the proposed rule and by other experts on stream ecology.⁶¹⁵ The SAB panel suggested that the agencies change the wording of the definition of tributaries to “bed, bank and other evidence of flow” and not have the presence of an

⁶⁰⁸ Fed. Reg. 79 at 22202 (April 21, 2014)

⁶⁰⁹

http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf at 1. Last accessed November 12, 2014.

⁶¹⁰ http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/west_mt_finalsupp_aug2014.pdf Last accessed November 14, 2014.

⁶¹¹ <http://water.epa.gov/type/rsl/streams.cfm>

⁶¹² Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest. U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046

⁶¹³ http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm Last accessed November 12, 2014.

⁶¹⁴ *Id.*

⁶¹⁵ SAB Rule Review Letter at 2; Acuna, et al, “Why Should We Care About Temporary Waterways?” Science Vol. 343 (March 7, 2014)

order high water mark (OHWM) be a required attribute for a stream to be considered a jurisdictional tributary under the CWA.⁶¹⁶

Acuna, et al (2014) recommend an even boarder definition that would ensure “temporary waterways” (which include ephemeral streams) are legally defined as “waters of the U.S.” - if “(i) they flow at some times and this flow connects them to a river network, or (ii) if they are habitat for obligate aquatic organisms or terrestrial organisms unique to dry river beds.”⁶¹⁷

Broadening the legal definition of tributaries is critical, because as the proposal is currently written, only streams that meet the definition of “tributaries” will be categorically protected under the CWA. As our water resources deal with additional stressors brought on by climate change, it will become even more urgent for all seasonal and rain dependent streams to be afforded strong and clear protections. In certain regions of the country scientists have already observed historically perennially flowing streams shifting to temporarily flowing streams due to climate change or over extraction of water.⁶¹⁸ (p. 3 - 4)

Agency Response: See summary responses 8.1 and 8.1.2.

The Heritage Foundation (Doc. #15055)

8.504 *All Tributaries are not “Waters of the United States”*

In the proposed rule, the agencies conclude that all tributaries should be per se “Waters of the United States” (or categorically jurisdictional). The agencies point to Justice Kennedy’s concurrence in *Rapanos*:

While Justice Kennedy focused on adjacent wetlands in light of the facts of the cases before him, it is reasonable to utilize the same standard for tributaries. As discussed in this preamble, based on a detailed examination of the scientific literature, the agencies conclude that tributaries as they propose to define them perform the requisite functions identified by Justice Kennedy for them to be considered, as a category, to be “Waters of the United States.”⁶¹⁹

The agencies are acknowledging that Justice Kennedy was solely “focused on adjacent wetlands,” but are still trying to cover additional waters. The EPA and Corps are justifying this extreme overreach based on the science, yet ironically, the agencies have not even waited for the final scientific report before taking such an action.

Further, quite simply, it is *unreasonable* to utilize this same standard for tributaries. There is no indication in *Rapanos* that Justice Kennedy supported such broad coverage of the law. In fact, the opposite is true.

⁶¹⁶ SAB Rule Review Letter at 2.

⁶¹⁷ Acuna, et al, “Why Should We Care About Temporary Waterways?” Science Vol. 343 (March 7, 2014)

⁶¹⁸ *Id.*

⁶¹⁹ *Federal Register*, Vol.79, No. 76 (April 21, 2014), p. 22204.

He makes it clear that at least some tributaries should not be categorically jurisdictional. For example, when analyzing whether wetlands adjacent to tributaries should be jurisdictional, he explains:

Yet the breadth of this standard – which seems to leave wide room for regulation of drains, ditches, and streams remote from any navigable-in-fact water and carting only minor water volumes towards it – precludes its adoption as the determinative measure of whether adjacent wetlands are likely to play an important role in the integrity of an aquatic system comprising navigable waters as traditionally understood.⁶²⁰

Under the proposed definition of tributary, these types of waters (“drains, ditches...”) would be covered. Justice Kennedy was concerned about the regulation of the very waters that the agencies now want to make categorically jurisdictional. (p. 3 – 4)

Agency Response: See summary response 8.1 and the TSD and Agency responses explaining the legal basis of the rule in light of relevant court cases.

Lea Soil and Conservation District Board of Supervisors (Doc. #15144.1)

- 8.505 Section (a)(5) and definition of “tributary”: For legal and scientific clarity, the agencies should withdraw the Proposed Rule and replace it with a rule that defines tributaries as only those waters that maintain a permanent, surface water connection to an (a)(1) or (a)(3) water. (p. 3)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. For further discussion of the definition of tributary see summary response 8.1.

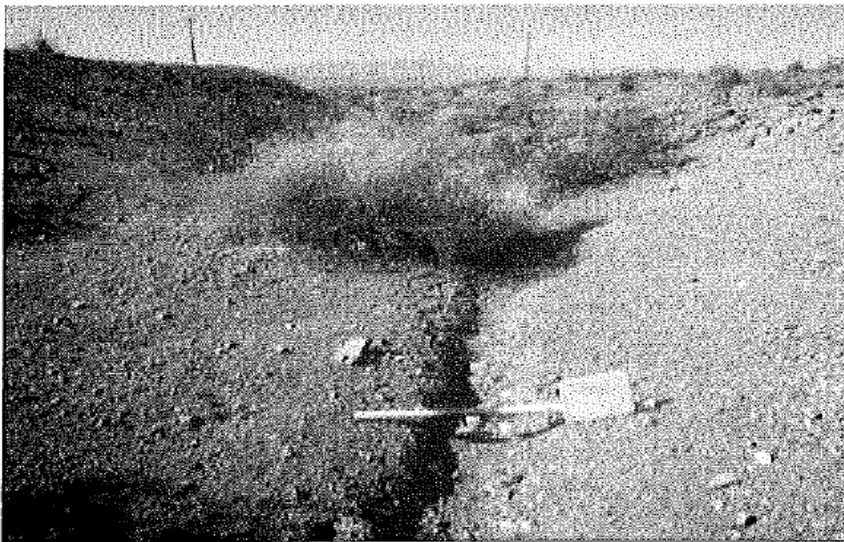
- 8.506 Specific comment was requested concerning whether in-channel “wetlands” should be included with tributaries or adjacent waters. Logically, they seem better positioned in the realm of adjacent waters. Placing them in the category of tributaries runs contrary to that definition’s requirements for a bed, banks and an ordinary high water mark. (p. 8)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

⁶²⁰ *Rapanos v. U.S.*, 547 U.S. 715, 767.

Arizona Department of Transportation (Doc. #15215)

8.507 ADOT agrees with the need to clarify the definition of waters regulated under the Clean Water Act and appreciates the use of a rulemaking to provide that clarification. In addition, ADOT understands that the EPA and the Corps have emphasized that the intent of the rule is not to expand the Corps' jurisdiction under the Clean Water Act. However, despite this intent, without further clarification, the Proposed Rule as written could expand the Corps' jurisdiction. The confusion is primarily caused through the proposed definition of "tributary." The proposed definition of "tributary" states: "The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section." The proposed rule also states that gullies, rills, and non-wetland swales are exempt from regulation. The EPA and Corps acknowledge in Part III. F. 2, of the preamble that rills, gullies, and non-wetland swales may contribute flow to a tributary with steep side slopes. Gullies and rills are further defined in Part III. 1, including gullies that are commonly found in areas of low density vegetative cover or with soils that are highly erodible and are younger than streams in geologic age, and that rills are formed by overland water flows. This section also states that both rills and gullies typically lack an Ordinary High Water Mark (OHWM). The December 2, 2008 Corps/EPA guidance memorandum excluded swales or erosional features (including gullies, small washes characterized by low volume, infrequent, or short duration flow). Overall, ADOT feels that the proposed definitions do not provide enough clarification of what constitutes a small tributary compared to a rill or gully, and the determination of the presence or absence of an OHWM can be subjective (see Photo 1, below). In addition, the exemption of small washes from the 2008 guidance is lost in the proposed rule. The arid west landscape is covered with small drainages and under the proposed rule it is unclear when an erosional feature (such as a rill or gully) would be considered to be a tributary by the Corps.



(p. 1 – 2)

Agency Response: See summary response at 8.1 for definition of tributary, 8.1.2 for efforts to improve OHWM determination especially arid regions, and 7.3.7 for discussion of gullies and rills.

Southern Ute Indian Tribe Growth Fund (Doc. #15386)

- 8.508 The Proposed Rule should be modified to identify tributaries that have a 'relatively permanent flow,' meaning that they 'typically flow year-round or have continuous flow for at least 90 days' are jurisdictional by rule. If relatively permanent flow is not found, tributaries should be evaluated on a case specific basis to determine if the tributary has a significant nexus to a water identified in sections (a)(1) through (3) of this Proposed Rule. A definition of relatively permanent flow should also be added to the rule. (p. 6)

Agency Response: See summary response 8.1.1.

- 8.509 Wetlands that connect jurisdictional tributary segments should be excluded from the definition of "tributary" because they generally lack a defined bed, bank, and OHWM. These types of wetlands should be considered an adjacent water and thus remain jurisdictional. (p. 7)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional "waters of the United States" as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

Wyoming County Commissioners Association (Doc. #15434)

- 8.510 As noted by the Congressional Research Service, the rule defines tributary for the first time and does so "broadly." The WCCA objects to this expansive definition that automatically declares a tributary a water of the U.S. even if it only sometimes contributes flow to another water that only sometimes contributes flow to still another water, and on and on until eventually the flow drains into a currently jurisdictional water. At best, when combined with the terms "adjacent," "neighboring," and excluded "ditches," the definition provides no certainty to Wyoming's counties or their constituents about what is considered jurisdictional waters, even when they flow for only very brief periods. At worst, when taken in the context of the recently released and aforementioned USGS maps, the definition could be construed to wrest jurisdictional control of all of Wyoming's approximately 270,000 miles of streams, over 80% of which are intermittent or ephemeral. In response to requests from the House Committee on Science, Space and Technology, the EPA insists that the USGS maps have not been used for regulatory purposes, and further, that the "EPA is not aware of maps prepared by any agency, including the EPA, of waters that are currently jurisdictional under the CWA or that would be jurisdictional under the proposed rule."

The EPA's response poses two related problems. First, given the domino effect of the tributary definition, the USGS maps illustrate the potential reach of the proposed rule

regardless of the EPA's use of the maps to date. As a headwaters state, Wyoming is particularly sensitive to the discussion of headwaters in the proposed rule (see the Sublette County discussion above and the Park County discussion below). The EPA repeatedly argues that headwaters are particularly important to regulate because of their effects on downstream, jurisdictional waters, even if the headwaters are intermittent, ephemeral, or are a "substantial distance from the nearest [jurisdictional water]. The EPA claims that no case-specific analysis is necessary on these often dry creek beds because "tributaries, including headwaters, intermittent, and ephemeral streams, and especially when all tributaries in a watershed are considered in combination, have a significant nexus to traditional navigable waters (emphasis added) Despite the EPA's claims of a limiting rule, it is difficult for a reasoned observer to not view these statements in plain writing as a dramatic and unprecedented grab for federal authority. The second problem posed by the EPA's response to the House Committee on Science, Space, and Technology is that if the USGS maps have not been used as EPA claims, and if no such maps exist in any agency, then clarity as to what is a tributary and what is not simply cannot be offered by the EPA, USACE or any other agency. No baseline data exists, and no map exists to show potential impacts. (p. 5-6)

Agency Response: Waters of the U.S. has historically included intermittent and ephemeral streams and some ditches. The final rule clarifies the extent of tributaries by adding additional context and field indicators to the definition and specifically identifying the features that excluded from the definition of waters of the U.S in (b)(1) – (7). See summary response 8.1 for further discussion of the definition of tributaries and 8.1.1 for the relevance of flow regime. See summary response 6.2 for excluded ditches. Determinations of jurisdiction are done on a case by case basis based on the best information available and they are only valid for five years because environmental conditions which can shape the outcome can change over time. For example changes in ground and surface water levels due to changes in water usage and losses through evapotranspiration. While maps of all the jurisdictional or non-jurisdictional waters are not feasible, the agencies have provided clarity in terms of the identifying features and analysis required to determine the jurisdictional status of a given waterbody.

Pennsylvania Farm Bureau (Doc. #15508)

- 8.511 Furthermore, "ordinary high water mark" is a term that encompasses any physical sign of water flow, such as changes in the soil, vegetation or debris. When rainwater flows through any path on the land, it tends to leave some sort of mark, even if flows are infrequent. EPA and ACOE themselves recognize that the definition of OHWM is vague, ambiguous and inconsistently applied. In fact, in its comments, AFBF noted that an official from the ACOE Philadelphia District has observed that, due to inconsistent interpretations of the OHWM concept, as well as inconsistent field indicators and delineation practices, identifying precisely where the OHWM ends is simply a matter of judgment, so reliance on this term provides neither certainty nor clarity. Moreover, ACOE is reportedly in the process of redefining how it determines an OHWM, yet nowhere in the proposal do the agencies signal to the public that this behind-the-scenes change is occurring, placing a key term in the proposed rule beyond public comment. (p. 9)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. Where the physical characteristics of bed and banks and another indicator of ordinary high water mark no longer exist or are actively manipulated, the presence of bed and banks and OHWM may be determined by using other appropriate means that consider the characteristics of the surrounding areas. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Countrymark Cooperative Holding Corporation, LLC; Countrymark Refining and Logistics, LLC (Doc. #15656)

- 8.512 Provide clear definitions of "rill," "gully," and "swale," that exclude from federal jurisdiction any erosion feature on the land caused by water runoff, whether or not an Agency official believes they can discern a bed, bank or ordinary high water mark. (p. 4)

Agency Response: See summary response at 7.3.7.

- 8.513 Nothing in the current regulation includes ephemeral streams and EPA and the Corps did not consistently consider ephemeral streams to be tributaries until 2000, when the preamble to the Corps Nationwide Permits preamble specified that jurisdiction extends to ephemeral streams, provided they have an ordinary high water mark (OHWM) - reversing the prior position of some Corps districts that declined to assert jurisdiction over ephemeral streams. However, this new Corps policy was at the root of the Supreme Court case, *Rapanos v. United States*, 547 U.S. 715 (2006). In that case, the Agencies had attempted to assert jurisdiction over a ditch that drained a wetland but was very distant from any traditional navigable water. The case did not result in one clear test for jurisdiction, but four justices (the plurality) were joined by one justice (Justice Kennedy) in finding that the Agencies had overreached and they remanded the case back to the lower courts. In *Rapanos*, the Corps took the position that anything that had a bed, a bank and an ordinary high watermark was within their jurisdiction. Both the plurality and the Kennedy opinions disapproved this interpretation of the law and required more than that to establish federal jurisdiction. Under both opinions, there must be a surface water connection to a traditional navigable water. However, a surface hydrologic connection alone is not sufficient to establish jurisdiction. "[R]elatively continuous flow is a necessary condition for qualification as a 'water,' not an adequate condition." 547 U.S. at 736 n.7 (emphasis in original) (plurality opinion). "[M]ere hydrologic connection should not suffice in all cases; the connection may be too insubstantial for the hydrologic linkage to establish the required nexus with navigable waters as traditionally understood." *Id.* at 784-85 (Justice Kennedy concurring). In fact, Justice Kennedy criticized the plurality opinion for allowing jurisdiction to be based on a hydrologic connection involving relatively continuous flow without requiring a significant nexus. *Id.* at 776-77 ("by saying

the Act covers wetlands (however remote) possessing a surface-water connection with a continuously flowing stream (however small), the plurality's reading would permit applications of the statute as far from traditional federal authority as are the waters it deems beyond the statute's reach"). The Proposed Rule would reinstate the Corps' prior attempts to assert jurisdiction over every so-called tributary based on the presence of a bed, a bank, and an OHWM based on ecological, not hydrological, connections. This goes beyond the Agencies' pre-2000 assertions of jurisdiction and beyond the limits set forth by the Supreme Court. And, as discussed below, it has created great uncertainty regarding the proposed scope of federal jurisdiction. (p. 5-6)

Agency Response: See summary response 8.1.1 and 8.1.2 for historic regulation of ephemeral streams by the agencies and the TSD and summaries in compendium 10 for legal analysis of the Rapanos opinion.

- 8.514 The Proposed Rule exempts gullies, rills, and non-wetland swales but does not define these terms in the rule language. The preamble defines gullies as: "relatively deep channels that are ordinarily formed on valley sides and floors where no channel previously existed." 79 Fed. Reg. at 22,218. The preamble defines rills as follows: "Rills are formed by overland water flows eroding the soil surface during rain storms." Id. According to the preamble, "Swales are distinct from streams in that they are non-channelized, shallow trough-like depressions that carry water mainly during rainstorms or snowmelt." Id. at 22,219. According to the EPA, gullies, rills, and swales "typically lack an OHWM." Id. Thus, the distinction between an ephemeral stream that is categorically jurisdictional under the Proposed Rule and an exempt gully, rill or swale is whether or not a Corps or EPA official thinks they can discern physical evidence of fluctuations in the lateral extent of the channel based on a natural line impressed on the banks, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. 33 CFR 328.3(e). This is a highly subjective determination and is improper. As a result of this subjectivity, any two persons may disagree regarding whether a feature that is wet when it rains is an exempt gully, rill or swale or a tributary that is per se part of the "waters of the United States." (p. 6-7)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. Where the physical characteristics of bed and banks and another indicator of ordinary high water mark no longer exist or are actively manipulated, the presence of bed and banks and OHWM may be determined by using other appropriate means that consider the characteristics of the surrounding areas. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. Any feature that does not meet these requirements, such as gullies, rills and swales, will not qualify as a tributary. These explicit requirements in the final rule provide regulatory certainty while continuing to rely on field indicators with a long history of use in the regulatory program. The agencies plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, especially in the western US where two guidebooks for OHWM identification have already been developed, see

<http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

- 8.515 This explanation does not provide any clarity so literally all water located in a flood plain or a riparian area could be regulated. This would include standing water and runoff from rain and snowmelt unless clearly excluded as a rill or gully or swale. And, if water is defined to include "aquatic systems" "as a whole," as described in the preamble, then jurisdiction could extend to the land as well as water based on the presence of plants, animals and insects. In addition, even if a water is outside the flood plain or riparian area, the definition of neighboring includes water connected to a jurisdictional by a shallow subsurface or confined surface connection. Neither of these terms is defined. However, the preamble to the proposed rule uses gullies, rills, and swales as examples of confined surface connections. So, theoretically, even if an erosional feature on the land is not itself a water of the United States, it can form a connection between water. For example, a low area of land that collects standing water could be jurisdictional even if it does not exhibit wetland features, and even if it is not in a flood plain or riparian area, if it is connected to a tributary by a swale, rill, or gully. (p. 8)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional "waters of the United States" as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. Dry lands have not historically nor are now waters of the U.S. See TSD section 8 for further discussion of neighboring and the types of connections needed to determine adjacency.

- 8.516 ~~All~~ Tributaries of waters identified in paragraphs (s)(1) through (4) of this section; (p. 14)

Agency Response: The final rule retains the "all" in (a)(5).

- 8.517 (5) Tributary. The term means a surface water channel below the headwaters that is physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another surface water, to a water identified in paragraphs (s)(1) through (4) of this section. ~~In addition, wetlands, lakes, and ponds are tributaries (even if they lack a bed and banks or ordinary high water mark) if they contribute flow, either directly or through another water to a water identified in paragraphs (s)(1) through (3) of this section. A surface water that otherwise qualifies as a tributary under this definition does not lose its status as a tributary if, for any lengths, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identifies upstream of the break. A tributary, including wetlands, can be a natural, man-altered or man-made water and includes waters such as rivers, streams, lakes, ponds,~~

~~impoundments, canals, and ditches not excluded in paragraph (t)(3) or (4) of this section.~~
(p. 16)

Agency Response: See (b)(3) for the final definition and summary response 8.1 for a discussion of the definition.

8.518 (12) Ordinary high water mark is the width of the channel that carries the mean annual flow. (p. 17)

Agency Response: No response required.

K. Ransford (Doc. #15675)

8.519 6. This rule will take away ambiguity and make it easier to administer. States in the west are constantly denying that surface and groundwater flows are connected. These water sources almost always are. The proposed rule will clarify that this connection exists, and better enable the EPA to guard our nation's rivers. (p. 1)

Agency Response: The agencies agree, no response required.

Anonymous (Doc. #16234)

8.520 The one place where they reveal their plan is when they claim that a wetland that does NOT flow into navigable waters has a NEGATIVE effect 011 navigable waters because of its LACK of effect. This is not only nonsense, it is directly contrary to the Supreme Court's *Rapanos* decision.

All of the language in the proposed regulations that reaches beyond navigable waters, their direct tributaries, and wetlands that directly flow into either, should be rejected because it rejects the statutory requirement that CWA enforcement must be tied to navigable waters. (p. 2)

Agency Response: See the TSD and summary responses in section 10.

North Dakota Farmers Union (Doc. #16390)

8.521 "Wetland as a "Tributary"

We are particularly concerned about including "wetlands" in the definition of tributaries. Wetlands are not tributaries under any legal, plain language, or common sense understanding. If a discharge into a wetland is significantly affecting a navigable water, it will be jurisdictional as an "adjacent water" or significant nexus analysis of "other waters." Further, finding jurisdiction over the wetland as a tributary will only further confuse - not provide clarity to - farmer and rancher community.

Recommendation: We strongly request that "wetlands" are removed from any definition of tributary. (p. 4)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional

“waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters.

Virginia Poultry Federation (Doc. #16604)

8.522 In defining a tributary as a drainage feature having a bed, bank, and an ordinary high water mark (OHWM), the agencies want the public to believe that the assertion of CWA authority over "tributaries" is appropriate. This assertion fails to recognize the unnecessary inclusion of other land features that fall within the definition of "Tributary", such as these areas with drainage features that do not resemble any stream, brook or creek. Instead, the agencies advance new jurisdictional authority by introducing ambiguity and vague concepts of connectivity. The agencies justify this effort to broaden the boundaries of what the agencies consider a tributary because in "some regions of the country where there is a very low gradient, the banks of a tributary may be very low or may even disappear at times." 79 Fed. Reg. at 22202. This appears to be a thinly veiled justification to protect human health and the environment, without first demonstrating any harm that must be eliminated or prevented.

The uncertainty and potential liability associated with implementation of the rule is further aggravated by the EPA and the Corps determination that "[a] water that otherwise qualifies as a tributary under the proposed definition does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as debris piles, boulder fields, or a stream segment that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break." 79 Fed. Reg. at 22202. This determination prompts some practical, but critical questions for implementation of the rule. For example, how far will a farmer have to look "upstream" to ensure he is not liable for applying fertilizer or pesticide into an area that may lack a bed a bank and an OHWM yet is still considered a jurisdictional water? The agencies have specifically indicated that "[I]n many intermittent and ephemeral tributaries, including dry-land systems in the arid and semi-arid west, OHWM indicators can be discontinuous within an individual tributary due to the variability in hydrologic and climatic influences." Id. at 22202. Consequently, how does a farmer gauge his liability for CWA violations of \$37,500 per day per occurrence and the risk of a citizen lawsuit when the discernible features required for a water to be a "tributary" do not exist in a specific location? It is difficult to understand how the agencies consider it logical that the proposed rule provides clarity and certainty to poultry and egg producers. (p. 30)

Agency Response: The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional “waters of the United States” as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See summary response 8.3 for a discussion of the relevance of breaks in OHWM and how far up valley to look to see if it was just a break in OHWM.

D. Gillham (Doc. #16906)

8.523 3. The definition of tributary is too broad, so that one can conclude that essentially all drainage branches within each watershed will be regulated. (p. 2)

Agency Response: See summary responses 8.1 and 8.1.2.

Shasta County Farm Bureau (Doc. #16924)

8.524 The Proposed Rule would modify existing regulations which have been in place for decades regarding which waters fall under federal jurisdiction under the Clean Water Act. In order to comply with these new regulations, farmers and ranchers will become more and more reliant on attorneys and consultants, making farming the land more difficult and costly. Points of concern include:

- Farmers and ranchers are stewards of the land and care about the environment and water quality. Farmers and ranchers know the ground they farm and should have clear guidance about how to comply with the law. Unfortunately, the Proposed Rule creates confusion and risk by providing the Agencies with almost unlimited authority to regulate, as they deem appropriate, any low spot where rainwater collects, including common farm ditches, ephemeral drainages, agricultural ponds, and isolated wetlands found in and near farms and ranches across the nation. (p. 1)

Agency Response: The final rule provides greater clarity to farmers and the general public by laying out explicit requirements for jurisdiction and greatly reducing the number of case by case determinations required. See summary responses 8.1 for discussion of tributaries, 6.2 for excluded ditches, and summaries in section 7 for non-jurisdictional features.

Arizona Rock Products Association (Doc. #17055)

8.525 (...) The proposed rule attempts to shift the burden of demonstrating certain waters have a "significant nexus" to interstate or traditionally navigable waters from the EPA and Corps to the regulated stakeholders. The proposed rule attempts to accomplish this by, among other things, creating an expansive definition of the word "tributary," and including all tributaries as per se waters of the U.S. Consequently, an ephemeral wash which discharges a minimal amount of water into the Gila River two times a year would, by rule, be waters of the U.S. if the proposed rule passed. The need to show a "significant nexus" is subsumed by the proposed rule's expansive definition of tributary. An approach that is consistent with Supreme Court precedent would be to have a definition of tributary, to help reduce some regulatory uncertainty, but to couch the definition in terms of the "significant nexus" test. In other words, the EPA and Corps cannot, by rule, do away with the "significant nexus" test by creating an expansive definition of "tributary." (p. 2)

Agency Response: The final rule provides greater clarity to by laying out explicit requirements for jurisdiction and greatly reducing the number of case by case determinations required. See summary responses 8.1 for discussion of tributaries and the TSD and summary responses in section 10 for legal analysis of the final rule.

8.526 The jurisdictional uncertainties in this rule are particularly problematic in the arid west. For example, the proposed rule fails to define the distinction between ephemeral "tributaries," which are potentially jurisdictional, and "gullies" or "rills," which are exempt. The proposed rule also irrationally exempts "vegetated swales," which differ from dry washes and other features of the arid west only in that they occur in more humid parts of the country and are therefore more likely to contain water. Similarly illogical is the proposed rule's definition of jurisdictional "tributaries" using the Corps definition of "ordinary high water mark." That concept created for waters that are "navigable-in-fact" is excessively broad as applied to the arid southwest where the land is crisscrossed with lines or cuts on the ground caused by water flow during infrequent but high intensity storms. The mere presence of physical signs that water flows across desert lands from time to time is insufficient to establish CWA jurisdiction, yet the proposed rule and associated draft connectivity report unjustifiably extend jurisdiction to areas that are functionally land, not waters, contrary to the requirements of the CWA.

In the arid southwest, where the predominant tributaries are ephemeral streams, the subsurface connections are an extremely complex metrics of hydraulic flow, fracturing, and inundation and such tributaries may fluctuate, change and recourse with unpredictable and variable annual precipitation events. (p. 4)

Agency Response: See summary response to comment 8.1 for definition of tributaries, 8.1.2 for discussion of OHWM in the arid west, and 7.3.7 for discussion of gullies, rills and swales.

8.527 **The Definition of "Tributary" Under the Proposed Rule must be Revised.**

For the first time EPA and the Corps have attempted to define the word "tributary." As proposed, a water feature is a "tributary" if it is natural or man-made and:

- it has a bed, bank, and ordinary high-water mark and flows to a traditionally navigable water, interstate water, a territorial sea, or any impoundment of the forgoing, or
- it is a wetland, lake, or pond that contributes flow to a traditionally navigable water, interstate water, or a territorial sea.

As written, a pond or flood control feature utilized in connection with an aggregate mining operation could be considered a tributary, and thus by rule "waters of the U.S." if it could contribute flow into a traditionally navigable or interstate water. Recall, a tributary can be perennial, seasonal, or ephemeral. Consequently, as written, this rule would allow the EPA to classify a lake or pond created by aggregate mining as a tributary if during ephemeral flow conditions, i.e. seasonal flooding, water could flow through the pond into the Gila River, or the Colorado River.

In addition, such an expansive definition places those in the construction materials industry in a precarious position with respect to citizen suits. If the EPA and the Corps insist on having such an expansive definition for the term tributary, then some provision must be added to protect against frivolous citizen suits. Consequently, we recommend an addition to the proposed rule which specifically provides sanctions against those filing citizen suits if it is determined that the original complaint was frivolous, meritless, or done for an improper purpose, such as harassment or delay. Having this provision would

help protect the regulated community from potential abuses of this expansive definition from citizens that are improperly abusing the protections the Clean Water Act is attempting to provide.

Finally, under the definition of tributary as written, a mining operation, which creates a manmade feature which potentially falls within the purview of the Clean Water Act, would not be able to alter or change the mining operation to reduce or eliminate impacts by the man-made feature to interstate or traditionally navigable waters. The definition of tributary should be revised to allow for man-made tributaries to be altered such that they are no longer "waters of the U.S." by rule. (p. 5 – 6)

Agency Response: The citizen suite provisions of the CWA are outside the scope of this rulemaking. The final rule contains a definition of tributary which was modified in response to comments to provide increased clarity. The final rule clearly requires the presence of both bed and banks and another indicator of OHWM, if one is not present then the water does not qualify as a tributary. Wetlands, lakes, ponds, and other features lacking a bed and banks and/or OHWM are no longer defined as tributaries in the Final Rule, but may be considered jurisdictional "waters of the United States" as adjacent waters or similarly situated waters with a significant nexus to (a)(1) through (3) waters. See summary responses under section 7.4 and 7.5 for water features, including certain mining and construction features, excluded from the definition of waters of the U.S.

Atlantic Legal Foundation (Doc. #17361)

8.528 1. Diminished Clarity and Increased Scope

We dispute the agencies' claim that the proposed rule will "narrow" the scope of regulatory jurisdiction.⁶²¹ The most problematic of the proposed rule's flaws is the significant expansion of areas defined as "waters of the United States" by effectively removing the word "navigable" from the definition of those waters subject to the CWA.

The proposed rule's definition is based on a legally and scientifically dubious interpretation of the "significant nexus" concept advanced by Justice Kennedy in *Rapanos*. Contrary to the agencies' claims, the rule would place features such as ditches, ephemeral drainages, natural or man-made ponds, seeps, flood plains, and other occasionally or seasonally wet areas under federal jurisdiction.⁶²² While this proposal is, in a sense, "narrower," because it facially decreases the water bodies subject to case-specific jurisdiction, it extends the agencies' per se jurisdiction well beyond current regulations by definitional changes and imprecise wording. (p. 3)

Agency Response: Dry lands have not historically nor are now waters of the U.S. The final rule provides greater clarity to by laying out explicit requirements for jurisdiction and greatly reducing the number of case by case determinations

⁶²¹ See Definition of "Waters of the United States" Under the Clean Water Act, 79 Fed. Reg. 22188, 22 189 (proposed Apr. 21, 2014) [hereinafter Definition] (to be codified at 33 C.F.R. pt. 328).

⁶²² EPA's attempt to limit federal jurisdiction by excluding gullies, rills, and swales from the definition of "waters of the United States" is salutary, but more clarity is needed on what these exclusions actually encompass.

required. See summary responses 8.1 for discussion of tributaries and the TSD and summary responses in section 10 for legal analysis of the final rule.

D. Furtado (Doc. #17659)

8.529 LWVK supports the proposed rule for the protection it affords to wetlands, headwaters, intermittent and ephemeral streams. Tributary streams and our remaining functional wetlands must be protected under the Clean Water Act if municipal and domestic water supplies are to remain clean, affordable and sufficient to protect public health. This is about ensuring safe drinking water for all our citizens. They may only flow during parts of the year but they support water quality in downstream waters by filtering pollutants and capturing nutrients. (p. 1)

Agency Response: The agencies have maintained protection for all tributaries in the final rule. See TSD section 8 for discussion of adjacent waters.

A. Cilimburg (Doc. #17667)

8.530 In addition, I also support including streams that have a bed, bank, and Ordinary High Water Mark in the definition of "waters of the United States." (p. 1)

Agency Response: The final rule requires the presence of both bed and banks and another indicator of OHWM.

D. Parsons (Doc. #17789)

8.531 I feel that it is critical that man made canals be included in the definition of waterways. Functionally they have the same deleterious side effect of any waterway, transporting harmful chemicals to sensitive natural habitats. This could not be more true than in southwest Florida. (p. 1)

Agency Response: The final rule requires the presence of both bed and banks and another indicator of OHWM which applies equally to man-made canals and natural or man-altered streams. See summary response 8.1.

J. Holder (Doc. #17999)

8.532 Due to the lack of clarity of what is ephemeral I believe only intermittent or perennial streams that carry flow for multiple months at a time should be jurisdictional.

The lack of clear definition of ephemeral allows any project manager to justify any ditch as jurisdictional by saying there is one ohwm indicator such as sediment sorting.

Sediment sorting will happen in any situation when water carries sediment. When I walk through my neighborhood I notice the asphalt has been sorted in the grass on the side of the street.

Another example is that anywhere there is slope a channel will form over a long period of time from erosion. There is no current way to say that is an erosion feature as opposed to an ephemeral channel.

Either clarify it or throw it all out. No one can be secure with ephemeral being jurisdictional. (p. 1)

Agency Response: See summary responses 8.1.

R. McKinnon (Doc. #18845)

8.533 In addition, I support including streams that have a bed, bank, and ordinary high water mark in the definition of “waters of the US.” All of these provisions will help protect important wetlands and other waters in the state of Montana. (p. 1)

Agency Response: The final rule requires the presence of both bed and banks and another indicator of OHWM.

Donald Shawcroft (Doc. #18569)

8.534 “Tributaries” Cannot Include Ephemeral Drainages

The definition of a “tributary” is one of the most expansive and problematic terms in the proposed rule. The American Heritage Dictionary (1982) defines “tributary” as “a stream or river flowing into a larger stream or river.” This common understanding of “tributary” simply does not include “ephemeral” drainages that only channel stormwater after heavy rains. Most of the time, ephemeral drainages are dry land—they are not flowing rivers or streams. This description fits perfectly many of the “rivers” and “streams” we have in Colorado. Yet, the Agencies insist that “[t]ributaries that are small, flow infrequently, or are of substantial distance from the nearest (a)(1) through (a)(4) water, e.g., headwater perennial, intermittent, and ephemeral tributaries” are nevertheless part of the tributary network regulated by this proposal. 79 Fed. Reg. at 22,206.

The Agencies have proposed an overly broad “tributary” definition focusing on the presence of a bed, bank, ordinary high water mark (OHWM) and any minimal amount of flow that eventually reaches (directly or through any number of other paths and channels) to a creek or stream that in turn ultimately flows to a traditional navigable water. See 79 Fed. Reg. at 22,263. The terms “bed” and “bank” simply mean land with lower elevation in between lands of higher elevation. This includes land with only subtle changes in elevation—any land where rainwater naturally channels as it flows downhill. All but the flattest terrain will have natural paths of lower elevations that water will follow. Under the Proposed Rule, Nearly Every Ditch Could Be Regulated as a Tributary None of the current regulations defining “waters of the U.S.” names ditches. In fact, the CWA does not define ditches as “waters of the U.S.,” but as “point sources” that may discharge to “waters of the U.S.” See 33 U.S.C. § 1362(14).

Nevertheless, over the years, the Agencies have. The rule would provide: “The term tributary means a water physically characterized by the presence of a bed and banks and ordinary high water mark, as defined at 33 CFR 328.3(e), which contributes flow, either directly or through another water, to a water identified in paragraphs (a)(1) through (4) of this section.” (p. 3)

Agency Response: See summary responses 8.1 for discussion of the tributaries definition and regulation of ephemeral streams and 6.2 for discussion of excluded ditches.

Anonymous (Doc. #18801)

8.535 (...) 5) The definitions proposed in the rule actually create more confusion. A good example is the definition of "Tributary" which creates a difficult situation for local government entities in making determinations in reviewing and approving construction permits including grading and fill permits. The same problem also exists for small businesses. Local governments and small businesses often do not have the resources to insure compliance with the existing rule and the proposed rule creates more confusion. (...) (p. 1 – 2)

Agency Response: The final rule provides greater clarity to by laying out explicit requirements for jurisdiction and greatly reducing the number of case by case determinations required. See summary responses 8.1 for discussion of tributaries. See also responses in 7 addressing relevance of definition to stormwater management features and certain construction and mining activities.

City of Olathe Kansas (Doc. #18982)

8.536 Defining jurisdictional streams by the presence of bed, banks, and high water mark is current Corp practice; however, the determination of such features can be subjective. The City of Olathe suggests a quantifiable method for determining jurisdiction based on stream order, stream flow, and/or watershed size. Regardless of the method, jurisdictional waters should be mapped with related GIs data available to local governments for use in land use planning and regulation of development. (p. 1)

Agency Response: The final rule clarifies the extent of tributaries by adding additional context and field indicators to the definition and specifically identifying the features that excluded from the definition of waters of the U.S in (b)(1) – (7). See summary response 8.1 for further discussion of the definition of tributaries and 8.1.1 for the relevance of flow regime. Regional variation in hydrology and climate among other factors do not allow for the development of nationally consistent and scientifically supported cutoffs for tributaries based on stream order, stream flow or watershed size, see further discussion in the TSD. Determinations of jurisdiction are done on a case by case basis based on the best information available and they are only valid for five years because environmental conditions which can shape the outcome can change over time. For example changes in ground and surface water levels due to changes in water usage and losses through evapotranspiration. While maps of all the jurisdictional or non-jurisdictional waters are not feasible, the agencies have provided clarity in terms of the identifying features and analysis required to determine the jurisdictional status of a given waterbody.

Jon Klingel (Doc. #19166)

8.537 **Intermittent Streams and Ephemeral Waters (including arroyos and playas)**

These waters are important to people, livestock and wildlife because they provide:

- Drinking water for people, livestock and wildlife
- Increased primary productivity (forage),
- Increased plant diversity,

- Increased plant density,
- Recharge of ground water, and
- Periodic surface water.

Low lying areas such as arroyos, playas and ephemeral streams tend to have richer soils due to the nutrients and fine grain sediments that accumulate in and on the flood plain during runoff events. Soil moisture also is greater than surrounding uplands and the sediments are storage for runoff water. The higher nutrient and moisture level supports greater plant growth both in terms of biomass and species diversity. The difference in plant growth between these low lying areas and the surrounding upland is well documented and should be obvious even to the most casual observer. The sand and gravel sediments in these areas absorb considerable water. Light and even moderate precipitation events that cause runoff from the uplands are generally absorbed by these sediments and often don't cause a surface water flow in the drainage. Larger runoff events saturate the sediments and cause flows which can move considerable sediment, including soluble and insoluble material and contaminants (natural or man-made). Some of the water in the sediments generally penetrates to and recharges deeper aquifers. Intermittent streams, especially in desert mountain country, often have segments and pools of perennial water where underlying bedrock forces the water to the surface. The flow through these segments and pools clearly shows that water is flowing through the sediments but not exposed to the surface except intermittently. These small segments of perennial water are often the only water available to wildlife over large desert areas and have a strong influence on the distribution, abundance and diversity of wildlife.

The result of ephemeral waters and intermittent streams for wildlife is increased thermal and hiding cover, increased nesting and denning habitat, increased food availability, and a water supply to springs and intermittent pools. During periods of flow, ephemeral streams provide connection between normally isolated habitat segments and populations. This temporary connectivity appears to be important to amphibians (and likely some reptiles and mammals) in maintaining genetic flow and recolonization of isolated habitats. The increased wildlife activity associated with ephemeral streams is well documented and is apparent even to the casual observer, by the increased bird activity and tracks. Even in the Santa Fe area it is obvious that the arroyos are the primary travel and resting areas for deer, coyotes and sometimes bobcats and black bears. In some areas (e.g. southeast of Santa Fe where I live) water within the sediments of arroyos is the domestic well water supply used by people in their homes, including drinking water.

Arroyos, ephemeral and intermittent streams are connected portions of downstream perennial waters (where perennial waters occur downstream), but function in a pulsating manner in response to precipitation events. **Sediment and chemicals dumped in an arroyo eventually end up in the perennial stream and water soluble compounds also end up in the ground water and drinking water.** However, rates of travel of sediments and chemicals vary depending on size, density and solubility. Los Alamos National Laboratory (LANL) is a good example. Contaminants dumped in arroyos 60 years ago are becoming an issue today. Water soluble perchlorate (primarily a byproduct of high explosives & rocket fuel) has shown up in a spring along the Rio Grande below LANL and one water well in Los Alamos is shut down due to perchlorate. While species that use

ephemeral waters and the associated habitat are adapted to intermittency and can cope with many environmental changes, this does not necessarily translate into an advantage during pollution exposure. (p. 1 – 2)

Agency Response: See summary response 8.1.

8.538 **Intermittent streams, and Ephemeral streams and playas:**

Intermittent streams, with perennial segments and pools of surface water are sometimes the only surface water available to wildlife in desert mountains and therefore critical to the distribution, abundance and diversity of wildlife. For example, Guadalupe Canyon with its intermittent stream in extreme southwest New Mexico has the highest concentration of State Threatened and Endangered wildlife in the State.

Some species are adapted to arid conditions and the periodic (sometimes sporadic) presence of available water. Millions of shorebirds and waterfowl migrate through the Playa Lakes Region in the spring and fall utilizing the ephemeral playas. Other species burrow into the soil or use burrows of other animals to reach moisture, emerging when ephemeral surface water is present. Other types of adaptations include: aestivation, dried eggs of some species remain viable for years, some mollusks have impermeable shells that prevent desiccation when closed, rapid breeding and development of young, highly concentrated urine, glands that extrude salt, bodies tolerant to dehydration, and some species meet all their water needs with metabolic water.

Ephemeral waters are essential for all three species of spadefoot toads in New Mexico. Spadefoots stay burrowed in the soil (several years has been documented) until conditions are suitable for breeding. Emergence from burrows is apparently triggered by thunder storms and breeding occurs quickly (as short as one night) in ephemeral waters. Eggs hatch in as little as 15 hours, and tadpoles metamorphose and leave the ephemeral waters in as little as 13 days. Possible threats to these species include pesticide contamination of the ephemeral waters.

Ephemeral waters also appear to be important to Box Turtles, Garter Snakes, and tiger salamanders. Many of the crustaceans and insects, mentioned later under playa lakes, also occur in ephemeral and intermittent streams. Even some fish use ephemeral waters. For example, Pecos Pupfish and White Sands Pupfish (both State Threatened, State "Species of Greatest Conservation Need", and federal Species of Concern) are exploiters which will move into ephemeral waters when available. Some sport fishing waters in NM are intermittent, including portions of: the Canadian River, Center Fire Creek, Conchas River, Conejos Creek, Cottonwood Creek, Felix River, Pecos River, Salt Creek, Walnut Creek, Yeso Creek, Mimbres River, Running Water Draw, Tularosa Creek, Three Rivers, and Tajique Creek.

Very conservatively, at least one fifth of NM vertebrate species, excluding fish, (19%, 127 species) use ephemeral and/or intermittent waters.

These 127 vertebrate species include:

9 taxa classified as State and/or federal threatened, endangered or candidate

8 taxa classified as State and/or federal sensitive or species of concern

24 taxa classified as State "Species of Greatest Conservation Need"

25 game species

1 taxa endemic to NM

10 species listed as of cultural importance to Pueblo Tribes (p. 3 – 4)

Agency Response: See summary response 8.1.

8.539 **Domestic Water Supply**

The alluvial sediments under ephemeral streams provide domestic water, including drinking water, for some homes, perhaps very many homes, in New Mexico. For example, I have lived southeast of Santa Fe for 19 years. The area is pinyon-juniper bisected by arroyos and the geology is granite bedrock. The only water is apparently within the sediments in the arroyos, and at least some (possibly most) of the wells in our area are within or adjacent to an arroyo. My family has been drinking arroyo sediment well water for 19 years. The three families downstream use a shallow well in the arroyo and an adjacent arroyos has at least one well in the arroyo bottom. If water soluble contaminants are dumped into the arroyo upstream from my house, they will be in our drinking water, and our neighbors. I believe an analysis of wells around New Mexico and the Southwestern U.S. would show many wells dependent upon water in the unconsolidated alluvial deposits of ephemeral streams, both for domestic use and livestock watering. **People are probably not drinking untreated water from perennial streams but they are from the alluvial deposits under ephemeral streams. Perhaps some ephemeral waters should have more protective standards than perennial waters.** (p. 4 – 5)

Agency Response: Drinking water standards for private wells and restrictions based on designated use as a drinking water supply are beyond the scope of this rulemaking. See summary discussion 8.1 for the definition of tributaries in the final rule.

J. R. Dorney (Doc. #19235)

8.540 The rule proposes to use bed and bank and ordinary high water marks as criteria to identify jurisdictional tributaries. I support the use of these criteria on an interim basis but urge the Corps and EPA to develop robust, field-based methodologies (on a regional basis) similar to the widely used NC Stream Identification Method (NC Division of Water Quality. 2010. Methodology for Identification of Intermittent and Perennial Streams and Their Origins. Version 4.11. Raleigh, NC; available at <http://portal.ncdenr.org/web/wq/swp/ws/401/waterresources/streamdeterminations>) which has now been verified as accurate by the peer-reviewed literature (K.M. Fritz, W.R. Wenerick and M.S. Kostich. 2013. A validation study of a rapid field-based rating system for discriminating among flow permanence classes of headwater streams in South Carolina. Environmental Management 52(5):1286-1298). This method was developed in NC and has been successfully taught to students in over 50 classes in NC, VA, SC, GA, TN and AL since 1999. I note that use of ordinary high water marks would exclude most ephemeral stream channels in NC since ephemeral channels in NC generally do not have this feature. This seems to be a reasonable approach since the Corps in NC has routinely exempted ephemeral channels from jurisdiction for the 404 Permit process. (p. 3)

Agency Response: The final rule continues the longstanding practice of using the OHWM to determine the lateral extent of jurisdiction for tributaries. The final rule does not change the definition or alter the methods for identification of OHWM. The OHWM continues to be identified using indicators of regular high flows whose return interval varies across the country based on climate, hydrology, and other factors. The Corps and EPA plan to continue to build on the more than a decade of effort spent improving the consistency and rigor of OHWM identifications, see <http://www.erdc.usace.army.mil/Media/FactSheets/FactSheetArticleView/tabid/9254/Article/486085/ordinary-high-water-mark-ohwm-research-development-and-training.aspx> for updates.

Halliburton Energy Services, Inc. (Doc. #19458)

- 8.541 In addition, the proposed definition specifies that a water that otherwise qualifies as a tributary under the definition "does not lose its status as a tributary if, for any length, there are one or more man-made breaks (such as bridges, culverts, pipes, or dams), or one or more natural breaks (such as wetlands at the head of or along the run of a stream, debris, piles, boulder fields, or a stream that flows underground) so long as a bed and banks and an ordinary high water mark can be identified upstream of the break" Examples of tributaries with breaks include dry-land systems in the arid and semi-arid west that may have stretches which flow through low gradient areas and do not exhibit an ordinary high-water mark, or a tributary that loses its bed and banks over a stretch characterized by wetlands.

In effect, federal jurisdiction would extend to all tributaries, no matter how remote or ephemeral and without regard to the significance of a specific tributary's relationship to a traditional navigable water - i.e., without regard to the nature of the flow in the stream, the evaporative losses within the stream and distance to a navigable-in-fact water (which might preclude a contaminant from ever reaching that water), or the relative effect of the tributary on navigable waters compared to the impact of more directly adjacent but unregulated areas. Indeed, the proposed definition goes further, extending beyond what would commonly be viewed as a "tributary" by ignoring breaks in the OHWM to capture additional upstream stretches with even further attenuated connections to traditional navigable waters. Thus, no matter how implausible the likelihood of conveyance of pollutants to navigable waters, the "tributary" would be per se jurisdictional. (p. 4)

Agency Response: See summary response 8.3. and discussion of comments regarding "breaks" in OHWM.

- 8.542 The proposed definition of tributary is an expansion of jurisdiction from current practice that has meaningful consequences. For example, in the arid west, under current application of regulations most ephemeral drainages, ditches, and depressions do not require a jurisdictional determination at all - in practice, the Corps does not extend jurisdiction to these features. Perhaps the exclusions for gullies, swales and other erosional features will be appropriately expansive, but the rule and the preamble lack that clarity. For other features, photographic documentation of breaks in the OHWM of drainages are regularly used to establish the limits of federal jurisdiction, limits that are currently recognized by the Corps. (p. 5)

Agency Response: See summary response 8.1 and 8.1.2 for discussion of the historic extent of jurisdiction and practice identifying tributaries. See summary response 7.3.7 for discussion of gullies, rills and swales.

REFERENCES

Comments included above in this document discuss the Proposed Rule, and some include citations to various attachments and references, which are listed below. The agencies do not respond to the attachments or references themselves, rather the agencies have responded to the substantive comments themselves above, as well as in other locations in the administrative record for this rule (e.g., the preamble to the final rule, the TSD, the Legal Compendium). In doing so, the agencies have responded to the commenters' reference or citation to the report or document listed below as it was used to support the commenters' comment. Relevant comment attachments include the following:

Battelle Energy Alliance, LLC. Map showing intermittent channels of the Big Lost River, Little Lost River, and Birch Creek on the INL Site. (Doc. #16448, p. 9)

Conservation Law Foundation et al. v. USEPA et al. Case No. 1:10-cv-11455-MLW, Memorandum in Support of Defendants' Motion for Summary Judgment (Doc. #15822.5)

Defenders of Wildlife and Patagonia Area Resource Alliance. Compilation of Preliminary Comments from Individual Panel Members on the Scientific and Technical Basis of the Proposed Rule Titled "Definition of 'Waters of the United States' Under the Clean Water Act" (As of August 14, 2014) (Doc. #16394.2)

Drake, Darrel, Brenda Tozer, and Geoffrey Stillwell. 2012. Prairie Pothole Wetlands and Region (PPR). Semester Project for ES-767, Wetland Environments, Earth Science Department, Emporia State University (2012) (Doc. #16394.3)

Earthworks and The Patagonia Area Resource Alliance. October 2014. *The Hermosa Mine Proposal: Potential Impacts to Patagonia's Water Supply*. (Doc. #16394.6)

Hansen, William. 2001. Identifying Stream Types and Management Implications. (Doc. #5570.2)

Hansen, William. 2007. Sediment from a Small Ephemeral Gully in South Carolina. (Doc. #5570.3)

High Lakes Aquatic Alliance Foundation. *Case Study: Intermittent and Ephemeral Streams and Lakes in Arid and Semi-Arid Landscapes in the Western United States*. (Doc. # 15212.1)

James, L. *Using LiDAR data to map gullies and headwater streams under forest canopy: South Carolina, USA*. (Doc. #5570.4)

Landmark Legal Foundation. Exhibit 1: Steams and Waterbodies in Missouri (Doc. #15364, p. 14)

Landmark Legal Foundation. Exhibit 2: EPA Region 7 National Wetlands Inventory (Doc. #15364, p. 15)

Landmark Legal Foundation. Exhibit B: Gully with bed, bank, and ordinary high water mark (Doc. #16534, p. 18)

Los Angeles Waterkeepers. Attachment A. Compton Creek and Dominguez Channel and prime examples of such waterbodies (Doc. #15060)

Mersel, Matthew K., Lindsey E. Lefebvre, and Robert W. Lichvar. August 2014. “A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification,” U.S. Army Engineer Research and Development Center (ERDC) (Doc. # 14428.3)

Mersel, Matthew K. and Robert W. Lichvar. August 2014. “Occurrence and Distribution of Ordinary High Water Mark (OHWM) Indicators in Non-Perennial Streams in the Western Mountains, Valley, and Coast Region of the United States,” U.S. Army Engineer Research and Development Center (ERDC) (Doc. # 14428.4)

Missouri Corn Growers Association. Appendix A: Photographic Log (Doc. #16569, p. 90)

National Corn Growers Association. Appendix 1: Results from Agriculture’s WOTUS Mapping Initiative (AWMI) (Doc. #14968, p. 24)

National Parks Conservation Association. Figure 2: “Headwater Stream Length, as a Proportion of Total Stream Length Within Each 8 Digit HUC Watershed, in the U.S., Excluding Alaska, as Computed Querying the NHD RAD v2.0 for Reaches That Have No Other Inflowing Streams at the 1:100,000 Scale. The NHD RAD v2.0 Does not Capture Streams Under 1 mile (i.e., 1.61 km) in Length.” Image and description source: Nadeau and Rains 2007. (Doc. #15130, p. 7)

National Parks Conservation Association. Figure 3: “Combined Intermittent and Ephemeral Stream Length in the U.S., Excluding Alaska, as a Proportion of Total Stream Length Within Each 8 Digit HUC Watershed, as Computed by Querying the NHD RAD v2.0 for Reaches That Contain Water Only Part of the Year at the 1:100,000 Scale. The NHD RAD v2.0 does not capture streams under 1 mile (i.e., 1.61 km) in length.” Image and description source: Nadeau and Rains 2007. (Doc. #15130, p. 8)

Pierce, Robert J. April 2003. *Technical Principles Related to Establishing the Limits of Jurisdiction for Section 404 of the Clean Water Act*. (Doc. #15822.14)

Sealaska. Maps: Election Creek Valley, Black Bear Valley and Saltery Creek (Doc. #16671, p. 24-26)

Sierra Club, Cumberland Chapter. Map titled *Percentage of Surface Drinking Water from Intermittent, Ephemeral, and Headwater Streams in Kentucky* (Doc. #15466, p. 8)

Southwest Kansas Groundwater Management District No. 3 Local Groundwater Management Policy 2014-1 (Doc. #16465.1)

U.S. Army Corps of Engineers Baltimore District. Oct. 17, 1994. Branch Guidance Letter, CENAB-OP-R, No.95-01. (Doc. #15822.3)

U.S. Department of the Interior and U.S. Geological Survey. Trends in Streamflow of the San Pedro River, Southeastern Arizona, and Regional Trends in Precipitation and Streamflow in Southeastern Arizona and Southwestern New Mexico: Professional Paper 1712. (Doc. #16394.5)

U.S. Environmental Protection Agency. 2009. *Figure 1: Percentage of Surface Drinking Water from Intermittent, Ephemeral, and Headwater Streams*. (Doc. #15130, p. 7)

U.S. Environmental Agency Science Advisory Board (SAB) Draft Report (09/17/14) to Assist Meeting Deliberations (Doc. #16394.1)

U.S. General Accounting Office. February 2004. *Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction. A Report to the Chairman, Subcommittee on Energy, Policy, Natural Resources and Regulatory Affairs, Committee on Government Reform, House of Representatives* (GAO-04-297). (Doc. #15822.2)

U. S. House of Representatives. March 30, 2004. *Inconsistent Regulation of Wetlands and Other Waters*. Document Number 108-58. (Doc. #15822.8)

Utah, State of, Office of the Governor. Exhibit B: Gully with bed, bank, and ordinary high water mark. (Doc. #16534, p. 18)

Utah, State of, Office of the Governor. Exhibit D: Map of Potential Jurisdictional Waters in Utah. (Doc. #16534, p. 18)

Western Urban Water Coalition. Appendix A: Photo Log (Doc. #15178.1, p. 36)

Winter, Thomas C., Judson W. Harvey, O. Lehn Franke, and William M. Alley. 1998. Ground Water and Surface Water A Single Resource: U.S. Geological Survey Circular 1139. (Doc. #16394.4)

Woolford, Sam, Shannon Bonney, and Ross Pringle. October 2014. *Physical, Chemical, and Biological Impacts of Geographically Isolated Wetlands on Waters of the United States*. (Doc. #15446, p. 9; Doc. # 15020.1)

Woolford, Sam, and Matt Carroll. July 2014. *Evidence of Significant Impacts of Coastal Plain Depressional Wetlands on Navigable Waters*. (Doc. #15020.2)

Zamzow, K. Comments on Connectivity of Streams and Wetlands to Downstream Waters. Washington DC. (Doc. #18006.2)

In addition, commenters submitted the following relevant references. These are copied into this document as they were submitted by commenters. The agencies have not verified the references, or the validity of hyperlinks.

33 C.F.R. 328.4(c)(a). (Doc. #19540, p. 60)

33 C.F.R. § 1362.14; 33 C.F.R. § 1342. (Doc. #19540, p. 71)

40 Fed. Reg. 31,320, 31,321 (July 25, 1975). (Doc. #15882.1, p. 12; Doc. #19540, p. 71)

42 Fed. Reg. 37,112 (1977). (Doc. #19540, p. 71)

51 Fed. Reg. at 41217 (Doc. #15882.1, p. 13; Doc. #19540, p. 72)

65 Fed. Reg. 12818, 12823, 12824 (Mar. 9, 2000). (Doc. #15882.1, p. 12; Doc. #18016, p. 4; Doc. #19540, p. 71)

77 Fed. Reg. 10288-10289 (February 21, 2012) (Doc. #15178.1, p. 15)

79 Fed. Reg. at 22201

Aldridge, B.N. 1970. *Floods of November 1965 to January 1966 in the Gila River Basin, Arizona and New Mexico, and adjacent basins in Arizona*. US Geological Survey Water-Supply Paper 1850-C. (Doc. #19540, p. 68 & 69)

Alexander, R. G., R. A. Smith, G. E. Schwarz, E. W. Boyer, J. V. Nolan, and J. W. Brakebill. 2008. *Differences in phosphorus and nitrogen delivery to the Gulf of Mexico from the Mississippi River basin*. Environmental Science & Technology 42:822-830. (Doc. #15123, p. 4)

Alexander, R. G., R. A. Smith, and G. E. Schwarz. 2000. *Effect of stream channel size on the delivery of nitrogen to the Gulf of Mexico*. Nature 403:758-761. (Doc. #15123, p. 3)

Allan, J.D. and M.M. Castillo. 2007. *Stream Ecology*, 2nd ed. New York: Springer. Print. (Doc. #19540, p. 66)

Allen, Aaron and D. Malanchuk. June 2001. *Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest*. USACOE, South Pacific Division. (Doc. #16394, p. 7)

Allen, A. December 18, 2002. Remarks at 5th Annual California Regulatory Coordination Conference, USCOE South Pacific Division, Sacramento, California. (Doc. #16394, p. 7)

Allen, David and Amanda Rodewald, EPA. Oct. 17, 2014. Letter to Gina McCarthy, EPA regarding SAB Review of the Draft EPA Report, Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence) available at [http://yosemite.epa.gov/sab/sabproduct.nsf/WebBoard/AF1A28537854F8AB85257D74005003D2/\\$File/EPA-SAB-15-001+unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/WebBoard/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf). (Doc. #16460, p. 10)

Arizona Department of Environmental Quality. Permit No. AZG2013-001. Part 3.1.1.1.1. Run-on Management (Doc. #14407, p. 11)

Association of State Wetland Managers. April 2014. Report on State Definitions, Jurisdiction and Mitigation Requirements in State Programs for Ephemeral, Intermittent and Perennial Streams in the United States. http://aswm.org/stream_mitigation/streams_in_the_us.pdf. (Doc. #14131, p. 4)

Bayless, M. A., M. G. McManus, and J. F. Fairchild. 2003. *Geomorphic, water quality and fish community patterns associated with the distribution of Notropis topeka in a Central Missouri watershed*. American Midland Naturalist 150:58-72. (Doc. #15123, p. 3)

Bell, Larry, Director of the New Mexico Department of Game and Fish. April 15, 2003. Letter to EPA (NMDGF comment letter on the 2003 ANPRM). Doc. #14974, p. 3)

Benjamin v. Douglas Ridge Rifle Club, 673 F.Supp.2d (D. Or. 2009) (Doc. #16413, p. 27)

Benke, A.C., and C.E. 2005. Rivers of North America. Cushing. Editors. Burlington, MA: Elsevier Academic Press. (Doc. #19540, p. 57)

Blazer, Vicki, Scott Phillips, and Edward Pendleton. Fish Health, Fungal Infections, and Pfiesteria: The Role of the U.S. Geological Survey, U.S. Geological Survey Fact Sheet 114-98. (Doc. #14620, p. 5)

Boulder Area Sustainability Information Network. 2005. Two Mile Creek Information, available at <http://bcn.boulder.co.us/basin/watershed/2mile.html>. (Doc. #16460, p. 16)

Bower, Michael R. et al. September 2008. *Habitat Features Affect Bluehead Sucker, Flannelmouth Sucker, and Roundtail Chub Across a Headwater Tributary System in the Colo. River Basin*. 23 J. Freshwater Eco. available at <http://www.uwyo.edu/frahel/pdfs/bower-2008-1.pdf>. (Doc. #16460, p. 13)

Brownback, Sam, Governor of Kansas. July 14, 2011. Letter to Nancy Stoner, Acting Assistant Administrator for Water, U.S. Environmental Protection Agency. (Doc. #13956, p.10)

Bukaveckas, P. A. 2009. Rivers. Pages 721-732 in G. E. Likens, editor. Encyclopedia of Inland Waters. Elsevier, Oxford, UK. (Doc. #15123, p. 3)

Business Roundtable v. SEC, 647 F.3d (D.C. Cir. 2011) (Doc. #15410, p. 16)

Cai, M., Schwartz, J. S., Robinson, R. B., Moore, S. E., & Kulp, M. A. 2010. *Long-term effects of acidic deposition on water quality in a high-elevation Great Smoky Mountains National Park Watershed: use of an ion input–output budget*. Water, Air, & Soil Pollution, 209. (Doc. #15130, p. 2)

California Department of Fish and Game. December 2010. *A Review of Stream Processes and Forms in Dryland Watersheds*. Prepared by K. Vyverberg, Senior Engineering Geologist, Conservation Engineering. (Doc. #15213, p. 8)

California Department of Fish and Wildlife. February 14, 2014. Letter to California Energy Commission on the subject of Hidden Hills Solar Electric Generating System, State Waters Compensatory Mitigation. (Doc. #16394, p. 5)

Campbell, Michael. 2014. *Waters Protected by the Clean Water Act: Cutting Through the Rhetoric on the Proposed Rule*. 44 Env'tl. L. Rep. News & Analysis. (Doc. #16491, p. 14)

Carabell v. United States (Doc. #16413, p. 28; Doc. #15540, p. 10)

Chevron, USA v. NRDC, 467 U.S. 837, 842-43 (1984) (Doc. #16394, p. 8)

Clarke, A., R. MacNally, N. Bond, and P. S. Lake. 2008. *Macroinvertebrate diversity in headwater streams: a review*. Freshwater Biology 53. (Doc. #15130, p. 2)

Congressional Research Service, EPA and the Army Corps' Proposed Rule to Define "Waters of the United States ", available at http://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&sqi=2&ved=0CB4QFjAA&url=http%3A%2F%2Ffas.org%2Fsgp%2Fcrs%2Fmisc%2FR43455.pdf&ei=JRYGVJJlzqjIBPjvgcgK&usg=AFQjCNGq5dlTONE-KCN-v-5FOmTuh38v2w&sig2=UBrr5c69WZitk_UwSF9Odg&bvm=bv.74115972,d.aWw, (accessed on Sept. 2, 2014). (Doc. #8674, p.6)

Congressionally Requested Report on Comments Related to Effects of Jurisdictional Uncertainty on Clean Water Act Implementation, Report No. 09-N-0149. 2009. Available at <http://www.epa.gov/oig/reports/2009/20090430-09-N-0149.pdf>. (Doc. #15020, p. 40)

Copeland, Claudia. June 24, 2014. *EPA and the Army Corps' Proposed Rule to Define “Waters of the United States.”* Congressional Research Service. (Doc. #16676, p. 5)

Crawford, J. T., & Stanley, E. H. (2014). *Distinct Fluvial Patterns of a Headwater Stream Network Underlain by Discontinuous Permafrost*. Arctic, Antarctic, and Alpine Research, 46(2). (Doc. #15130, p. 3)

Crowther, Wendy Bowden, Clyde Snow & Sessions. 2009. P.C., UTAH WATER LAW 101 , available at <http://slco.org/watershed/symposium/pdf2009/Symp09Crowther.pdf>. (Doc. #16460, p. 13)

<http://www.thecordovatimes.com/article/1420water-supply-crisis-or-conservation>; (Doc. #15426, p. 1)

<http://www.cityofcordova.net/residents/services/water-status/490-water-update-may-22>; (Doc. #15426, p. 1)

Streams Lakes and Trout Streams of Colorado,
<http://www.cotrout.org/Portals/0/pdf/legislative/State%20of%20Colorado%20Ephemeral%20Comparison.pdf>; (Doc. #15020, p. 40)

DiCosmo, Bridget. August 22, 2014. InsideEPA.com, EPA Appears to Reject SAB Calls to Clarify Controversial "Waters" Proposal. (Doc. #7981, p.5)

DiCosmo, Bridget. April 30, 2014. InsideEPA.com, Agencies' Workgroup Eyes Changes to Key Delineation Guides. (Doc. #13071, p.6)

Dodds, W. K., J. M. Blair, G. M. Henerbry, J. K. Koelliker, R. Ramundo, and C. M. Tate. 1996. *Nitrogen transport from tallgrass prairie watersheds*. Journal of Environmental Quality 25:973-981. (Doc. #15123, p. 3)

Dodds, W. K., K. Gido, M. R. Whiles, K. M. Fritz, and W. J. Matthews. 2004. *Life on the edge: The ecology of Great Plains prairie streams*. Bioscience 54:205-216. (Doc. #15123, p. 3)

Dodds, W. K., and R. M. Oakes. 2006. Controls on nutrients across a prairie stream watershed: *Land use and riparian cover effects*. Environmental Management 37:634-646. (Doc. #15123, p. 3)

Dodds, W. K., and R. M. Oakes. 2008. *Headwater influences on downstream water quality*. Environmental Management 41:367–377. (Doc. #15130, p. 2)

Dorney, John. April 5, 2006. Memo: Wetlands Program Development Unit, NC DWQ. (Doc. #16413, p. 30)

Doyle, M.W., 2005. *Incorporating hydrologic variability into nutrient spiraling*. Journal of Geophysical Research – Biogeosciences. (Doc. #14135.1, p. 3)

Doyle, Martin W. and Jason P. Julian. 2014. Technical Comments on the Applicability of the Proposed Rule of Jurisdictional Waters Determination in Arid Landscapes. (Doc. #14135 p. 4, 5 & 6)

Duhigg, Charles, and Janet Roberts. February 28, 2010. Rulings Restrict Clean Water Act, Foiling EPA, New York Times.

http://www.nytimes.com/2010/03/01/us/01water.html?pagewanted=all&_r=0. (Doc. #13610, p.46)

Dunne, T., and L.B. Leopold. 1978. *Water in Environmental Planning*. New York: W.H. Freeman and Co. Print. (Doc. #19540, p. 60)

Eisenberg, Jeff, National Cattleman's Beef Ass'n., Sept. 13, 2006. Email to Greg Schildwachter, CEQ, Doc. #15020, p. 37)

Elliot, William R. 2007. *Zoogeography and Biodiversity of Missouri Caves and Karst*. Journal of Cave and Karst Studies. Available at <https://caves.org/pub/journal/PDF/v69/cave-69-01-135.pdf>. (Doc. #16372, p. 13)

Finn, D. S., N. Bonada, C. Murria, and J. M. Hughes. 2011. *Small but mighty: headwaters are vital to stream network biodiversity at two levels of organization*. Journal of the North American Benthological Society 30:963–980. (Doc. #15130, p. 2)

Freeman, Mary C. et al. 2007. *Hydrologic Connectivity and the Contribution of Stream Headwaters to Ecological Integrity at Regional Scales*, 43 Journal of the American Water Resources Association. (Doc. #13610, p.48)

Graf, William L. 1988. *Fluvial Processes in Dryland Rivers*. The Blackburn Press, Caldwell, New Jersey. (Doc. #15178.1, p. 17)

Gen. Chem. Corp. v. United States, 817 F.2d (D.C. Cir. 1987) (Doc. #15410, p. 16)

Gomi, T., R. C. Sidle, and J. S. Richardson. 2002. *Understanding processes and downstream linkages of headwater systems*. Bioscience 52. (Doc. #15130, p. 2)

Gracz, M, M Moffett, D Siegel, P Glaser. 2014. *End member mixing analysis [in a homogenous watershed] to identify the contribution of peatlands to stream flow*. (Doc. #15426, p. 1)

Grumbles, Benjamin, Assistant Administrator of Water, USEPA. January 9, 2006 (mis-dated January 9, 2005). Letter to Jeanne Christie, Executive Director, Association of State Wetland Managers. (Doc. #15123, p. 4; Doc. #15020, p. 39)

Haag and Pfeiffer 2012 (Doc. #15624, p. 4)

Headwaters, Inc. v. Talent Irrigation Dist., 243 F.3d (9th Cir. 2001) (Doc. #15020, p. 36; Doc. #13160, p. 48)

Holland, 373 F. Supp. (Doc. #16413, p. 31)

INDUS Corporation. October 2013. U.S. Environmental Protection Agency: Streams and Waterbodies Maps, the National Hydrography Dataset, High Resolution. Prepared under contract with U.S. EPA, Office of Water, and published on the House Committee on Science, Space, and

Technology webpage: <http://science.house.gov/epa-maps-state-2013> (Doc. #15123, p. 5; Doc. #16581, p. 7)

Int'l Union, UAW v. NRLB, 514 F.3d (6th Cir. 2008) (Doc. #15410, p. 16)

Izbicki. 2007 (Doc. #16394, p. 4)

Jacobson, L. M., M. B. David, and L. E. Drinkwater. 2011. *A spatial analysis of phosphorus in the Mississippi River basin*. Journal of Environmental Quality 40:931-941. (Doc. #15123, p. 3)

Karr, James R. & Daniel R. Dudley. Sept. 1978. Biological Integrity of a Headwater Stream: Evidence of Degradation, Prospects for Recovery, in EPA, EPA-905/9-77-007-D, Environmental Impact of Land Use on Water Quality, Final Report on the Black Creek Project (Supplemental Comments). (Doc. #15019, p. 128)

Kansas Department of Health and Environment. 2012 Report. (Doc. #14599, p. 1)

Kemp, M. J., and W. K. Dodds. 2002. *Comparisons of nitrification and denitrification in prairie and agriculturally influenced streams*. Ecological Applications 12:998-1009. (Doc. #15123, p. 3)

Krueper 1993 (Doc. #16394, p. 5)

League of Wilderness Defenders/Blue Mountains Biodiversity Project v. Forsgren, 309 F.3d (9th Cir., 2002) (Doc. #10966, p. 8)

Leibowitz, S.G. 2003. Isolated wetlands and their functions: an ecological perspective. Wetlands 23. (Doc. #19540, p. 66 & 67)

Leopold, L.B., M.G. Wolman, J.P. Miller. 1964. *Fluvial Processes in Geomorphology*. San Francisco: Freeman. (Doc. #19540, p. 117)

Levick, Lainie R. et al. 2008. *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest*, U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046. (Doc. #13610, p.46; Doc. #15130, p. 2; Doc. #15213, p. 8; Doc. #19540, p. 68)

Lowe, W. H., and G. E. Likens. 2005. *Moving headwater streams to the head of the class*. Bioscience 55. (Doc. #15130, p. 2)

Magnien, Dr. Robert. April 1999. *Miles of Ditches have Altered Delmarva Peninsula Hydrology*. Chesapeake Bay Journal at <http://www.bayjournal.com/article.cfm?article=2128> (last checked 11/12/14). (Doc. #15020, p. 35)

Maryland Department of Natural Resources Eyes on the Bay. May2, 2008. *Microcystis Bloom Continues in the Transquaking River*. (Doc. #14620, p. 5)

McCarthy, Gina. EPA Administrator. March 25, 2014. Huffington Post op-ed. available at http://www.huffingtonpost.com/gina-mccarthy/clearer-protections-for-c_b_5029328.html (Doc. #19540, p. 59)

Mersel, Matthew K. March 4, 2014. U.S. Army Engineer Research and Development Center, Development of National OHWM Delineation Technical Guidance [presentation]. (Doc. #7981, p.5; Doc. #18005, p. 7; Doc. #19540, p. 61)

Mersel, Matthew K. March 4, 2014. *Development of National OHWM Delineation Technical Guidance*. U.S. Army Corps of Engineers Cold Regions Research and Engineering Laboratory. Available at http://insideepa.com//index.php?option=com_iwpfile&file=apr2014/epa2014_0760.pdf. (Doc. #13071, p. 6; Doc. #17921.1, p. 47; Doc. #14460, p. 6; Doc. #14916, p. 56)

Mersel, Matthew K., Lindsey E Lefebvre, and Robert W, Lichvar. August 2014. A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark Classification. U.S. Army Engineer Research and Development Center (ERDC). (Doc. #12979, p.9)

Mersel, Matthew K., and Robert W. Lichvar. U.S. Army Engineer Research and Development Center (ERDC), *A Guide to Ordinary High Water Mark (OHWM)*. (Doc. #12979, p.9)

Meyer, J. L. 1979. *The role of sediments and bryophytes in phosphorus dynamics in a headwater stream ecosystem*. Limnology and Oceanography 24. (Doc. #15123, p. 4)

Meyer, J.L, L.A. Kaplan, J.D. Newbold, D.L. Strayer, C.J. Woltemade, J.B. Zedler, R. Beilfuss, Q. Capenter, R. Semlitsch, M.C. Watzin, & P.H. Zedler. February 2007. *Where Rivers are Born: The Scientific Imperative for Defending Small Streams and Wetlands*. American Rivers and Sierra Club 8, available at <http://www.americanrivers.org/assets/pdfs/reports-and-publications/WhereRiversAreBorn1d811.pdf?422fcb> (Doc. #15372, p 13; Doc. #15130, p. 2)

Meyer, Judy E. et al. 2003. *Where Rivers are Born: The Scientific Imperative for Defending Small Streams and Wetlands*. Available at www.americanrivers.org/newsroom/resources/where-rivers-areborn-the-scientific-imperative-for-defending-small-streams-and-wetlands/ (last visited Nov. 10, 2014). (Doc. #13610, p.46)

Meyer, J. L., D. L. Strayer, J. B. W., S. L. Eggert, G. S. Helfman, and N. E. Leonard. 2007. *The Contribution of Headwater Streams to Biodiversity in River Networks*. Journal of the American Water Resources Association 43. (Doc. #15130, p. 2)

Michigan Comp. Laws § 324.30101(i). Part 301 of the NREPA. (Doc. #16469, p. 5)

Missouri Department of Conservation. Water Quality and Use, <http://mdc.mo.gov/your-property/greener-communities/missouri-watershed-inventory-and-assessment/big-piney-river/water-> (last visited Oct. 15, 2014). (Doc. #16372, p. 13)

Missouri Department of Natural Resources. March 5, 2003. Comments on “Advance Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of ‘Waters of the United States,’” Docket ID OW-2002-0050. (Doc. #15123, p. 6)

Missouri Department of Natural Resources. Nov. 9, 2012. Regulatory Impact Report In Preparation for Proposing An Amendment to 10 CSR 20-7.031, Missouri Water Quality Standards. Available at <http://www.dnr.mo.gov/env/wpp/docs/master-rir-wqs-112312.pdf> (Doc. #17921.1, p. 45; Doc. #14460, p. 5; Doc. #19540, p. 60)

Mulholland, P. J., et al., 2008. *Stream denitrification across biomes and its response to anthropogenic nitrate loading*. Nature 452:202-205. (Doc. #15123, p. 3)

Montana Department of Environmental Quality. Guidelines on Erosional Features. (Doc. #16937, p. 7)

Motor Vehicle Mfrs. Ass’n, 463 U.S. (Doc. #15410, p. 16)

NWF, NMWF, TU, DU. January 2008. *Imperiled Treasures: How Recent Supreme Court Decisions and Agency Actions Have Endangered Southwest Waters and Wildlife*. (Doc. #15020, p. 40)

Nadeau & Rains. 2007. *Hydrological Connectivity Between Headwater Streams and Downstream Waters: How Science can Inform Policy*. Am. Water Resources Ass’n 118, Fig. 3b, available at <http://www.albergstein.com/cao/Best%20Available%20Science/Headwater%20Streams/JA-WRA%20Headwaters%20Issue/Headwaters%20ecological%20connectivity%20-%20science%20and%20policy.pdf>. (Doc. #15020, p. 40; Doc. #15130, p. 2; Doc. #15882.1, p. 10)

Natural Resources Defense Council. 2008. *Missing Protection: Polluting the Mississippi River Basin’s Small Streams and Wetlands*. NRDC Issue Paper. (Doc. #15123, p. 4; Doc. #16581, p. 7)

NRDC v. Callaway, 392 F.Supp. 685, 686 (D.D.C. 1975) (Doc. #16413, p. 35)

NRDC. v. Castle, 568 F.2d (Doc. #16413, p. 35)

New Mexico, State of. Clean Water Act 303d/305b Integrated Report, 2010-2012. Available at: <http://www.nmenv.state.nm.us/swqb/303d-305b/2010-2012/>. (Doc. #14974, p. 1)

New Mexico, State of. 2004. NMED exhibit at New Mexico's 2004 Triennial Review of Water Quality Standards. (Doc. #14974, p. 2)

North Carolina Department of Environmental and Natural Resources.
http://portal.ncdenr.org/web/wq/swp/ws/401/waterresources/faqs#What_is_a_stream_ (Doc. #15770, p. 3)

North Carolina Division of Water Quality. 2010. "Methodology for Identification of Intermittent and Perennial Streams and their Origins." Version 4.11. (Doc. #15130, p. 3)

North Carolina Research and Policy Center. October 2014. "Waterways Restored: The Clean Water Act's Impact on 15 American Rivers, Lakes, and Bays." Available at :
<http://environmentnorthcarolinacenter.org/reports/ncc/waterways-restored> (Last accessed November 14 2014) (Doc. #14280, p. 2)

Northern California River Watch v. City of Healdsburg, 496 F.3d (9th Cir. 2007) (Doc. #16413, p. 27)

Northwest Environmental Defense Center v. Brown, 640 F.3d (9th Cir., 2011) (Doc. #10966, p. 8)

<http://nveyak.com/water-shortage-update/> (Doc. #15426, p. 1)

Owens, Stephen A., Director, Arizona Department of Environmental. December 5, 2007. Letter to Benjamin H. Grumbles, Assistant Administrator, Office of Water, U.S. Environmental Protection Agency. (Doc. #15020, p. 40)

Meyer, J.L., and J.B. Wallace. 2001. *Lost linkages and lotic ecology: rediscovering small streams in Ecology: Achievement and Challenge*. 295-317 (M.C. Press et al. eds.) (Doc. #13610, p.46)

Meyer, J.L. et al. 2003. Comments of Professional Aquatic Scientists on Advanced Notice of Proposed Rulemaking for on the Clean Water Act Regulatory Definition of "Waters of the United States" (Docket ID No. OW-2002-0050). (Doc. #13610, p.46)

Patz, M.J. et al. 2006. *Trace Elements in Coalbed Methane Produced Water Interacting with Semi- and Ephemeral Stream Channels.*, 170 *Water Air and Soil Pollution*. (Doc. #13610, p.46)

Pennsylvania Code Title 58 Recreation§ 57.11 Statements of Policy, Listing of wild trout streams. (Doc. #4826, p. 2)

Perciasepe, Robert, EPA Deputy Administrator. July 9, 2014. Testimony before the House Committee on Reynolds, Tom. August 28, 2014. USEPA Blog. (Doc. #13029, p.36)

Reynolds, Tom. August 28, 2014. Mapping the Truth, EPA Connect Blog. Science, Space, and Technology available at <http://www.c-span.org/video/?320360-1/hearing-clean-water-act-regulations> (Doc. #19540, p. 59)

Peterson, B. J., W. M. Wollheim, P. J. Mulholland, J. R. Webster, J. L. Meyer, J. L. Tank, E. Martí, W. B. Bowden, H. M. Valett, A. E. Hershey, W. H. McDowell, W. K. Dodds, S. K. Hamilton, S. Gregory, and D. D. Morrall. 2001. *Control of nitrogen export from watersheds by headwater streams*. Science 292. (Doc. #15123, p. 3; Doc. #15130, p. 2)

Poff, N.L., J.D. Allan, M.B. Bain, J.R. Karr, K.L. Prestegard, B.D. Richter, R.E. Sparks, and J.C. Stromberg, 1997. *The natural flow regime*. BioScience. (Doc. #14135.1, p. 3; Doc. #16460, p. 11; Doc. #19540, p. 64, 65 & 66)

Pond et al. 2008. Downstream effects of mountaintop coal mining: comparing biological conditions using family- and genus-level macroinvertebrate bioassessment tools. J. N. Am. Benthol. Soc. http://www.epa.gov/owow/wetlands/pdf/Pond_2008.pdf (Doc. #16581, p. 7)

Portland Cement Assoc. v. Ruckelshaus, 486 F. 2d (<http://blog.epa.gov/epaconnect/2014/08/mapping-the-truth/> (Doc. #7981, p.5)

Rice v. Harkin Exploration Company. 250 F.3d 264 (5th Cir. 2001). (Doc. #10196, p.5)

San Francisco Baykeeper v. Cargill. Salt Div., 481 F. 3d 700, 707 (9th Cir. 2007). (Doc. #13271, p.22)

Science Advisory Board. September 30, 2014. Panel Comments on proposed rule (EPA-SAB-14-007). (Doc. #13029, p. 23 and 25; Doc. #13071, p.6)

Stanley, Emily H. et al. 1997. Ecosystem Expansion and Contraction in Streams. 47 BioScience. (Doc. #13610, p.48)

Stoner, Nancy. July 28, 2014. Letter to Congressman Lamar Smith. (Doc. #13029, p.36)

U.S. App. D.C. 1973)v. Needham. No. 02-30217, 2003 WL 22953383 (5th Cir. 2003). (Doc. #1505910196, p. 305)

QuiviraU.S. v. EPA, 765 Wilson. 133 F.2d (10th3d 251 (4th Cir. 1985)1997). (Doc. #1502010196, p. 39)

Rapanos v. United States, 126 S.Ct. 2208 (2006) (Doc. #14405, p. 3; Doc. #16564, p. 4; Doc. #15020, p. 37; Doc. #15372, p. 17; Doc. #8319, p. 6; Doc. #14283, p. 7; Doc. #14408, p. 7; Doc. #14424, p. 3; Doc. #14593, p. 10 & 11; Doc. #15224, p. 4; Doc. #15392, p. 5; Doc. #15540, p. 10; Doc. #16471, p. 4; Doc. #16937, p. 7; Doc. #15410, p. 16; Doc. #15534, p. 4; Doc. #15882.1, p. 64; Doc. #17921.1, p. 43 & 46; Doc. #14134, p. 32; Doc. #14638, p. 8; Doc. #14914, p. 11; Doc. #15114, p. 4; Doc. #15536, p. 13, 14, 15 & 16; Doc. #16563, p. 7;

Doc. #14135 p. 3; Doc. #14135 p. 5 & 6; Doc. #14135.2, p. 2; Doc. #14640, p. 21 & 22; Doc. #14916, p. 5; Doc. #14930, p. 18; Doc. #15142, p. 7, 8 & 12; Doc. #15509, p. 4; Doc. #15624, p. 4; Doc. #16353, p. 7; Doc. #18016, p. 4; Doc. #15178.1, p. 6 & 13; Doc. #15213, p. 8; Doc. #15356, p. 12 & 13; Doc. #15365, p. 3; Doc. #16393, p. 4; Doc. #16491, p. 3, 13, & 14; Doc. #4185, p. 1; Doc. #17159, p. 4; Doc. #15360, p. 10; Doc. #10847, p. 5; Doc. #17071, p. 9; Doc. #17077, p. 9; Doc. #17075, p. 5 & 6; Doc. #15078, p. 8; Doc. #16337.1, p. 6; Doc. #16460, p. 11; Doc. #16542.1, p. 8; Doc. #19465, p. 25; Doc. #5596, p. 1; #19540, p. 55, 56, 57, 58, 59, 62, 66, 70, & 72)

Rains, M. 2008. Surface-water and groundwater interactions in small pools on the Pebble property. Powerpoint to federal agencies, Anchorage, AK. (Doc. #15426, p. 2)

Rains, M. 2011 *Water sources and hydrodynamics of closed-basin depressions, Cook Inlet Region, AK*. Wetlands 31: 377-387 (Doc. #15426, p. 2)

Aug. 28, 2014. <http://blog.epa.gov/epaconnect/2014/08/mapping-the-truth/>. (Doc. #17921.1, p. 47)

Royer, T. V., M. B. David, and L. E. Gentry. 2006. *Timing of riverine export of nitrate and phosphorus from agricultural watersheds in Illinois: Implications for reducing nutrient loading to the Mississippi River*. Environmental Science & Technology 40:4126-4131. (Doc. #15123, p. 3)

<http://science.edgeboss.net/sst2014/documents/epa/national2013.pdf>. (Doc. #14968, p. 6)

<https://www.snap.uaf.edu/> (Doc. #15426, p. 1)

Sanford, W.E., and J.P Pope. 2013. *Quantifying Groundwater's Role in Delaying Improvements to Chesapeake Bay Water Quality*. Environ. Sci. Technol. (Doc. #19540, p. 70)

Snyder et al. 2013; (Doc. #15130, p. 2)

Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers, 531 U.S. 159 (2001) (Doc. #14424, p. 3; Doc. #14593, p. 10; Doc. #15540, p. 10; Doc. #15536, p. 14; Doc. #15142, p. 7 & 12; Doc. #15178.1, p. 6; Doc. #15356, p. 12 & 13; Doc. #16491, p. 13, & 14; Doc. #10847, p. 5)

Stallman, Bob, President, American Farm Bureau Federation. June 11, 2014. Statement on the Potential Impacts of Proposed Changes to the Clean Water Act Jurisdiction Rule: Testimony Before the House Transportation and Infrastructure Committee Subcommittee on Water Resources and Environment, available at http://www.fb.org/newsroom/nr/nr2014/06-11-14/WOTUS_testimony_6-11-14.pdf (Doc. #15536, p. 15)

Stefferdud & Steffrud,. 2007. *Fish Movement through Intermittent Stream Channels: A Case History Study*, available at

<http://www.usbr.gov/lc/phoenix/biology/azfish/pdf/intermittentStreams.pdf>. (Doc. #15020, p. 39; Doc. #16460, p. 11 & 12)

Stoner, Nancy, Acting Assistant Administrator. July 28, 2014. Letter to U.S. Representative Lamar Smith.. Available at http://science.house.gov/sites/republicans.science.house.gov/files/documents/epareleases_maps_letter.pdf (Doc. #16676, p. 5)

Stoner, Nancy, Acting Assistant Administrator. June 30, 2014. Blog post EPA. “Setting the Record Straight on Waters of the US,” available at <http://blog.epa.gov/epaconnect/2014/06/setting-the-record-straight-on-wous/> (last visited Nov. 6, 2014). (Doc. #19540, p. 59)

Tate, Mike and Tom Stiles. May 2, 2014. Kansas Department of Health and Environment, Waters of the U.S. (Doc. #17921.1, p. 45)

Tennessee Department of Environment and Conservation (TDEC) Aquatic Resource Alteration rule and associated permitting process. See <http://www.tn.gov/sos/rules/0400/0400-40/0400-40-07.20131216.pdf> (Doc. #17470, p. 8)

Tennessee Wildlife Resources Agency. February 26, 2003. Comments on “Advance Notice of Proposed Rulemaking on the Clean Water Act Regulatory Definition of ‘Waters of the United States,’” Docket ID OW-2002-0050. (Doc. #15123, p. 6)

Thorp, James H. & Michael D. DeLong. 1994. *The Riverine Productivity Model: An Heuristic View of Carbon Sources and Organic Processing in Large River Ecosystems*. OIKOS. (Doc. #15019, p. 128)

James H. Thorp et al. 2006. *The Riverine Ecosystem Synthesis: Biocomplexity in River Networks Across Space and Time*. River Res. & Applications. (Doc. #15019, p. 128)

Trustees for Alaska v. EPA, 749 F.2d (9th Cir.1984) (Doc. #15882.1, p. 67)

Rising to the Challenge - How Anglers Can Respond to Threats to Fishing in America, available at: http://www.tu.org/sites/default/files/TU_Rising_to_the_Challenge_web.pdf. (Doc. #16413, p. 28)

U.S. Army Corps of Engineers. Environmental Assessment and Finding of No Significant Impact for the Caribbean Regional Supplement to the 1987 Wetland Delineation Manual. (Doc. #15059, p. 29)

U.S. Army Corps of Engineers Philadelphia District. Public Comments and Responses: Draft Interim Eastern. Western Mountains and Piedmont Regional Supplement to the 1987 Corps of Engineers Wetland Delineation Manual. (Doc. #15059, p. 29)

- U.S. Army Corps of Engineers. Environmental Assessment and Finding of No Significant Impact for the Northcentral and Northeast Regional Supplement to the 1987 Wetland and Delineation Manual (Doc. #15059, p. 29)
- U.S. Army Corps of Engineers. January 1987. *Wetlands Delineation Manual*. (Doc. #18005, p. OHWM Guidance. (Doc. #7981, p.5)
- U.S. Army Corps of Engineers. 2004. *Review of Ordinary High Water Mark Indicators for Delineating Arid Streams in the Southwestern United States*. (Doc. #13951, p.8, 9, and 10; Doc. #14135.1, p. 8, 9 &10))
- U.S. Army Corps of Engineers Alaska District. June 28, 2005. Special Public Notice: Draft Alaska Regional Supplement to the 1987 Wetland Delineation Manual (Public Notice No. SPN 2005-10) (Doc. #15059, p. 29)
- U.S. Army Corps of Engineers Portland District. Sept. 2, 2005. Special Public Notice: Field Testing the Arid West Supplement: Draft Arid West Regional Supplement to the 1987 Wetland Delineation Manual. (Doc. #15059, p. 29)
- U.S. Army Corps of Engineers. December 7, 2005. Regulatory Guidance Letter No. 05-05, Ordinary High Water Mark Identification. Available at <http://www.usace.army.mil/Portals/2/docs/civilworks/RGLS/rgl05-05.pdf>. (Doc. #17921.1, p. 48; Doc. #14638, p. 8; Doc. #14963, p. 12; Doc. #15059, p. 28 & 29; Doc. #15517, p. 10)
- U.S. Army Corps of Engineers.. 2006. *Distribution of Ordinary High Water Mark (OHWM) Indicators and Their Reliability in Identifying the Limits of “Waters of the United States” in Arid Southwestern Channels*. (Doc. #13951, p.10 and 11; Doc. #14135 p. 8; Doc. #14135.1, p. 8; Doc. #15206, p. 4)
- U.S. Army Corps of Engineers Galveston District. Sept. 27, 2006. Public Notice: Request for Public Input on Proposed Wetland Indicators and Data Collection Procedures for Draft Great Plains Regional Supplement to the 1987 Wetland Delineation Manual (Doc. #15059, p. 29)
- U.S. Army Corps of Engineers Omaha District. Apr. 20, 2007 Special Public Notice: Notice of Availability and Request for Public Comments: Draft Western Mountains & Valleys Regional Supplement to the 1987 Wetland Delineation Manual. (Doc. #15059, p. 29)
- U.S. Army Corps of Engineers Louisville District. June 26, 2007. Public Notice: Draft Midwest Regional Supplement to the 1987 Wetland and Delineation Manual (Public Notice No. LRL-2007-785-asb) (Doc. #15059, p. 29)
- U.S. Army Corps of Engineers Alaska District. Oct. 26, 2007. Special Public Notice: Final Version of the Alaska Regional Supplement to the 1987 Wetland Delineation Manual (Public Notice No. SPN-2006-445-FINAL) (Doc. #15059, p. 29)

U.S. Army Corps of Engineers. Aug. 17, 2007. Approved Jurisdictional Determination Form, File NWK-2007-01586-1. (Doc. #15020, p. 31)

U.S. Army Corps of Eng'rs, Kansas City District. Dec. 6, 2007. Approved Jurisdictional Determination: Coffey County RWD 3, NWK-2007-02080-2. (Doc. #15020, p. 41)

U.S. Army Corps of Engineers. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*. Prepared by Robert W. Lichvar and Shawn M. McColley. (Doc. #13951, p.11; Doc. #15074, p. 2; Doc. #15020, p. 32; Doc. #15372, p 19; Doc. #16559, p. 5; Doc. #17921.1, p. 48; Doc. #14638, p. 8 & 9; Doc. #14135.1, p. 8; Doc. #15178.1, p. 15 & 17; Doc. #15213, p. 8; Doc. #17159, p. 4; Doc. #15206, p. 4 Available at <http://www.dtic.mil/dtic/tr/fulltext/u2/a486603.pdf>. (Doc. #13951, p.11)

U.S. Army Corps of Engineers. 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*, ed. J.S. Wakely, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28. Vicksburg, MS: U.S. Army Engineer Research and Development Center. (Doc. #15178.1, p. 15)

U.S. Army Corps of Engineers Baltimore District. Dec. 9, 2008. Special Public Notice: Publication and One-Year Trial Implementation Period of the Atlantic and Gulf Coastal Plain Interim Regional Supplement to the 1987 Wetland Delineation Manual (Public Notice No. 08-77). (Doc. #15059, p. 29)

U.S. Army Corps of Engineers. May 6, 2009. Environmental Assessment and Finding of No Significant Impact for the Hawaii and Pacific Islands Regional Supplement to the 1987 Wetland and Delineation Manual (Doc. #15059, p. 29)

U.S. Army Corps of Engineers. 2009. *Vegetation and Channel Morphology Responses to Ordinary High Water Discharge Events in Arid West Stream Channels*. (Doc. #13951, p.11)

U.S. Army Corps of Engineers Philadelphia District. Dec. 20, 2010. Special Public Notice: Final Atlantic and Gulf Coastal Plain Regional Supplement to the 1987 Wetland Delineation Manual (Public Notice No. CENAP-OP-R) (Doc. #15059, p. 29)

U.S. Army Corps of Engineers. 2011. *Ordinary High Flows and the Stage–Discharge Relationship in the Arid West Region*. (Doc. #13951, p.7; Doc. #19540, p. 61 & 62)

U.S. Army Corps of Engineers Philadelphia District. Feb. 14, 2012. Public Notice: Announcement of Version 2.0 of the Northcentral and Northeast Regional Supplement to the Corps of Engineers Delineation Manual (Public Notice No. CENAP-OP-R) (Doc. #15059, p. 29)

U.S. Army Corps of Engineers Philadelphia District. May 4, 2012. Special Public Notice: Final Eastern Mountains and Piedmont Regional Supplement to the 1987 Corps of Engineers Wetland Delineation Manual (Public Notice No. CENAP-OP-R) (Doc. #15059, p. 29)

- U.S. Army Corps of Engineers. 2013. *Survey of OHWM Indicator Distribution Patterns across Arid West Landscapes*. (Doc. #13951, p.11; Doc. #14135.1, p. 8 & 9)
- U.S. Army Corps of Engineers Engineer Research and Development Center. January 2013. *Channel Classification across Arid West Landscapes in Support of OHW Delineation*, Lefebvre L., R. Lichvar, K. Curtis, J. Gillrich. (Doc. #19540, p. 60)
- U.S. Army Corps of Engineers. April 2014. *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States* (ERDC/CCREL TR-14-13). (Doc. #14904, p. 3; Doc. #15655, p. 5; Doc. #17921.1, p. 48; Doc. #17455, p. 3)
- U.S. Army Corps of Engineers. August 2014. *A Guide to Ordinary High Water Mark (OHWM) Delineation for Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*. Available at <http://acwc.sdp.sirsi.net/client/search/asset/1036027>. (Doc. #8674, p.11; Doc. #13438, p. 3; Doc. #17455, p. 3; Doc. #15392, p. 5; Doc. #14134, p. 36; Doc. #14963, p. 12; Doc. #16392, p. 12; Doc. #15059, p. 6 & 273)
- U.S. Army Corps of Engineers. August 2014. *A Review of Land and Stream Classifications in Support of Developing a National Ordinary High Water Mark (OHWM) Classification*. Available at <http://acwc.sdp.sirsi.net/client/search/asset/1036026>. (Doc. #8674, p.11; Doc. #12979, p.9; Doc. #17455, p. 3; Doc. #15372, p 19; Doc. #14904, p. 4; Doc. #15392, p. 5; Doc. #15633.1, p. 6; Doc. #18005, p. 8; Doc. #17921.1, p. 48; Doc. #14134, p. 36; Doc. #14963, p. 12; Doc. #15059, p. 6; Doc. #17455, p. 3)
- U.S. Army Corps of Engineers. August 2014. *Occurrence and Distribution of Ordinary High Water Mark (OHWM) Indicators in Non-Perennial Streams in the Western Mountains, Valleys, and Coast Region of the United States*. Available at <http://acwc.sdp.sirsi.net/client/search/asset/103602>. (Doc. #15372, p 19; Doc. #17921.1, p. 48; Doc. #16932, p. 4)
- U.S. Department of Agriculture, Agricultural Research Service, and Southwest Watershed Research Center. October 2003. *Walnut Gulch Experimental Watershed Research Brochure*. (Doc. #19540, p. 67)
- U.S. Environmental Protection Agency. *My Waters Mapper*. (Doc. 14968, p. 7)
- U.S. Environmental Protection Agency. www.epa.gov/uswaters. Under the heading “What the Rule Does Not Do,” “Does not broaden coverage of Clean Water Act” (last visited Nov. 6, 2014); (Doc. #19540, p. 59)
- U.S. Environmental Protection Agency. http://www2.epa.gov/sites/production/files/2014-09/documents/facts_about_wotus.pdf, “The proposed rule does not expand jurisdiction [of the Clean Water Act]” (last visited Nov. 6, 2014). (Doc. #19540, p. 59)

U.S. Environmental Protection Agency. State and National Maps of Waters and Wetlands , available at <http://science.house.gov/epamaps-state-2013#overlay-context>. (last visited Oct. 29, 2014) (Doc. #17921.1, p. 47)

U.S. Environmental Protection Agency. *Percentage of Surface Drinking Water from Intermittent, Ephemeral, or Headwater Streams in Utah*, available at http://www.epa.gov/owow/wetlands/science/surface_drinking_water/pdfs/surface_drinking_water_ut.pdf (last visited 06/28/11). (Doc. #15020, p. 40)

U.S. Environmental Protection Agency. *Geographic Information System Systems Analysis of the Surface Drinking Water Provided by Intermittent, Ephemeral, and Headwater Streams in the U.S.* . Available at http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm (last updated Oct. 29, 2013). (Doc. #15372, p 13 & 17; Doc. visited Nov. 10, 2014). (Doc. #13610, p.46)

U.S. Environmental Protection Agency. . 2008. *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest*. (Doc. #15233, p. 3; Doc. #16394, p. 4)

U.S. Environmental Protection Agency. March 2008. EPA 816-K-07-004, FACTOIDS: Drinking Water and Ground Water Statistics for 2007. Available at http://www.epa.gov/ogwdw/databases/pdfs/data_factoids_2007.pdf. (Doc. #15372, p 13)

U.S. Environmental Protection Agency. 2008 Rapanos Guidance. (Doc. #16413, p. 28; Doc. #17921.1, p. 45; Doc. #14282.1, p. 5 & 6; Doc. #16470, p. 4 & 5; Doc. #17159, p. 2 & 3; Doc. #19461, p. 7; Doc. #19465, p. 25; Doc. 13596, p. 28 & 29)

U.S. Environmental Protection Agency. 2009. Analysis of Surface Drinking Water Provided By Intermittent, Ephemeral, and Headwater Streams in the U.S (State-by-State) and (County-by-County) available at http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm. (Doc. #16460, p. 10)

U.S. Environmental Protection Agency. April 2011 draft guidance. Available at http://www.epa.gov/tp/pdf/wous_guidance_4-2011.pdf. (Doc. #13271, p.13)

U.S. Environmental Protection Agency. 2006. *Field Operations Manual for Assessing the Hydrologic Permanence and Ecological Condition of Headwater*. (Doc. #13610, p.48)

U.S. Environmental Protection Agency March 25, 2014. "EPA and U.S. Army Corps of Engineers Clarify Protection for Nation's Streams and Wetlands: Agriculture's Exemptions and Exclusions from Clean Water Act Expanded by Proposal" (press release), available at: <http://www2.epa.gov/uswaters>. (Doc. #14282.1, p. 6)

U.S. Environmental Protection Agency. March 2014. *Economic Analysis of Proposed Revised Definition of Waters of the United States*. Retrieved September 12, 2014.
http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf (Doc. #14794, p. 8)

U.S. Environmental Protection Agency. July 1, 2014. "Facts About the Waters of the U.S. Proposal". http://www2.epa.gov/sites/production/files/2014-09/documents/facts_about_wotus.pdf (Doc. #18005, p. 8)

U.S. Environmental Protection Agency Office of General Counsel. 1975. In re: Riverside Irrigation Dist., Ltd. & 17 Others, 1975 WL 23864 (Doc. #15020, p. 36)

U.S. Environmental Protection Agency Office of General Counsel. Nov. 11, 1977. In re: Town of Buckeye, Arizona, 1977 WL 28254.. (Doc. #15020, p. 36)

U.S. Environmental Protection Agency Office of Research & Development. September 2013. *Connectivity of Streams and Wetlands to Downstream Waters :A Review and Synthesis of the Scientific Evidence – External Review Draft*. (Doc. #15123, p. 3; Doc. #15372, p 19; Doc. #15437, p. 32; Doc. #16394, p. 4; Doc. #16413, p. 28 & 32; Doc. #14135 p. 4; Doc. #14930, p. 19; Doc. #15624, p. 4; Doc. #16353, p. 7; Doc. #14407, p. 10; Doc. #19540, p. 57, 66, 67 & 73)

U.S. Environmental Protection Agency Science Advisory Board. September 30, 2014. *Consideration of the Adequacy of the Scientific and Technical Basis of the EPA's Proposed Rule titled "Definition of Waters of the United States under the Clean Water Act*, EPA-SAB-14-007. (Doc. #15060, p. 3; Doc. #15838, p. 3; Doc. #16372, p. 13; Doc. #14738.1, p. 3; Doc. #16581, p. 6; Doc. #15020, p. 35, 40 & 41; Doc. #15372, p. 17 & 18; Doc. #15437, p. 33, 34, 60, 61 & 62; Doc. #16394, p. 4; Doc. #16394, p. 7; Doc. #16413, p. 27 & 33; Doc. #17921.1, p. 45; Doc. #17921.1, p. 45 & 46; Doc. #16335.1, p. 1; Doc. #14134, p. 31, 32 & 34; Doc. #16392, p. 13; Doc. #17444, p. 5; Doc. #18010, p. 2; Doc. #14135 p. 5; Doc. #15178.1, p. 13; Doc. #15213, p. 2; Doc. #15360, p. 10; Doc. #19593, p. 5; Doc. #19540, p.57 & 73)

U.S. Environmental Protection Agency, September 2013. *Connectivity of Stream and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence* (External Review Draft, EPA/600/R-11/098B). (Doc. #15123, p. 4)

U.S. Environmental Protection Agency and U.S. Army Engineers. Memorandum Regarding Clean Water Act Jurisdiction Following *Rapanos v. United States*. (Doc. #15770, p. 2)

U.S. Environmental Protection Agency and U.S. Army Engineers.. May 30, 2007. *Jurisdictional Determination Form Instructional Guidebook*. (Doc. #7937.1, p.8; Doc. #15770, p. 2)

U.S. Environmental Protection Agency and U.S. Army Engineers. April 21, 2014. Definition of "Waters of the United States" Under the Clean Water Act; Proposed Rule, 79 Fed. Reg.

22,188, 22,201. Proposed “Definition of ‘Waters of the United States’ Under the Clean Water Act” 40 CFR 230.3(c)5 (Doc. #14130, p. 12)

U.S. General Accounting Office. February 2004. Report to the Chairman, Subcommittee on Energy Policy, Natural Resources and Regulating Affairs, Committee on Reform, House of Representatives. Waters and Wetlands: Corps of Engineers Needs to Evaluate Its District Office Practices in Determining Jurisdiction, GAO-04-297.
<http://www.gao.gov/new.internets/d04297.pdf> (Doc. #13610, p. 46; Doc. #13951, p. 11; Doc. #15392, p. 5; Doc. #18005, p. 7; Doc. #14134, p. 32; Doc. #18016, p. 4; Doc. #15356, p. 14; Doc. #19540, p. 6011)

U.S. Geological SurveyService, available at: <http://nhd.usgs.gov/ftp://nhdftp.usgs.gov/DataSets/Staged/SubRegions/>. (Doc. #11773.1, p.3)

U.S. Geological SurveyService, available at: <http://nhd.usgs.gov/ftp://nhdftp.usgs.gov/DataSets/Staged/SubRegions/>. (Doc. #11773.1, p.3)

U.S. Geological Survey- National Hydrography Dataset. U.S. Geological Survey, 2014. Retrieved September 15, 2014. <http://nhd.usgs.gov/> (Doc. #14794, p. 8; Doc. #16393, p. 4)

U.S. Geological Survey, http://water.usgs.gov/nawqa/sparrow/gulf_findings/ES&T_states.pdf (Doc. #16581, p. 7)

U.S. Geological Survey. 1998. Water Quality In The South Platte River: Colorado, Nebraska & Wyoming 1992-1995, CIRCULAR 1167. (Doc. #16460, p. 12)

U.S. House of Representatives, Committee on Appropriations.
<http://appropriations.house.gov/calendararchive/eventsingle.aspx?EventID=373134> (46:08 to 50:00). (Doc. #13029, p.36)

U.S. House of Representatives, Committee on Science, Space and Technology. Maps.
<http://science.house.gov/epa-maps-state-2013#overlay-context>. (Doc. #13029, p.36; Doc. #15364, p. 10; Doc. #19540, p. 59)

United States v. Ashland Oil and Transportation Co., 504 F.2d (6th Cir. 1974) (Doc. #15020, p. 39)

United States v. Deaton, 332 F.3d (4th Cir. 2003), 124 S. Ct. (2004) (Doc. #15020, p. 39)

United States v. Eidson, 108 F.3d (11th Cir.) (Doc. #15020, p. 36; Doc. #16413, p. 35)

United States v. Gerke Excavating, Inc. (Doc. #15020, p. 32)

United States v. Holland, 373 F. Supp. (M.D. Fla. 1974). (Doc. #13160, p. 48)

United States v. Moses, 496 F.3d (9th Cir. 2007) (Doc. #15020, p. 32)

United States v. Riverside Bayview, 474 U.S. (1985) (Doc. #15536, p. 14; Doc. #14135 p. 3; Doc. #14640, p. 22; Doc. #15356, p. 12; Doc. #16491, p. 14; Doc. #19540, p. 73)

United States v. Robison, 505 F.3d (11th Cir 2007) (Doc. #16413, p. 27; Doc. #14134, p. 36)

United States v. St. Bernard Parish, 589 F.Supp. (E.D. La. 1984). (Doc. #15020, p. 36)

United States Tel. Ass'n v. FCC, 188 F.3d (D.C. Cir. 1999) (Doc. #15410, p. 16)

United States v. TGR Corp., 171 F.3d (2d Cir. 1999). (Doc. #15020, p. 37)

United States v. Vierstra, 2011 WL 1064526 (D. Id. Mar. 18, 2011) (Doc. #16413, p. 27)

Vannote, Robin L. et al. 1980. *The River Continuum Concept*, 37 CANADIAN J. FISHERIES & AQUATIC SCI. (Doc. #15019, p. 127)

Virginia Department of Environmental Quality comments on Advanced Notice of Public Rulemaking on definition of Waters of the US, EPA Docket OW-2002-0050, March 28, 2003. (Doc. #11773.1, p.3)

Walker & Burr. 1994. *Status of Freshwater Fishes of the United States: Overview of an Imperiled Fauna*. Fisheries. (Doc. #16460, p. 12)

Watersheds, <http://www.pawsd.org/watershed-protection.html> (last visited Oct. 3, 2014). (Doc. #16460, p. 13)

Westar Energy, Inc. v. FERC, 473 F.3d (D.C. Cir. 2007) (Doc. #15410, p. 17)

Wigington, et al. 2006. *Coho Salmon Dependence on Intermittent Streams*. Available at <http://www.roguebasinwatersheds.org/files/intermittent%20streams%20and%20coho.pdf>. (Doc. #15020, p. 39; Doc. #16460, p. 11)

Winter, T. C. 2007. *The role of groundwater in generating streamflow in headwater areas and in maintaining base flow*. Journal of the American Water Resources Association 43:15-25. (Doc. #15123, p. 3; Doc. #15770, p. 2)

Wheeler, Cody, Corps Employee. Nov. 16, 2007. Email from to OW-Docket@EPA. (Doc. #15020, p. 31)

Whipfli et.al. *Ecological Linkages Between Headwaters and Downstream Ecosystems: Transport of Organic Matter, Invertebrates, and Wood Down Headwater Channels*. (Doc. #15770, p. 2)

Zale, Alexander V. et al. U.S. Fish & Wildlife Serv. March 1989. *The Physicochemistry, Flora, and Fauna of Intermittent Prairie Streams: A Review of the Literature*. Biological Report. (Doc. #15019, p. 127)

SUPPLEMENTAL REFERENCES

Acuna, et al, “Why Should We Care About Temporary Waterways?” *Science* Vol. 343 (March 7, 2014) (Doc. #15015, p. 2)

Levick, L., J. Fonseca, D. Goodrich, M. Hernandez, D. Semmens, J. Stromberg, R. Leidy, M. Scianni, D. P. Guertin, M. Tluczek, and W. Kepner. 2008. *The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest*. U.S. Environmental Protection Agency and USDA/ARS Southwest Watershed Research Center, EPA/600/R-08/134, ARS/233046 (Doc. #15015, p. 3)

<http://water.epa.gov/type/rsl/streams.cfm> (Doc. #15015, p. 2)

<http://water.epa.gov/type/rsl/streams.cfm> (Doc. #15015, p. 3)

http://water.epa.gov/lawsregs/guidance/wetlands/surface_drinking_water_index.cfm Last accessed November 12, 2014. (Doc. #15015, p. 3)

Environmental Protection Agency/Army Corps of Engineers, “Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision in *Rapanos v. United States* & *Carabell v. United States*,” p. 1, (June 5, 2007) available at <http://www.epa.gov/owow/wetlands/pdf/RapanosGuidance6507.pdf> (Doc. #13199, p. 2)

Pennsylvania Rule, Definition of Stream Watercourse, Intermittent Stream, and Perennial Stream. (Doc. 11370, p. 1)