

US EPA ARCHIVE DOCUMENT

Clean Water Rule Comment Compendium
Topic 11: Costs/Benefits (Volume 2)

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 Cost and Benefits 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.

Note: While the contractor established a placeholder in this document for the “Agency Response,” the rule is promulgated by the Environmental Protection Agency and the Department of the Army and the responses are those of the agencies.

TOPIC 11. COSTS/BENEFITS (VOLUME 2)	9
11.2. SCOPE OF CHANGE OF JURISDICTION	9
AGENCY SUMMARY RESPONSE	9
SPECIFIC COMMENTS	12
Small Business Administration Office of Advocacy (Doc. #7958)	13
Committee on Space, Science and Technology (Doc. #16386)	13
Texas Comptroller of Public Accounts (Doc. #10952)	13
Wyoming Association of Conservation Districts (Doc. #14068)	17
State of Wyoming (Doc. #14584)	17
Maine Department of Environmental Protection (Doc. #14624)	17
State of Oklahoma (Doc. #14625)	18
Arizona Department of Environmental Quality (Doc. #15096)	19
Office of the Governor, State of Utah (Doc. #16534)	20
State of Oklahoma, et al. (Doc. #16560)	22
Coastal Restoration and Protection Authority Board of Louisiana (Doc. #17043)	23
Texas Department of Agriculture (Doc. #18854)	25
Iowa League of Cities (Doc. #18823)	26
State of Alaska (Doc. #19465)	26
Sweetwater County Board of County Commissioners, Sweetwater County, Wyoming (Doc. #6863)	27
Butler County Pennsylvania (Doc. #6918.1)	27
White Pine County Board of County Commissioners, White Pine County, Nevada (Doc. #6936)	28
City of San Diego, Transportation & Storm Water Department (Doc. #7950.2)	29
Moffat County Board of Commissioners, Moffat County, Colorado (Doc. #7987)	29
Board of Douglas County Commissioners, Castle Rock, Colorado (Doc. #8145)	29
Beaver County Commission (Doc. #9667)	33
Pasco County, Florida (Doc. #9697)	33
Pike Peak Area Council of Governments (Doc. #9732)	34
Urban Drainage and Flood Control District (Doc. #12263)	34
Owyhee County Board of Commissioners (Doc. #12725.1)	35
Palo Alto County Board of Supervisors (Doc. #14095)	35
Maricopa County Board of Supervisors (Doc. #14132.1)	35
Florida League of Cities, Inc. (Doc. #14466)	36
Big Horn County, State of Wyoming (Doc. #14571)	37
Soil and Water Conservation District (Doc. #14943)	38
San Joaquin Tributaries Authority (Doc. #14992)	38
Harris County Flood Control District (Doc. #15049)	38
National Association of Counties (Doc. #15081)	39
Rio Grande Water Conservation District (Doc. #15124)	41
Sacramento County, California (Doc. #15518)	41
Republican River Water Conservation District (Doc. #15621)	42
Delaware County Department of Watershed Affairs (Doc. #16936)	43

Department of Public Works, County of San Diego, California (Doc. #17920) ..	43
Nevada County Board of Supervisors, State of California (Doc. #18894).....	44
Mississippi Valley Flood Control Association (Doc. #19488)	44
California Central Valley Flood Control Association (Doc. #19571)	45
Butte County Administration, County of Butte, California (Doc. #19593).....	46
National Association of Towns and Townships (Doc. #1864)	47
North Houston Association, et al. (Doc. #8537).....	48
California State Association of Counties (Doc. #9692).....	48
Kentucky League of Cities (Doc. #15227)	49
The United States Conference of Mayors, et al. (Doc. #15784).....	50
Oklahoma Municipal League (Doc. #16526)	50
Michigan Association of Conservation Districts (Doc. #16583).....	50
Maine Municipal Association (Doc. #16630).....	51
Wyoming Association of Conservation Districts (Doc. #17348)	52
U.S. Chamber of Commerce (Doc. #14115).....	53
Georgia Chamber of Commerce (Doc. #14430).....	54
Atlantic Legal Foundation (Doc. #15253)	55
International Brotherhood of Boilermakers, et al. (Doc. #15373).....	59
National Association of Manufacturers (Doc. #15410).....	63
Grand Junction Area Chamber of Commerce (Doc. #15425)	64
Missouri and Associated Rivers Coalition (Doc. #15519)	65
South Carolina Association of Counties (Doc. #15573).....	65
Federal Water Quality Coalition (Doc. #15822).....	66
Minnesota Chamber of Commerce (Doc. #16473).....	68
Kentucky Association Manufacturers (Doc. #16525)	68
Water Advocacy Coalition (Doc. #17921)	69
Water Advocacy Coalition (Doc. #17921.15)	71
Western States Land Commissioners Association (Doc. #19453)	80
Minnkota Power Cooperative, Inc. (Doc. #19607).....	81
Houma-Terrebonne Chamber of Commerce (Doc. #19624)	81
Southern Nevada Home Builders Association (Doc. #3251)	82
American Concrete Pressure Pipe Association et al. (Doc. #3306).....	82
Kolter Land Partners and Manatee-Sarasota Building Industry Association (Doc. #7938.1)	83
Southern States Energy Board (Doc. #13011).....	83
National Ready Mix Concrete Association (Doc. #13956)	84
El Dorado Holdings, Inc. (Doc. #14285).....	86
Vulcan Materials Company (Doc. #14642)	90
Home Builders Association of Mississippi (Doc. #19504)	90
National Association of Home Builders (Doc. #19540).....	91
North Carolina Aggregates Association (Doc. #6938).....	94
Kansas Independent Oil & Gas Association (Doc. #12249).....	94
National Stone, Sand and Gravel Association (Doc. #14412).....	96
Wyoming Mining Association (Doc. #14460).....	99
The Mosaic Company (Doc. #14640).....	99
Devon Energy Corporation (Doc. #14916).....	110

Alaska Miners Association (Doc. #15027.1).....	110
American Petroleum Institute (Doc. #15115).....	111
Permian Basin Petroleum Association (Doc. #15378)	151
Texas Pipeline Association (Doc. #15404).....	152
Illinois Coal Association (Doc. #15517)	153
Pennsylvania Grade Crude Oil Coalition (Doc. #15773)	154
Dominion Resources Services, Inc. (Doc. #16338).....	154
Vulcan Materials Company (Doc. #16566).....	155
Oregon Cattleman’s Association (Doc. #5273).....	156
North Dakota Soybean Growers Association (Doc. #14121).....	156
Dairy Cares (Doc. #16471).....	157
Ohio Farm Bureau Federation (Doc. #16609)	158
Iowa Soybean Association (Doc. #17175).....	158
J.R. Simplot Company (Doc. #15062).....	159
Colorado Agricultural Aviation Association (#15033).....	166
Klamath Water Users Association (Doc. #15063).....	166
Riverport Levee District (Doc. #15655)	167
Ohio Farm Bureau Federation (Doc. #16609)	168
Earth City Levee District (Doc. #18910).....	169
Coon Run Levee and Drainage District (Doc. #8366).....	170
Ingram Barge Company (Doc. #14796).....	170
Elmore County Highway Department, Wetumpka, Alabama (Doc. #14072)	171
SD1 (Doc. #15140)	171
Arizona Public Service Company (Doc. #15162).....	172
Department of Public Works, City of Harrisonville, Missouri (Doc. #4038.2)..	173
Utility Water Act Group (Doc. #15016)	173
Association of Electronic Companies of Texas, Inc. (Doc. #16433).....	175
Florida H2O Coalition (Doc. #19325)	177
Exxon Mobil Corporation (Doc. #15044).....	178
ARIPPA (Doc. #16545)	178
Northern California Water Association (Doc. #17444).....	179
Pacific Legal Foundation (Doc. #14081).....	180
Environmental Council of the States (Doc. #15543)	180
Southeastern Legal Foundation (Doc. #16592)	181
Coalition of Alabama Waterways (Doc. #15101).....	182
Missouri and Associated Rivers Coalition (Doc. #15519)	183
Upper Mississippi, Illinois, & Missouri Rivers Association (Doc. #19563)	184
University of Florida (Doc. #16446)	185
Florida Stormwater Association, Inc. (Doc. #7965.1).....	192
American Legislative Exchange Council (Doc. #19468)	201
United States Senate (Doc. #1377)	202
United States House of Representatives (Doc. #17464).....	202
Congress of the Unites States (Doc. #1434)	202
House of Representatives (Doc. #12751)	203

11.3. SECTION 404 204

AGENCY SUMMARY RESPONSE	204
SPECIFIC COMMENTS	204
Southern Nevada Home Builders Association (Doc. #3251)	205
The Mosaic Company (Doc. #14640).....	205
Oregon Cattlemen’s Association (Doc. #5273).....	206
Pike and Scott County Farm Bureaus (Doc. #5519).....	206
Consolidated Drainage District #1, Mississippi County, Missouri (Doc. #6254)	
.....	207
Monarch-Chesterfield Levee District, St. Louis, Missouri (Doc. #14904)	207
11.3.1. <i>Costs</i>	208
AGENCY SUMMARY RESPONSE	208
SPECIFIC COMMENTS	214
New Mexico Department of Agriculture (Doc. #13024).....	214
Wyoming Association of Conservation Districts (Doc. #14068)	214
State of Wyoming (Doc. #14584).....	215
Tennessee Department of Environment and Conservation (Doc. #15135)	215
Florida Department of Agriculture and Consumer Services (Doc. #10260)	215
Mesa County Board of County Commissioners (Doc. #12713).....	216
Resource Development Council for Alaska, Inc. (Doc. #14649)	216
Golf Course Superintendent’s Association of America, et al. (Doc. #14902)....	217
Coalition of Local Governments (Doc. #15516)	218
Houma-Terrebonne Chamber of Commerce (Doc. #19624)	218
Water Advocacy Coalition (Doc. #17921.15)	219
El Dorado Holdings, Inc. (Doc. #14285).....	223
Associated General Contractors of America (Doc. #14602)	223
Lehigh Hanson, Inc. (Doc. #15781).....	224
National Association of Home Builders (Doc. #19540).....	226
National Stone, Sand and Gravel Association (Doc. #14412).....	227
The Mosaic Company (Doc. #14640).....	227
Continental Resources, Inc. (Doc. #14655).....	232
American Petroleum Institute (Doc. #15115).....	232
Countrymark Cooperative Holding Corporation, LLC, Countrymark Refining and	
Logistics, LLC (Doc. #16656)	233
Pennsylvania Grade Crude Oil Coalition (Doc. #15773)	234
Dominion Resources Services, Inc. (Doc. #16338).....	234
American Petroleum Institute (Doc. #15115).....	234
Coastal Louisiana Levee Consortium (Doc. #19324).....	250
The Mosaic Company (Doc. #14640).....	251
Iowa Farm Bureau Federation and American Farm Bureau Federation (Doc.	
#7633)	255
North Dakota Soybean Growers Association (Doc. #14121).....	255
Florida Crystals Corporation (Doc. #16652)	256
Department of Public Works, City of Northglenn, Colorado (Doc. #14990).....	257
Orange County Public Works, Orange County, California (Doc. #14994)	257
Mohave Electric Cooperative, Inc. (Doc. #10953).....	258

Arizona’s Generation and Transmission Cooperative (Doc. #14901).....	258
Salt River Project Agricultural and Power District and the Salt River Valley	
Water Users Association (Doc. #14928)	258
Utility Water Act Group (Doc. #15016)	259
American Wind Energy Association (Doc. #15208)	259
Tri-State Generation and Transmission Association, Inc. (Doc. #16392)	260
Greater Lafourche Port Commission (Doc. #8411).....	261
Iowa Waters Advocacy Coalition (Doc. #14120).....	262
11.3.2. Benefits.....	262
AGENCY SUMMARY RESPONSE	262
SPECIFIC COMMENTS	264
Water Advocacy Coalition (Doc. #17921.15)	264
The Mosaic Company (Doc. #14640).....	266
American Petroleum Institute (Doc. #15115).....	271
Western Landowners Alliance (Doc. #16553).....	279
11.4. OTHER CWA PROGRAMS.....	279
AGENCY SUMMARY RESPONSE	279
SPECIFIC COMMENTS	281
Tennessee Valley Association (Doc. #17470)	281
The United States Conference of Mayors, et al. (Doc. #15784).....	282
Greater Houston Partnership (Doc. #14726)	282
Water Advocacy Coalition (Doc. #17921.15)	283
Lydig Construction Inc. (Doc. #14147).....	285
Halliburton Energy Services, Inc. (Doc. #15509).....	286
Illinois Coal Association (Doc. #15517)	286
Family Farm Alliance (Doc. #1431).....	286
Mohave Electric Cooperative, Inc. (Doc. #10953).....	287
11.4.1. 303 and 305.....	287
AGENCY SUMMARY RESPONSE	287
SPECIFIC COMMENTS	287
Wyoming Association of Conservation Districts (Doc. #14068)	287
11.4.1.1 Costs	288
AGENCY SUMMARY RESPONSE	288
SPECIFIC COMMENTS	288
Arizona Department of Environmental Quality, et al. (Doc. #15096).....	288
Tennessee Department of Environment and Conservation (Doc. #15135)	290
Water Advocacy Coalition (Doc. #17921.15)	291
Nevada Mining Association (Doc. #14930)	292
Independent Petroleum Association of America (Doc. #18864)	292
County Engineers Association of Ohio (Doc. #1997)	293
Arizona Public Service Company (Doc. #15162).....	294
Utility Water Act Group (Doc. #15016).....	296
11.4.1.2 Benefits.....	297

11.4.2.	311 Program	297
	AGENCY SUMMARY RESPONSE	297
	SPECIFIC COMMENTS	297
	Pennsylvania Grade Crude Oil Coalition (Doc. #15773)	297
	Independent Petroleum Association of America (Doc. #18864)	298
	Kansas Independent Oil & Gas Association (Doc. #12249)	298
11.4.2.1	Costs	299
	AGENCY SUMMARY RESPONSE	299
	SPECIFIC COMMENTS	299
	Water Advocacy Coalition (Doc. #17921.15)	300
	American Petroleum Institute (Doc. #15115)	300
11.4.2.2	Benefits	302
	AGENCY SUMMARY RESPONSE	302
	SPECIFIC COMMENTS	302
	American Petroleum Institute (Doc. #15115)	302
	The Mosaic Company (Doc. #14640)	303
11.4.3.	401 Program	304
	AGENCY SUMMARY RESPONSE	304
	SPECIFIC COMMENTS	305
	Tennessee Valley Association (Doc. #17470)	305
	State of Iowa (Doc. #8377)	308
	Florida Department of Agriculture and Consumer Services (Doc. #10260)	308
11.4.3.1	Costs	309
	AGENCY SUMMARY RESPONSE	309
	SPECIFIC COMMENTS	309
	Water Advocacy Coalition (Doc. #17921.15)	309
	American Petroleum Institute (Doc. #15115)	310
	The Clean Energy Group Waters Initiative (Doc. #14616)	310
11.4.3.2	Benefits	311
11.4.4.	402 Program	311
	AGENCY SUMMARY RESPONSE	311
	SPECIFIC COMMENTS	311
	Arizona Department of Environmental Quality, et al. (Doc. #15096)	311
	Colorado Clean Water Coalition (Doc. #1231)	312
	Butler County Pennsylvania (Doc. #6918.1)	312
	Mesa County Board of County Commissioners (Doc. #12713)	313
	Board of Douglas County Commissioners, Castle Rock, Colorado (Doc. #8145)	313
	Georgia Municipal Association (Doc. #14527)	314
	Colorado Clean Water Coalition (Doc. #3533)	315
	American Society of Civil Engineers (Doc. #19572)	316
	North Carolina Aggregates Association (Doc. #6989)	316

The Mosaic Company (Doc. #14640).....	316
Golf Course Superintendent’s Association of America, et al. (Doc. #14902)....	319
11.4.4.1 Costs	320
AGENCY SUMMARY RESPONSE	320
SPECIFIC COMMENTS	320
St. Johns County Board of County Commissioners (Doc. #5598)	320
Natural Resources (Doc. #14426.1).....	320
Florida Stormwater Association (Doc. #14613)	324
City of Golden Public Works (Doc. #14617)	324
Water Advocacy Coalition (Doc. #17921.15)	324
Texas Mining and Reclamation Association (Doc. #10750).....	326
American Petroleum Institute (Doc. #15115).....	326
City of Goose Creek, South Carolina (Doc. #18827)	327
11.4.4.2 Benefits.....	327
11.4.5. <i>Other</i>	327
11.5. SUPPLEMENTAL COMMENTS ON COSTS AND BENEFITS	327
SPECIFIC COMMENTS	327
W. V. Giniecki (Doc. #4262).....	328
Council of the Borough of Ferndale, Cambria County (Doc. #4825)	328
Nevada County Resource Conservation District (Doc. #4830).....	328
Bonner County Board of Commissioners (Doc. #4879.1).....	329
Kansas Senate Committee on Natural Resources (Doc. #4904).....	330
Congress of the United States (Doc. #4983).....	330
L. Banks (Doc. #5554.1).....	330
L. Banks (Doc. #5554.2).....	331
Iowa State University (Doc. #7975)	332
Pike County (IL) Republican Central Committee, Pike County Republican Party, Illinois (Doc. #7984).....	333
Home Builders Association of Michigan (Doc. #7994)	333
Eddy County Board of Commissioners (Doc. #9693).....	335
United States Senate (Doc. #10625)	336
Anonymous (Doc. #11304).....	336
Anonymous (Doc. #11481).....	336
Board of County Commissioners, El Paso County, Colorado (Doc. #11487)... #11587)	337
Commissioner’s Court, Collin County, Texas (Doc. #11989).....	338
Office of the Board Attorney, Board of Supervisors Jackson County, Mississippi (Doc. #12262)	338
Family Farm Alliance (Doc. #12983).....	340
Duncan Valley Electric Cooperative, Inc. (Doc. #13033).....	341
Sitka Economic Development Association (Doc. #13023)	343
Todd Wilkinson (Doc. #13443)	343
Legislative Council on River Governance (Doc. #14791).....	343

Clean Water Action (Doc. #15015)	344
The Heritage Foundation (Doc. #15055)	344
Destin Water Users, Inc. (Doc. #15357)	345
Missouri and Associated Rivers Coalition (Doc. #15528)	345
Countrymark Cooperative Holding Corporation, LLC; Countrymark Refining and Logistics, LLC (Doc. #15656)	346
City of Jackson, Mississippi (Doc. #15766)	347
Martin Marietta (Doc. #16356)	349
L. L. Hughes (Doc. #16687)	349
D. Gillham (Doc. #16906)	350
Shasta County Farm Bureau (Doc. #16924)	351
Colusa County Board of Supervisors (Doc. #17002)	352
Cook County, Minnesota, Board of Commissioners (Doc. #17004)	352
Arizona Rock Products Association (Doc. #17055)	354
Walsh Centennial, LLC (Doc. #17056)	355
Atlantic Legal Foundation (Doc. #17361)	356
Vermilion Parish Police Jury (Doc. #17362)	360
W. Stevens (Doc. #17663)	361
L. Schlothauer (Doc. #17946)	361
Anonymous (Doc. #18801)	362
Donald Shawcroft (Doc. #18569)	362
Independent Petroleum Association of America, et al (Doc. #18864)	362
Anonymous (Doc. #18943)	363
Kevin and Nicole Keegan (Doc. #19128)	363
United States Senate (Doc. #19309)	364
Jil Tracy, State Representative 94 th District (Doc. #19518)	364
M. Sedlock (Doc. #19524)	365
Spring City, Utah (Doc. #19662)	367
Alpine County Board of Supervisors, County of Alpine, California (Doc. #20492)	367
Mayor and Hannibal City Council, City of Hannibal, Missouri (Doc. #20495)	367
Highlands Ranch Metropolitan District, Highlands Ranch, Colorado (Doc. #20499)	368
Empire District Electric Company (Doc. #20501)	369
Michigan House of Representatives (Doc. #20504)	369
REFERENCES/ATTACHMENTS	370

Topic 11. COSTS/BENEFITS (VOLUME 2)

11.2. SCOPE OF CHANGE OF JURISDICTION

Agency Summary Response

Some commenters expressed concerns regarding the analysis of jurisdictional determinations that serves as a proxy for a potential increase in permitting activity for the purposes of the economic analysis. In some cases these concerns are unwarranted, while in other cases EPA has attempted to address the concerns. An initial set of concerns relate to the Corps' Operation and Maintenance Business Information Link, Regulatory Module (ORM2) database which was used in order to review a sample of negative jurisdictional determinations (JDs)¹ (i.e., determinations of no jurisdiction) completed by the Corps in fiscal years 2009 and 2010 in order to assess if the determination would change if the final rule had been in place. Contrary to submitted comments, ORM2 categories are fully inclusive of all types of waters whose jurisdiction may be affected by this rule. The Corps' ORM2 database includes a variety of waters that have been found to be jurisdictional and not jurisdictional including ditches. This analysis and the waters in ORM2 are described in Section 4: Estimated Changes in Positive Jurisdiction of the Economic Analysis of the Clean Water Rule. The Economic Analysis evaluated streams, wetlands, and "other waters". The "other waters" category includes intrastate, non-navigable waters - lakes, ponds, streams, and ditches that lack a direct surface connection to other waterways.

Commenters suggest that the universe of jurisdictional areas under the proposed rule is underrepresented because ORM2 only captures waters engaged in the permitting process. The agencies recognize this uncertainty, and conducted quantitative analysis based on conservative assumptions to address this issue. (The agencies also recognize that some landowners seeking determinations may not pursue permits.) To account for the fact that there may be "other waters" for which landowners are not engaging in the permit process as a result of a presumption of non-jurisdiction, the agencies doubled the number of "other waters" records in the ORM2 dataset to derive a "high-end" estimate of increases in positive jurisdictional determinations. This is a more conservative assumption than used in the proposal analysis, where the number of "other water" records was doubled only for the purposes of estimating the number of other waters becoming jurisdictional as non-adjacent other waters. Additionally, the agencies assume that 100 percent of the waters in the stream and wetlands categories would be found jurisdictional. The agencies did not have data available to estimate the number of waters that were found jurisdictional under current practice but that would be found non-jurisdictional under the final rule.

Commenters stated the agencies should rely on additional data sources apart from ORM2 to calculate the change in jurisdictional determinations. The agencies believe ORM2 to be the best nationally representative dataset available for the calculation of the percent change in jurisdictional determinations. The data have gone through an extensive quality assurance process in preparation for the final rule economic analysis.

¹ A "positive jurisdictional determination" is a decision to assert CWA jurisdiction over a particular water. The alternative is a "negative jurisdictional determination" which is a decision not to assert CWA jurisdiction over a particular water. It is important to note that the purpose of the economic analysis is not to estimate the change in the numbers of waters subject to jurisdiction.

Commenters also state that the “water type null” is not accounted for in the calculations resulting in a 2.7% increase as estimated for the proposed rule. There is no reason to suggest that a blank entry for “aquatic resource type” would fall predominantly in any one or other category should it have been entered. The agencies deem assuming the same distribution is the most appropriate way to deal with blank entries.

Some commenters note that because certain states claim state jurisdiction over waters beyond what EPA and the Corps claim under current practice, an increase in jurisdiction under the proposed rule could lead to increased permit costs without the equivalent increase in benefits. Additionally, some commenters suggest that a way to correct the Economic Analysis for the rule is to calculate the incremental acreage for each state, rather than for the entire country, and subsequently adjust incremental benefits to account for protection already occurring under state law. The agencies based their projections on actual records of jurisdictional determinations. While it was not feasible to assemble a large enough sample of nation-wide jurisdictional determinations to project how many more positive jurisdictional determinations would be made in each state, the agencies did apply their projections of the increased fraction of jurisdictional determinations to levels of 404-regulated activity in each state, so those states experiencing more activity requiring 404 permits would be assigned higher costs. The agencies estimated mitigation and permit application costs. While some costs of project design modification incurred prior to permit application may not have been reflected, the agencies’ estimates of costs also have an upward bias, as not all parties requesting a jurisdictional determination will acquire a permit and realize mitigation costs. The agencies did not estimate costs to Section 404 permittees of meeting other non-CWA requirements, but have no reason to suppose they would be significant. In any event, the Economic Analysis was developed for informational purposes and did not guide policy decisions.

Some commenters also expressed concern that preliminary jurisdictional determinations (PJDs) were not included as part of the analysis. In the PJD process an applicant presumes all wetlands or streams on-site are jurisdictional, in lieu of performing a complete jurisdictional analysis on the site. Because these waters are currently being assumed jurisdictional, they are not relevant to a calculation focused on estimating the potential increase in jurisdictional waters. Commenters noted that the PJD process is sometimes used to avoid the full approved jurisdictional determination (AJD) process and associated processing time and expense. However, in circumstances where there are waters on-site that are likely not jurisdictional under current practice, it can benefit applicants to undergo the full AJD process to avoid incurring permit requirements and associated costs on non-jurisdictional waters. Following this rule-making the PJD process will continue, and the explicit distance limits in under paragraphs (a)(6) and (a)(8) of the rule may make PJDs for certain waters more appealing, saving permit applicants time and money.

Commenters suggest that using permit data from fiscal years 2009 and 2010 represents an economically depressed period, and will result in artificially low numbers of applications and affected acreage. The agencies used the most recent available information in ORM2 at the time of conducting the EA for the Proposed Rule. In response to these concerns, in the final rule

analysis, the agencies examined permit numbers from fiscal years 2009 to 2013 and independently selected the maximum number of general and individual permits issued each year. As a point of comparison, ORM2 fiscal years 2009 and 2010 records listed in the EA for the Proposed Rule totaled 141,965, while the equivalent figure for fiscal years 2013 and 2014, used for the Final Rule, totaled 160,087. The average project size per permit was also updated using data from fiscal year 2013. This data reflects a more recent year of permit activity and also has been informed by significant data-cleaning efforts by the Corps, and is believed to be an improvement on the information presented in the proposal.

Similar to the concern above regarding the universe of jurisdictional waters being underrepresented, commenters suggest that the sensitivity analysis in the Proposed Rule’s EA doesn’t adequately address the potential influx of new applicants. In the EA for the Proposed Rule, the agencies doubled the number of waters not meeting the definition of adjacency. This assumption reflects the belief that waters found to be adjacent are located on the landscape such that their current jurisdictional status is likely to be ambiguous and so a landowner would have sought a jurisdictional determination prior to any water disturbance activity. In the EA for the Final Rule, the agencies have attempted to address the concern that landowners would not have sought a jurisdictional determination by doubling the number of all “other waters,” and not just the number of non-adjacent other waters. This assumption will provide a reasonable high-end estimate of the potential increase in jurisdictional determinations.

Commenters point out that the EA for the Proposed Rule uses the 2.7% estimate of increased permit applications as a starting point for economic analysis of non-404 sections of the Clean Water Act, and questions the validity of this approach. The Agencies do not have a database similar to ORM2 that would confidently show the change in impact, benefits, or costs to other Clean Water Act programs. In the absence of such information, it is reasonable to rely on the estimates of change negative jurisdictional determinations to positive determinations related to Section 404 activity. Construction-related stormwater discharges, CAFO discharges, and permits for the application of pesticides are more likely to occur in similar locations as CWA Section 404 dredge and fill discharge with respect to proximity to “isolated waters”, small streams, and their adjacent wetlands. Using the estimates of change in negative determinations to positive determinations related to 404 activity directly for changes to other programs serves to potentially overestimate costs. In an effort to accurately estimate the potential increase in permits and associated costs and benefits, when applying the estimated increase in jurisdictional waters as a proxy for an increase in Clean Water Act permits, the agencies examine each respective CWA program. In the case of evaluating Section 402 program effects, the agencies adjusted for either program growth or shrinkage since the original regulatory impact analysis was completed.

Commenters provided the agencies with numerous examples of site-specific situations and examples of particular waters that they believe should or should not be considered jurisdictional. See Summary and Individual Responses under Topic 14 for more information.

Specific Comments

Small Business Administration Office of Advocacy (Doc. #7958)

11.2.1 Second, the rule defines the scope of jurisdiction of the Clean Water Act without any discretion left to any entity or intermediary. The rule does not, for example, set a goal for which types or how many waters must be included in jurisdiction, leaving the Corps or states to determine the exact definition of waters of the United States in particular instances. This rule establishes the definition and all small entities are bound by it. (p. 6)

Agency Response: See Summary Response to Topic 11.1 (RFA/SBREFA), as well as Topic 10 (Legal Analysis). The rule is narrower in jurisdiction than the existing rule.

Committee on Space, Science and Technology (Doc. #16386)

11.2.2 (...) 29. Why did EPA only look at the cost of 404 permits when developing their economic impact numbers? Did EPA make the determination that there will be cost associated with the other permits such as 303, 311, 401 and 402? (p. 10)

Agency Response: See Summary Response to Topic 11.4 (Other CWA Programs). Though the Economic Analysis is for illustrative purposes only, the agencies do estimate potential costs to non-404 programs.

11.2.3 (...) 31. A recent study by conducted by Dr. David Sunding a Professor at DC Berkley and Principle at the Brattle Group found that the EPA used data on permitting costs that were almost 20 years old and not adjusted for inflation. Additionally, his analysis showed that EPA's cost estimates excludes costs of avoidance and delay. What is EPA doing to address the concerns with its economic analysis? (p. 11)

Agency Response: See Summary Response for Topic 11.3. The agencies did adjust costs for inflation.

11.2.4 32. The Agencies' economic analysis projects a 3 percent increase in regulatory jurisdiction based upon Section 404 permitting activities in 2009-2010.

a. What factors did EPA consider in selecting this window as the best representative sample?

b. What percentage of people do you estimate never apply for regulatory determinations and are therefore not part of the sample EPA relied on? (p. 11)

Agency Response: See Summary Response for this section (Topic 11.2). The agencies selected the 2009-2010 period because of best available data at the time. The agencies have adjusted their illustrative economic analysis to account for similar critiques by using data from 2013-2014.

Texas Comptroller of Public Accounts (Doc. #10952)

11.2.5 **Faulty Economic Analysis**

Finally, EPA's economic analysis of the proposal does not provide an accurate or complete picture of the proposal's true economic costs. According to the Review of 2014 Economic Analysis of Proposed Revised Definition of Waters of the United State by Dr. David Sunding (Professor, Agricultural and Resource Economics, at the University of California, Berkeley) numerous deficiencies exist regarding the EPA's economic analysis of the proposed rule including those outlined below. Dr. Sunding's instructive analysis, as summarized below, is consistent with my agency's view and we agree with his approach and conclusions.

EPA Inaccurately Quantifies the Increase in Bodies of Water Subject to CWA Jurisdiction

To calculate the potential increase in CWA jurisdiction caused by the proposal, EPA used the U.S. Army Corps of Engineers' Operation and Maintenance Business Information Link - Regulatory Module (ORM2) database.² However, according to Dr. Sunding, this database is not an appropriate tool to conduct this analysis for numerous reasons. Specifically, the use of ORM2 greatly weakens EPA's overall analysis, resulting in EPA sending misleading information to the public regarding this proposal.³

Most problematic is the fact that EPA's analysis **underrepresents the universe of jurisdictional areas and fails to consider the extent to which increased jurisdiction will impact activities** other than discharge. The following outlines some of the problems with EPA's use of ORM2:

- ORM2 records do not correspond with the categories of jurisdictional waters in the proposal; and records are not included for preliminary jurisdictional determinations.
- Even though a PJD would force landowners to treat all waters and wetlands on their property as jurisdictional waters of the U.S., EPA does not account for this **potentially large increase** in cost and scope of jurisdiction.
- Even if a landowner applies for a jurisdictional determination ORM2 does not accurately capture all aquatic resources.

While EPA recognizes that costs would be associated with updating ORM2 to properly match the proposal, the Agencies did not include these costs in their analysis. Given the reasons above, Sunding states, "... **EPA's use of the ORM2 data throughout its economic analysis to quantify the increase in jurisdiction is highly suspect and results in woefully inaccurate projections.**" (p. 4)

Agency Response: See Summary Response for this section (Topic 11.2).

² The Brattle Group, Review of 2014 EPA's Economic Analysis (Proposed Revised Definition of Waters of the United States by Dr. David Sunding, May 15, 2014, p. 4

³ Sunding p. 4-5.

11.2.6 *EPA's Estimated 2.7 Percent Increase in Jurisdictional Waters is Misleading*

EPA's economic analysis projected the proposed definition of WOTUS would result in 2.7 percent more jurisdictional waters than under the current definition.⁴ However, the time period (FY 2009-2010) used to arrive at EPA's estimated 2.7 percent increase in the number of waters subject to CWA jurisdiction is not representative of the number of acres that could actually be affected in a "normal" year. This timeframe was marked with unusually low construction activity, which produced an artificially low number of applications and affected acreage. Broadly applying this 2.7 percent increase to the total number of permitted acres is incorrect as it does not account for fundamental differences that exist across state lines. (p. 5)

Agency Response: See Summary Response for this section (Topic 11.2).

11.2.7 *EPA Underestimates Incremental Costs Associated with the Proposal*

EPA estimates the costs of the proposal for several CWA regulatory programs, emphasizing costs associated with Section 404 permitting. As 404 permits are issued for development near wetlands and small streams, the regulation of these waters under the CWA will increase costs for affected entities, including farmers, ranchers, developers, communities and local governments. As Dr. Sunding points out, the Agencies' analyses are flawed in several ways:

- First, the analysis did not examine all costs associated with 404 permitting. There are four types of costs associated with 404 permitting: permit application; compensatory mitigation; permitting time; and impact avoidance and minimization. However, EPA's analysis **only considered two** of these costs: permit application and compensatory mitigation.⁵
- Second, data used by EPA to calculate permitting costs are **out-of-date and not adjusted for inflation**.
- Third, the total costs associated with the type of permits issued does not accurately account for all of the different permit types.
 - For example, individual permits (IP) are issued for activities that are expected to significantly impact a nearby body of water, while general permits (**GP**) are issued for projects with minimal expected impacts.

⁴ U.S. Environmental Protection Agency, Economic Analysis of Proposed Revised Definition of Waters of the United States, March 2013;
[file:///G:/Shared/Water/CWA/WOTUS%20definition%20proposal/EPA%20wus_proposed_rule_economic_analysis.p](file:///G:/Shared/Water/CWA/WOTUS%20definition%20proposal/EPA%20wus_proposed_rule_economic_analysis.pdf)
[df](file:///G:/Shared/Water/CWA/WOTUS%20definition%20proposal/EPA%20wus_proposed_rule_economic_analysis.pdf), p. 12.

⁵ U.S. Environmental Protection Agency, Economic Analysis of Proposed Revised Definition of Waters of the United States, March 2013;
[file:///G:/Shared/Water/CWA/WOTUS%20definition%20proposal/EPA%20wus_proposed_rule_economic_analysis.p](file:///G:/Shared/Water/CWA/WOTUS%20definition%20proposal/EPA%20wus_proposed_rule_economic_analysis.pdf)
[df](file:///G:/Shared/Water/CWA/WOTUS%20definition%20proposal/EPA%20wus_proposed_rule_economic_analysis.pdf), p. 12.

EPA did not consider the potential restructuring that could occur wherein a project that was previously eligible for GP would be required to apply for an IP, which carries increased costs.⁶

- Finally, EPA applied its Section 404 acreage increase value (2.7 percent) to non-Section 404 regulatory programs. As previously stated, there are several questions regarding the methodology supporting the 2.7 percent incremental change. (p. 5)

Agency Response: See Summary Response for this section (Topic 11.2).

11.2.8 *EPA's Incremental Benefits are Inflated and Unsubstantiated*

- **EPA's estimates are based on outdated, unpublished studies that have not been peer reviewed, and its** findings are based on synthesized information from ten studies that sought to estimate average willingness-to-pay for wetland mitigation. Nine of the ten studies were conducted more than ten years ago, with the oldest being completed thirty years ago. As Sunding concludes, "Those studies are largely irrelevant and do not provide accurate estimates of benefit."⁷
- The analysis assumes that benefits estimated for one geographic region at a particular point in time can be readily applied to other regions and points in time. However, "This oversimplification comes at the expense of accuracy."⁸
- EPA did not take into account variations in economic trends, recreational patterns or **stated** preferences over time, which further skews the analysis and conclusions. (p. 6)

Agency Response: See Summary Response for Topic 11.3.2.

11.2.9 *EPA's Analysis is Misleading and Contains Several Calculation Errors*

Based on Dr. Sunding's review, EPA's economic analysis does not accurately reflect the potential impacts of the proposal as EPA's assumptions and calculations appear to be flawed and the analysis excludes certain costs and benefits. Thus, it is fair for the public to question EPA's conclusions (e.g., estimated benefits at \$301M - 398M and costs of \$134M - \$231M). In his analysis, Dr. Sunding strongly recommends that EPA conduct a more thorough analysis to accurately calculate the true economic impacts of the proposal. (p. 6)

Agency Response: The agencies have made several changes to address concerns expressed by Dr. Sunding and others. See Summary Responses to this section, as well as responses to Topics 11.3.1 and 11.3.2, and 11.4.

⁶ Sunding p. 16

⁷ Sunding p. 27

⁸ Sunding p. 28

Wyoming Association of Conservation Districts (Doc. #14068)

11.2.10 **Cost analysis**

The Association believes that the cost analysis⁹ failed to take a hard look at the economic impact of the proposed rule on the regulated community as well as state and local governments. EPA on one hand argues that 60% of the nation's waters are not clearly protected under today's jurisdictional requirements. EPA suggests that this rule will provide protection, pro se, to all of these waters. Yet EPA claims an increase of 3% or an estimated 1,500 acres in jurisdiction after completing the analysis. So the Association assumes, the impact in increased jurisdictional waters would range between the 3% and 60% of waters. Is it then assumed that of the 60% "not clearly protected waters" 57% will remain "not clearly protected"? (p. 6-7)

Agency Response: See Summary Response for this section (Topic 11.2). This rule is narrower in scope than existing regulations and historical practice. An increase of approximately 3% represented the agencies' estimate of increased positive jurisdictional determinations over recent practice.

State of Wyoming (Doc. #14584)

11.2.11 **The costs and benefits of the proposed rule are not properly addressed.**

The Agencies state that the proposed rule "saves businesses time and money" and "provides more benefits to the public than it costs." These statements are grossly inaccurate. The Agencies note savings in Agency expenditures based on an assumption that there will be less field-based, case-specific determinations for jurisdictional authority. While the proposed rule may save some administrative cost if the Agencies assume certain jurisdiction over more waters, it creates an expectation for more services elsewhere. The Agencies have failed to incorporate the weight of additional responsibilities they assume in this proposal. (p. 6)

Agency Response: See Summary Response for this section (Topic 11.2). In addition, this rule is narrower in scope than existing regulations and historical practice, and therefore does not create an expectation for more services elsewhere.

Maine Department of Environmental Protection (Doc. #14624)

11.2.12 **The estimated 3% increase of jurisdiction nationwide and 17% increase in jurisdiction regulating "other waters" exceeds the jurisdiction afforded to the Agencies by the U.S. Constitution.**

Despite the fact that the Supreme Court made the determination that the Corps exceeded its jurisdiction in the Rapanos cases, the Agencies proceeded to develop a regulation that

⁹ http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf

expanded their jurisdiction by an estimated 3% nationwide, and an estimated 17% expansion of jurisdiction for waters categorized as "other waters." The Agencies' *Economic Analysis of Proposed Revised Definition of Waters of the United States*¹⁰ ("Economic Analysis ") predicts an expansion of jurisdiction over what was considered jurisdictional under the 2008 guidance. The result of the expanded interpretation of WOTUS is an encroachment of federal jurisdiction into state jurisdictional waters by approximately 3%. Economic Analysis at 34. This 3% expansion of jurisdiction encroaches upon Maine's traditional and primary authority over land and water use.

It should be noted that the Economic Analysis was conducted over the course of a two-year time period which may not be indicative of normal construction activity due to the economic climate during the time period. If increased construction were to have taken place during the two-year time period, the estimates of expanded jurisdiction may have been greater than what was presented by the Agencies. Furthermore, the estimates which were provided in the Economic Analysis represented a nationwide increase. More rural, water-rich states, such as Maine, are likely to be disproportionately impacted by the proposed regulation and expansion of jurisdiction.

Waters that are not navigable, and that have traditionally been regulated solely by the State of Maine, such as a "shallow subsurface hydrologic connection" to a jurisdictional water, are considered WOTUS under the proposed regulation. Significantly, the Economic Analysis states that 0% of "other waters" evaluated using the 2008 guidance were determined to be jurisdictional, compared to 17% of "other waters" under the proposed rule. Economic Analysis at 34. The Agencies' Economic Analysis indicates that this expansion is a result of the redefinition of the "adjacency" test. This expansion in jurisdictional reach interferes with the regulation of a state resource by the state. Further, use of shallow subsurface connections to determine adjacency essentially federalizes regulation of groundwater, which no reasonable person could interpret as navigable water. Use of a shallow subsurface connection as the only connection to a traditional navigable water ("TNW") would be to "read the significance of the term 'navigable' out of the statute altogether." (see SWANCC at 171-172) (p. 3-4)

Agency Response: See Summary Response for this section (Topic 11.2) and the Economic Analysis for the final rule, as well as the Technical Support Document. The agencies have revised the period evaluated to account for economic downturn in 2009 and 2010.

State of Oklahoma (Doc. #14625)

11.2.13VI. The Burden of Ambiguity on States and Local Stakeholders

¹⁰ March 2014, US Environmental Protection Agency and US Army Corps of Engineers.

Like others that have commented, including the organizations to which we belong, we believe that the Agencies have missed or ignored the greater expense and resource burden this proposed rule will place on State co-regulators and watershed stakeholders. The ambiguity outlined above opens the door for your Agencies and the courts to greatly expand CWA jurisdiction to waters not meant to be regulated by the Federal government. Because States are in the lead or play a significant role in implementation of the various CWA programs, we anticipate greater demands on our already limited resources that go well beyond the estimates provided in the cost analysis accompanying this rulemaking. For example, an expanded number of Section 404 permits will result in an increased demand for 401 certifications by the State, and there are unquantifiable impacts on our stormwater general permits and MS4 permits. More significantly, it will be the landowners, developers and other watershed stakeholders that own and manage well over 90% of Oklahoma's landscape that will face the brunt of the burden despite the great strides they have made in working with us to restore water quality heretofore. (p. 3-4)

Agency Response: See Summary Response under Topic 13.2.4 (Unfunded Mandates Reform Act) for a discussion related to co-regulators. See Summary Response for this section (Topic 11.2), and Topics 11.3 and 11.4, for responses related to the potentially affected community in the context of a “recent practice” baseline.

Arizona Department of Environmental Quality (Doc. #15096)

11.2.14B. Expansion of Federal Control Over Land and Water Use.

By asserting jurisdiction over areas of land where water flows in direct response to precipitation, the Agencies are blurring the distinction between nonpoint source runoff and point source discharges. If the area through which water runs is a water of the U.S., then the federal government has control of the use of that area. This is federal land use control that will affect State economic development decisions.

Indeed, all activities that drive economic development in the States would be affected by the proposed rule, including highway and road construction, pipeline projects, transmission line projects, farming, flood control, and public works projects. With federal permitting also comes the potential for a federal veto of State economic development projects.

For example, stream and wetland mitigation costs for state highway projects in the State of Washington can range anywhere from \$180,000 to \$2.28 million each.⁸ The likelihood that roadside ditches would now be included as jurisdictional federal waters would increase those costs exponentially. The proposed rule could also have similar impacts on States that choose to build significant infrastructure related to renewable energy or natural gas projects in order to comply with EPA's proposed guidelines for states to reduce emissions from existing power plants under § 111(d) of the Clean Air Act. (p. 6)

Agency Response: See Summary Response for this section (Topic 11.2), and Topics 11.3 and 11.4, for responses related to the potentially affected community in the context of a “recent practice” baseline. See also Summary Response for Topic 6 (Ditches).

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

11.2.15B. Flawed Economic Analysis

The rule does not comport with EO 12866. The proposing agencies have used a flawed methodology for calculating benefits and a deficient approach toward calculating incremental costs. The analysis fails to conform to even the most basic principles of economic analysis. As a result, the analysis does not provide the public and policy makers credible information about the magnitude of the rule's impacts. For example, the economic analysis relies on nearly 20-year old cost data that has not been adjusted for inflation. In concluding that the rule would increase the waters subject to permitting requirements by only 2.7 percent, the proposing agencies rely on a data base that is incomplete and not representative of those waters that are subject to jurisdiction under current regulation. Their use of the 2.7 percent figure to extrapolate likely cost impacts in other CWA programs introduces further bias in the benefit-cost analysis.

In addition, EPA's economic analysis has been limited to costs associated with section 404 of the CWA and fails to consider the full costs of implementing expanded jurisdiction. The cost of this expansion will impact all programs of the CWA, including sections 303, 311, 401, and 402. EPA has significantly underestimated the costs associated with this rule. (p. 15)

Agency Response: See Summary Response for this section (Topic 11.2), and Topics 11.3 and 11.4. The economic analysis does take into consideration sections 303, 311, 401, and 402 of the Clean Water Act.

11.2.16C. Energy Sector

The value of the state's direct energy production is nearly \$5 billion dollars annually, and jobs in the energy sector pay almost twice the state average.¹¹ Revenues from energy development on state trust lands provide crucial funding to Utah's schools. Additionally, a multitude of energy and infrastructure projects underway in the state will provide direct benefits to the nation and region through increased access to energy resources, improved transportation systems with economic and environmental benefits, and efficient resource development. The EPA's proposed rule imposes unjustified and unnecessary costs and burdens on energy production and infrastructure projects, and the many benefits that flow

¹¹ Michael Vanden Berg, Utah Geographic Survey, "Utah's Energy Landscape," 3rd Edition; 2014 at 9, available at <http://energy.utah.gov/wp-content/uploads/Utahs-Energy-Landscape-3rd-Edition.pdf> (accessed 11/10/14).

from them , and should be reconsidered to allow for sensible and understandable interpretations of Waters of the U.S.

The Environmental Protection Agency' s (EPA) proposed rule for the definition of "waters of the United States" unreasonably impedes responsible domestic energy development by unnecessarily increasing the time and expense of project and infrastructure permitting. Energy companies already face burdensome costs and delays from numerous federal requirements. According to the National Association of Environmental Professionals, final Environmental Impact Statements (EIS) issued in 2012 under the National Environmental Policy Act (NEPA) averaged 4.6 years to complete.¹² The Government Accountability Office in a 2014 report to Congress found the median EIS contractor cost for Department of Energy projects was \$ 1.4 million.¹³

The EPA's proposed rule would extend federal jurisdiction to whole new categories of natural and artificial features, including poorly defined "tributary," "adjacent, " and "neighboring" waters that would by regulatory rule be assumed to have a " significant nexus" to navigable water. This approach would unfairly expose the energy industry to numerous lawsuits where they would have the legal burden of showing that some water feature does not have a "significant nexus." The EPA's approach turns established law on its head and undermines current best practices for assessing Waters of the U.S. The EPA's ambiguous legal terms and shifting of the legal burden of proof will create enormous costs and delays to energy production and infrastructure projects.

The proposed rule states that man-made conveyances, including ditches, are considered jurisdictional tributaries if they have a "bed, bank and ordinary water mark and flow directly or indirectly into a 'water of the United States,' regardless of perennial, intermittent or ephemeral flow." This broad declaration would require numerous energy production and infrastructure projects to potentially get a number of new Clean Water Act (CWA) permits and/or certifications, including sections 303, 304, 305 (state water quality standards), 311 (oil spill prevention), 401 (state water quality certification), 402 (effluent/stormwater discharge permits), and 404 (dredge and fill permits). Compliance with these new permitting and certification requirements would cost industry enormous amounts of time and money. The average time it takes to acquire a 404 permit is 788 days and costs an average of \$271 ,596 .¹⁴ Since the proposed rule has placed the legal burden of proof on industry, the cost and burden of these new permitting requirements would be greatly enhanced.

¹² U.S. Government Accountability Office, "National Environmental Policy Act: Little Information Exists on NEPA Analyses, " GAO- 14-37 0, at 14 (April 20 14), available at <http://gao.gov/assets/670/662546.pdf> (accessed 11 /10/201 4).1

¹³ Id. at 13.

¹⁴ David Sunding and David Zilbennan, "The Economics of Environmental Regulation by Licensing: An Assessment of Recent Changes to the Wet land Permitting Process" (200 2) available at [http://are.berkeley.edu/~sunding/Economics%20filfo20Environmental%20Regulation .pdf](http://are.berkeley.edu/~sunding/Economics%20filfo20Environmental%20Regulation.pdf) (accessed 11/ 10/201 4).

The expansive and uncertain application of this proposed rule would require significant state and local government time and money to implement without any evidence that it will improve the state's system for protecting its water resources. State and local governments must make tough decisions on how to deploy limited personnel and budget. Increased compliance costs created by the Proposed Rule would likely reduce government responsiveness to other regulatory needs in the energy sector, which would further hamper energy development that is so crucial to economic development for the state. (p. 12-14)

Agency Response: See Summary Response for this section (Topic 11.2), and Topics 11.3 and 11.4 on the potentially affected entities in the economic analysis. See also the Summary Response and additional discussion under Topic 13 (Unfunded Mandates Reform Act) on impacts to state and local governments. See also response to Topic 11.3.1.

State of Oklahoma, et al. (Doc. #16560)

11.2.17c. Inadequate economic impact analysis

EPA and the Corps also claim that the rule would have minimal economic impact and would not affect many acres—only about 1,300 acres nationwide—which seems grossly inaccurate given that the proposed rule could be read to affect this number of acres within one Oklahoma county alone. Furthermore, in order for EPA and the Corps to substantiate such claims that the rule will only impact a defined number of acres or defined percentage of waters requires that they delineate the newly impacted areas. So show us the map! Such a map would go a long way to helping states and the regulated community understand exactly where each jurisdictional water is located. Unfortunately, up to this point there has been no map delineating the proposed scope of CWA jurisdiction, even in the abstract, which seems like a very reasonable and helpful visual aid to accompany a geographically-based rule. When we contacted our Corps District Office to help identify which waters would be covered by the new rule, we were told that case-by-case determinations would continue to be made, which begs the question whether anything has been clarified by the proposed rule.

Largely avoiding the true costs, EPA and the Corps have instead emphasized that the proposed rule will benefit businesses by making it easier to determine if a body of water is covered by the CWA. Based upon our aforementioned confusion regarding definitions and new undefined terms, this is only true if we assume that nearly everything is covered. This, of course, does not save anyone from the cost and burdens of increased regulation. As highlighted in a recent report prepared for The Waters Advocacy Coalition, "The inclusion of these (expanded categories of) waters will broaden the scope of the CWA and will increase the costs associated with each program. Unfortunately, the EPA

analysis relies on a flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of the definitional changes.¹⁵ Thus, the proposed rule creates a situation where continued litigation will likely cause a greater expenditure of time and resources to subjectively apply the definitions contained within the proposed rule. This impact will be felt by the entire regulated community and all Oklahomans, including small landowners and businesses least able to absorb such costs.

Of grave concern to the OWRB and our sister agencies, the analysis also does not address the burden on state resources for required for permitting, oversight and enforcement. (p. 11-12)

Agency Response: See Summary Response for this section (Topic 11.2), and Topics 11.3 and 11.4 on the potentially affected entities in the economic analysis. The agencies considered it more appropriate for the economic analysis to use existing Corps data to assess the change in jurisdictional determinations from negative to positive assertions due to the rule when compared to recent practice, as opposed to abstract maps. Furthermore, as the rule clarifies types of waters that are covered by the CWA and those that aren't, the agencies would expect to find reduced litigation costs. See also the Summary Response and additional discussion under Topic 13 (Unfunded Mandates Reform Act) on impacts to state and local governments.

Coastal Restoration and Protection Authority Board of Louisiana (Doc. #17043)

11.2.18C. The permitting delays and increased costs associated with the broad reach of the proposed rule will significantly hamper state and local restoration efforts given the lack of exemptions for restoration projects that actually increase wetland acreage and promote integrated coastal protection.

Just as the risk of litigation as outlined in the previous comment will surely increase as uncertainty of the case-by-case "other waters" desktop analysis clutters the landscape in the aftermath of the implementation of this proposed rule, so too will the risk of litigation for the state and local agencies sifting through the permit process because of the increased costs associated with heavy delays in permitting. It is undisputed that the administration costs for an agency like the CPRA would skyrocket if this proposed rule goes into effect.

Consider, for example, the increased costs associated with the oversight of the permitting process. While the task of issuing coastal use permits in the Louisiana coastal zone lies with the Louisiana Department of Natural Resources ("DNR"), CPRA is nonetheless required to conduct a consistency review of these permits to determine whether the

¹⁵ David Sunding, Ph.D., Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States, The Brattle Group (May 2014), available at: <http://news.agc.org/wpcontent/uploads/2014/05/WOTUS-Economic-Report-FINAL.pdf>

permits are, in fact, consistent with the most recent version of the Master Plan. In addition, the CPRA also has oversight authority over other potentially impacted entities like state levee and drainage boards. The Agencies readily admit that the costs to state agencies are likely to increase. As the jurisdictional reach of the proposed rule and the uncertainty surrounding the analysis of "other waters" coincide, the direct and indirect costs from additional permitting will assuredly soar like those associated with § 404 permits under the CWA, stormwater permits and permits required in the coastal zone.

Along with the increased oversight costs borne by state agencies like the CPRA, DNR and the Louisiana Department of Environmental Quality, the delays in the processing time of Corps permit applications will delay critical coastal restoration projects. The expansion of jurisdictional waters under the proposed rule will require more permits for activities that did not previously require them. In turn, state agencies will have to use more funding dollars to hire more staff to administer the larger permit load. So, in addition to the costs needed to apply for the permits, the cost of administering the permits will overwhelm state agencies as they grapple with bringing on more personnel to handle the bloated permit loads. Every dollar that is put toward the administration costs of handling the ever-growing permit load means less dollars that can actually be used toward restoration projects that restore critical lost wetland acreage.

Ultimately, the increased cost of the expansive permitting regime brought on by this proposed rule would be felt by the end user, as well. Local governments and private stakeholders will be forced to hire consultants and more technical personnel as they struggle to make determinations of whether the waters associated with their projects will be deemed "waters of the United States" and, thus, subjected to the Agencies' expanded permitting footprint. Outside of these determinations, local governments and private stakeholders will be forced to bring on more staff to handle the increased permit load given the acknowledgement by the Agencies that more waters will be subjected to the Agencies' regulatory reach than have been in the past.

Louisiana is facing a critical land loss crisis. Every hour, we lose a land area the size of a football field due to erosion and subsidence. Through our Master Plan, we are combatting that crisis and building land. With the Master Plan, we anticipate closing that land loss gap within 20 to 30 years at which time we will actually be building more land than we are losing. However, the increased delays from the expansive permitting requirements under the proposed rule coupled with the ever-inflating administrative costs and the growth in the amount of regulatory permits required for our restoration projects threaten the State's ability to turn this critical corner to realize more land built than lost. In sum, the dollars required to comply with the expanded permitting footprint of the Agencies could be more efficiently used to fund critical restoration projects. The efficient use of these dollars could be streamlined if the proposed rule included exclusions for projects that restore wetlands rather than delaying projects to the point where wetlands are lost or destroyed due to administrative red tape. As it is written, the proposed rule would not only increase the amount of time required to implement restoration projects, but it would

effectively decrease the number of wetland acres restored in Louisiana. We ask the Agencies to address why they do not include exclusions in their proposed rule for these types of restoration projects. While the Agencies address the potential permit expansion, they do not discuss why exclusions are not included in the rule for restoration projects that restore wetlands in the battle against land loss in places like Louisiana. (p. 3-4)

Agency Response: This rule is narrower in scope than existing regulations and historical practice. Costs described in the economic analysis are for illustrative purposes. See the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4. See also Topic 7.

Texas Department of Agriculture (Doc. #18854)

11.2.19The EPA and the Corps anticipate that the losses suffered by the government and regulated entities will be between \$162 million to \$279 million per year under the new rule. These financial costs will be associated with activities such as administering additional permits and modifying business operations to meet new standards. The reporting agencies go on to estimate the benefits of this rule change to be between \$318 million and \$514 million per year. These benefits, however, are represented by "values of ecosystem services" and "reduced uncertainty concerning where the CWA jurisdiction applies." This assessment of benefits is vague and severely inflated. These measures are not easily quantifiable, which will result in subjective and questionable estimates of economic costs without clearly identifying defined and measurable benefits from these proposed regulations. While the costs to agriculture and our economy will be very real, the purported costs by EPA and the Corps are grossly underestimated - meanwhile, the benefits are obscure at best.

This proposal comes as the most recent and most expansive attempt to bypass the term "navigable" in the CW A. All previous efforts have been deterred by Congress and the Supreme Court. Congress has consistently defended the original intent of the CW A, and these actions to circumvent the wills of our Congress and Supreme Court by EPA and the Corps are inexcusable.

Wise stewardship of our water resources is of paramount importance to Texans. The elimination of water pollution should be considered a time-intensive objective that is restricted by the incurrence of financial and social costs. The costs of this radical proposal severely outweigh the expected benefits. This type of overregulation will be damaging to our nation's economy, as well as citizens' trust in government. In order to protect our agricultural producers and communities, I encourage EPA and the Corps to withdraw the proposed rule immediately. (p. 2-3)

Agency Response: While this rule is narrower than existing regulations, see Summary Responses to Topics 11.3 and 11.4 on the benefits as a result of this rule compared to recent practice.

Iowa League of Cities (Doc. #18823)

11.2.20 The data analyzed for the Economic Analysis of Proposed Revised Definition of Waters of the U.S. does not provide a complete picture of the impact of the proposed rule. The Agency utilizes the ORM2 database, which was not developed or intended for the type of analysis for which it was utilized. The focus of the analysis was also on the Section 404 program and did not include Section 402 NPDES program, Section 303 Water Quality Standards, TMDLs, storm-water and green infrastructure. Not fully analyzing the waters impacted leaves uncertainty for systems that are used to dealing with EPA and the Iowa Department of Natural Resources (IDNR). According to EPA's and Army Corp's Economic Analysis of Proposed Revised Definition of Waters of the U.S., the impact of this change in definition is largely unknown because the findings are "incomplete" due to the "many data and methodological limitations, as well as the inherent assumptions in each component of the analysis."

The Economic Analysis states that about 3 percent more waters would be found jurisdictional. EPA based this calculation on permits that were submitted for review, rather than waters that would be jurisdictional under the rule (where permits are not currently needed). Moreover, the calculation was based off of 2009-2010 data- the height of the recession when development (and other types of projects) was at an all-time low.

City Example: One city had only 38 NPDES General Permit No.2's issued in 2009. By comparison there were 60 issued in 2007 and 54 issued in 2008 in that same city. County wide there were only 147 NPDES General Permits No.2's issued in 2009. By comparison there were 229 in 2007 and 184 in 2008. The numbers indicate that development was significantly reduced in 2009 based upon the number of NPDES General Permits No.2's issued.

Request for EPA Response: The Agency should further delineate what new waters, if any, would be impacted through this rulemaking that are associated with municipal storm-water systems both internal and external to these systems. (p. 2)

Agency Response: See the Summary Response in this section on how the agencies have modified the sampling period from the ORM2 database, as well as the Summary Response to Topic 11.4 on CWA Section 402 permits, including stormwater. See also Topic 7 Features and Waters Not Jurisdictional and Topic 12 Implementation.

State of Alaska (Doc. #19465)

11.2.21 **Disregard and Underestimation of Significant Economic Costs.** Economic analysis for the proposed rule does not adequately consider the significant cost of implementing the proposed rule. Costs to comply with the rule divert funding from state and federal regulatory programs already in place, and place an unreasonable burden on private and public development projects for which there is little risk of impacting downstream, traditionally navigable waters. Increases in compliance and transactions costs include

consulting contracts, compensatory mitigation, post-construction costs, and liabilities that are foreseeable. EPA and the Corps fail to adequately investigate and disclose what fiscal impacts implementation of this program will have on both state and federal agencies. The rule is an unfunded mandate in terms of its implementation, both for state regulatory agencies, state-funded public construction projects, and for the court system. (p. 5-6)

Agency Response: See Summary Response for Topic 13 (Unfunded Mandates).

Sweetwater County Board of County Commissioners, Sweetwater County, Wyoming (Doc. #6863)

11.2.22As described above, the proposed rule may have similar effects on businesses and industries attempting to develop in Sweetwater County. For example, the oil and gas industry, which provides 43% of the county tax base, depends on obtaining approved Sweetwater County Road Access Permits in order to construct service roads to their oil and gas wells. Under the existing rule, Sweetwater County can quickly approve these access permits for oil and gas companies. If the proposed rule is passed and is interpreted in a manner that classifies the Sweetwater County roads as waters of the United States, the approval of county road access permits will potentially be delayed by requirements to obtain CWA 404 permits. This delay adds to the time needed to obtain access permits, which in turn adds to the numerous permitting delays that oil and gas companies now face. When taken as a whole, additional permitting delays may cause a company to choose not to develop in Sweetwater County, the State of Wyoming, or for that matter, in the United States. (p. 2)

Agency Response: This rule is narrower in scope than existing regulations and historical practice. See Summary Response in this section and Summary Response 11.3.1, and the Economic Analysis for the rule, on the effects to CWA programs that may result because of the rule.

Butler County Pennsylvania (Doc. #6918.1)

11.2.23Because the EPA and Corps self-determine their proposed definitional rule expansion would only impose indirect costs, the proposed rule stated federalism concerns were not triggered despite their own cost-benefits analysis. The economic analysis indicates there may be additional implementation costs for a number of CWA programs and cautions the data used and the assumptions relied upon by the Agencies in drafting the proposed rule analysis may be flawed. Furthermore, under the rule, the economic analysis failed to address additional waters currently not jurisdictional (with no permit submissions) which would become jurisdictional under the rule. This reasoning is flawed and fails to recognize a true accounting of direct impact costs or benefits. Consultation input strengthens federal, state and local government partnerships for CWA implementation and streamlining of expenses in any proposed projects. (p. 9)

Agency Response: This rule is narrower in scope than existing regulations and historical practice. See Summary Responses to Topic 13.2.5 (Federalism). See

Summary Response for this section (Topic 11.2), and Topics 11.3 and 11.4 on the potentially affected entities in the economic analysis.

11.2.24 Moreover, a direct impact cost analysis should have been included in the proposed rule process. Usurping a State and local government's right to oversee land use within its jurisdiction clearly violates Constitutional federalism concepts and mandates. (p. 9)

Agency Response: See Summary Responses to Topic 13.2.5 (Federalism).

11.2.25 Given the economic recession realized since 2007 and its slow recovery, the timing of this proposed rule and its jurisdictional expansion is both inappropriate and not advised. During the recession, federal and state revenues declined which economically impacted counties. County funds are limited given the expenses in providing needed services to its residents. Federal mandates by the proposed rule on states and counties means increased expenses without funding avenues to implement and oversee compliance within the regulations as the rule is not proposed legislation. The proposed rule is federal agency self-regulation without proposed revenue supporting methodologies. As demonstrated earlier, Supreme Court cases determined the EPA and Corps exceeded their regulatory authority. Costs of mitigation or design changes and daily fines (if a party misinterprets or misapplies the proposed rule contrary to the regulatory agency) were not included. Current permitting costs and time frames for application approval were not readily available from the Corps. With these figures many counties, local municipalities could find their coffers bankrupt under federal jurisdictional requirements for a particular project. Most residents would not be able to afford the permitting process due to both criminal liability and steep civil fines imposed by the CWA. Arbitrarily expanding the definition without legislative debate and placing additional regulatory burdens on local economies beginning to experience recovery from a long recession is not an inappropriate solution. As such, the EPA and Corps should withdraw their draft guidance and proposed definitional expansion of regulatory implementation. (p. 10)

Agency Response: See Summary Response in this section on the adjustments the agencies made in the economic analysis to account for the economic recession.

White Pine County Board of County Commissioners, White Pine County, Nevada (Doc. #6936)

11.2.26 According to a review of the EPA's economic analysis by an economist and University of California- Berkeley faculty member, EPA relied on flawed methodology for estimating the extent of its jurisdiction under the proposed rule and rail to include several types of costs in its analysis resulting in an analysis that is not accurate in its estimate of the rules impact on affected communities and businesses and under-represents its expanded jurisdiction. (p. 3)

Agency Response: See Summary Responses in this section, as well as in Topics 11.3 and 11.4 for a discussion of similar comments.

City of San Diego, Transportation & Storm Water Department (Doc. #7950.2)

11.2.27 The true impacts of this rule are unknown. Though it is not intended to add new waters to federal jurisdiction, it leaves much open to interpretation and may unintentionally pull in waters and infrastructure that conveys storm water. It is vague in some sections, and specifically mentions some exemptions while excluding others such as MS4 infrastructure. The economic burden on MS4 operators is not known.

Recommendation: Clarify and/or specifically exclude those waters which were not intended to be classified as waters of the US such as MS4 infrastructure. Conduct an economic analysis which adequately assesses the cost for complying with regulations governing new waters that are pulled into federal jurisdiction with this rule. (p. 3)

Agency Response: See Summary Response under Topic 13.4 (Other CWA Programs) for a discussion of MS4 infrastructure, and see Topic 7 (Features and Waters Not Jurisdictional).

Moffat County Board of Commissioners, Moffat County, Colorado (Doc. #7987)

11.2.28 Although the cost benefit analysis identifies that most programs under the Clean Water Act will be affected, a main focus of cost analysis was 404 permit costs. Cost benefit analysis should also include permitting time/delay costs and impact avoidance and minimization costs, neither of which were addressed in the cost benefit report. In addition, the economic analysis uses cost information from Section 404 permits in FY 2009-2010, a timeframe that is very narrow in scope, and one of economic downturn for much of Colorado. To assume the cost of 404 permitting before this rule is in effect, does not consider the additional costs the rule will impose upon future applicants. (p. 3)

Agency Response: See the Summary Response in this section on how the agencies addressed concerns over FY 2009-2010 timeframe. See the Summary Responses to Topics 11, 11.3, 11.3.1, and 11.4 for information on permitting time/delay and other related costs.

Board of Douglas County Commissioners, Castle Rock, Colorado (Doc. #8145)

11.2.29 Douglas County contracted Wright Water Engineers, Inc. (WWE) to evaluate how the Proposed Rule could impact Douglas County if the Proposed Rule is finalized as currently written. The evaluation, Douglas County Waters' Evaluation---Considerations on Potential Clean Water Act Jurisdiction under Current Guidance and the 2014 Proposed Waters of the U.S. Rule (Douglas County Waters Evaluation) is attached to this letter as Exhibit 1. The Douglas County Waters Evaluation demonstrates how the Proposed Rule expands jurisdictional determinations.

To demonstrate the economic impact the Proposed Rule would have on Douglas County specifically, we offer the following specific illustration. In 2014, Douglas County underwent a 404 permit process to design and construct a federally funded bridge replacement at Airport Road crossing Plum Creek. The bridge replacement was

warranted due to the current bridge being structurally deficient and functionally obsolete. The permitting process began in January with local agencies priming federal agencies, which resulted in a submittal in April and awarded permit in June. This two month turnaround is considered the best case scenario. The Federal Highway Administration's (FHA) current estimated timeline for obtaining a required individual 404 permit for activities that occur in jurisdiction determined WOUS is approximately 3 to 6 months.

Taking into consideration the County's current staff, resources, and project load, the County can expect that under the Proposed Rule, the time to secure the 404 permit for the Airport Road Bridge Project would have been doubled. The permitting delay and increase in cost will also affect public infrastructure economically in the following ways:

- **New public roadway infrastructure** - Typically in Colorado, bridge projects are constructed during low precipitous periods and timing is critical during the permit process. For example, the \$3 million Airport Road Bridge Project may be delayed as much as one year if the Proposed Rule is promulgated in its current form. As outlined in the Colorado Construction Cost Index Report, the average inflationary increases for labor materials of this type of construction averaged 8.6 percent from 1987 to 2011, which would result in an additional cost of \$258,000 to the public. In some years like 2004 to 2005, Colorado experienced an increase in the Colorado Construction Cost index reporting of 168.0 to 255.2 resulting in a 51.9% annual increase in construction. Under the Airport Road Bridge Project example, such a delay would result in an additional \$1.6 million to the cost of the Project.
- **National new public roadway infrastructure** – The American Society of Civil Engineers (ASCE) and the FHA have stated that approximately \$76 billion is needed to repair deficient bridges across the United States. According to the ASCE's 2013 Infrastructure Report Card and the FHA, approximately \$12.8 billion is being spent currently on bridge investments, with a shortage of approximately \$8 billion annually to address the identified \$76 billion needed. The resulting increase in costs associated with permit delays, with an average 4 percent inflationary increase, totals approximately \$512 million or higher in annual construction costs inefficiencies nationally immediately following the Proposed Rule promulgation.
- **Existing public roadway infrastructure maintenance** – It is the responsibility of MS4 permittees to ensure long term operational and maintenance of permittee owned and private owned water quality/detention facilities to the maximum extent practical. MS4s at times develop manmade wetlands for water quality features and at other time, may need to remove such wetlands, along with sediment for purposes of protecting the infrastructures functional purpose, such as storage volume and controlled release for water quality and downstream stormwater conveyance in roadside ditches that outfall into tributary waters. Maintenance of water quality/detention facilities and ditches both inside the boundaries of the MS4 and within public right-of-way will require a 404 permit never before required for this type of maintenance. The additional constraint from the Proposed Rule is the time it

will take a MS4 to obtain a 404 permit. The increase in time will delay the ability to conduct the required maintenance activities for the infrastructure to function as intended such as protecting public life, property, and the environment. While waiting for a 404 permit or jurisdictional determinations, the owners will be delayed in construction, resulting in penalties and fines associated with such delays. These 404 permits or jurisdictional determinations impede Douglas County and private land owners from completing their currently permitted operational and maintenance responsibilities resulting in tens of thousands of dollars in EPA and Colorado Department of Health and Environment daily accumulated fines. Nonetheless, these violations have civil and criminal imprisonment terms. If we maintained these facilities without a 404 permit, similar violations and penalties could be imposed on the owners of the facilities. This is a 100% increase in fiscal costs and unforeseen increase to public life, property, and the environment if permitting obstructs required maintenance.

- **Business impact** – Douglas County is undergoing strong economic development and some notable economic indicators suggesting the County is poised for continued expansion as follows:
 - Total employment rose 6.5% from 2013, resulting in 6,370 additional jobs. Douglas County reported a 5.3% increase in total retail sales over-the-year.
 - Average sales price for a single-family detached home rose 6.3% through the first quarter of 2014 compared with 2013. The average sales price increase was \$23,928 higher than the first quarter 2013.
 - Douglas County workers in the prime ages of 35 to 54 make up 55.1% of the labor force compared to 44.6% for all workers in Colorado.
 - Standard & Poor's Rating Services has reviewed their rating for Douglas County and has raised the County's credit rating from AA+ to AAA.

These economic indicators are often indicators for cyclical business demands of commercial and residential construction needs and the public infrastructure these business sectors provide. The Proposed Rule may impact business decisions if the Proposed Rule is implemented without consideration of regional development. The increase in time will delay the ability for the infrastructure to be installed or designed to account for the Proposed Rule and the increased jurisdiction. Assuming the Proposed Rule is promulgated in 2015, and a single family housing development with 100 units is planned to start construction in the same year under Current Guidance, what would the economic impact be to that development? Based on the Douglas County Waters Evaluation, potential expansions of jurisdiction will result in additional 404 permitting. The delay resulting from the requirement to obtain a federal permit could result in missing a construction season, resulting in a possible loss of business revenue. In the example of 100 units finally designed after the Proposed Rule is promulgated, implementation of the Rule could result in a 404 permitting issuance delay transferring

the delay to delay of construction of one year. Assuming growth of \$23,298 per unit is the same in 2015 but is reduced in 2016 by possible economic change could result in a loss for this 100 unit development of approximately \$2.4 million. (p. 6–9)

Agency Response: See Summary Response to Topics 11, 11.3.1, and 11.4 on costs.

11.2.30 The Proposed Rule combined with existing state and federal regulations, which are not factored in the Economic Analysis, will increase local fiscal burdens to Douglas County. The anticipated burden on Douglas County will be to increase the workload of the existing five full time employee's (FTE's) positions responsible for managing noxious weeds and pests under these compounding regulations. It has been estimated that an additional 25-50 percent of additional responsibilities will be added to each of these FTE's to accommodate these new regulations. Each FTE including benefits are compensated at \$80,000 annually. This estimated burden totals \$100,000 to \$200,000 annually.

Douglas County respectfully requests that the Agencies suspend the rulemaking process to allow the Agencies to analyze specific impacts the Proposed Rule may have to each region of the U.S. and update the Economic Analysis accordingly based upon those findings for further stakeholder comment and review to confirm that these additional new programs for required herbicide and pesticide use prior to the finalization of the Proposed Rule.

The inclusion of this additional cost in the Economic Analysis is a necessary component for a complete review of the Proposed Rule to ensure the Proposed Rule is not impeding standard public safety operations. Moreover, more information is required in the Economic Analysis to allow local units of governments such as Douglas County to determine actual objective impacts to MS4s and public rights-of-ways. The current draft Economic Analysis does not provide enough information wherein Douglas County can conclude that the Proposed Rule will not fiscally limit it from conducting standard operating procedures to construct and repair infrastructure to protect the public. Stakeholders cannot provide meaningful comment on the Proposed Rule without being afforded the opportunity to review and comment on a comprehensive Economic Analysis prior to the finalization of the Proposed Rule. (p. 10-11)

Agency Response: See Summary Response to Topics 11, 11.3.1, and 11.4 on costs.

11.2.316) Rework the Economic Analysis to Accurately Quantify Costs of the Proposed Rule
For the reasons stated above, the current Economic Analysis falls egregiously short of measuring the actual costs of the Proposed Rule. Not only is this damaging to the citizens of Douglas County, it is in violation of Presidential Executive Orders. Douglas County urges the Agencies to develop a new Economic Analysis. The Economic Analysis should examine all costs and benefits associated with implementation of the Proposed Rule and should use the Current Guidance as the baseline condition. (p. 16)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. However, the agencies do use recent practice as a baseline for

the economic analysis. See Summary Responses to Topic 11, and Topic 13 (Process Concerns and Administrative Procedures) regarding Presidential Executive Orders.

Beaver County Commission (Doc. #9667)

11.2.32Reference: FR page 22220, column 1; [The Agencies] prepared an analysis of the potential costs and benefits associated with this action. This analysis is contained in “Economic Analysis of the Proposed Revised definition of Waters of the United States.”

The Agencies’ estimate of the costs and benefits associated with the regulatory redefinition of “waters of the United states” has not been adequately addressed in the proposed rule or in the associated document cited above. The inclusion of categories of non-navigable waters that were previously never regulated by the Agencies under CWA, such as waters in floodplains, riparian areas, and certain ditches, will broaden the jurisdictional authority of the Agencies and will significantly increase the costs associated with each program; however the above cited document severely underestimates the impact of the definitional changes, excludes important costs, and uses a flawed benefits transfer methodology to estimate the benefits of expanding jurisdiction.

According to a May 15, 2014 report by David Sunding, Ph.D. of the Waters Advocacy Coalition, the numerous errors, omissions, and lack of transparency render the analysis virtually meaningless. Estimates of economic impacts to other programs rely on an incremental jurisdiction determination that is deeply flawed. The systematic exclusion of various costs and benefits ignores important impacts to permit applicants and permitting agencies. The analysis suffers from a lack of transparency. Explanations of calculations, basic assumptions, and discrepancies between various EPA analyses **ant** rarely provided; the entire report is based on records from the Corps' internal ORM2 database, which is unavailable to the public, and thus the validity of the underlying data cannot be determined due to lack of requisite transparency.

Recommendation: Withdraw the proposed rule. Withdraw the economic analysis. If the Agencies wish to resubmit a proposed rule, it must be based on an adequate economic analysis. (p. 14)

Agency Response: See Summary Responses in this section, as well as in Topics 11.3 and 11.4 for a discussion of comments similar to those provided by the Waters Advocacy Coalition.

Pasco County, Florida (Doc. #9697)

11.2.33Lastly, the agencies have significantly underestimated the costs to implement this rule. Dr. David Sunding of the Brattle Group conducted an independent review of the EPA's March 2014 "Economic Analysis of Proposed Revised Definition of Waters of the United States" on behalf of the Waters Advocacy Coalition. Dr. Sunding concluded that:

.....the EPA analysis relies on a flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of the definitional

changes. This is compounded by the exclusion of several important types of costs and the use of a flawed benefits transfer methodology, which the EPA uses to estimate the benefits of expanding jurisdiction. The errors, omissions, and lack of transparency in the EPA's study are so severe as to render it virtually meaningless. The agency should withdraw the economic analysis and prepare an adequate study of this major change in the implementation of the CWA" (Source: Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States; Prepared for the Waters Advocacy Coalition, by David Sunding, Ph.D., May 15, 2014.)

Recommendation: The County concurs with Dr. Sunding's recommendation to withdraw the economic analysis and prepare a more comprehensive and transparent study of the economic impact of the proposed rule. (p. 5)

Agency Response: See Summary Responses in this section, as well as in Topics 11.3 and 11.4 for a discussion of comments similar to those provided by the Waters Advocacy Coalition.

Pike Peak Area Council of Governments (Doc. #9732)

11.2.34 Without modifications to the proposal, infrastructure projects will be delayed and increased in cost due to the need to meet additional permitting requirements. Both small and large infrastructure projects are already expensive and time consuming. If permits are not timely issued, it can cause an economic ripple effect through a community as a consequence of the project delays. The potential complexity in applying for a permit under the proposal, especially with reference to the "other waters" category, coupled with the ambiguity in what type of project will require a permit, will result in project delays and cost increases that local governments cannot afford. The financial analysis which accompanied the proposal needs to be re-examined and supplemented so as to provide a more accurate portrayal of on-the-ground cost impacts. State and local governments could assist with this effort. (p. 2)

Agency Response: See Summary Responses in this section, as well as in Topics 11, 11.3 and 11.4 for a discussion of common concerns, as well as how the agencies have revised the economic analysis.

Urban Drainage and Flood Control District (Doc. #12263)

11.2.35 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 and will result in higher costs for agencies like UDFCD who are trying to improve the quality of the nation's streams. (p. 1)

Agency Response: See Summary Response to Topic 8 (Tributaries) on the types of tributaries that could be brought into scope relative to recent practice.

Owyhee County Board of Commissioners (Doc. #12725.1)

11.2.36 Additionally, the methodologies used to determine economic costs and benefits to the proposed rule are misleading. In its economic cost analysis for the proposed rule, the Administration has indicated that 2.7 percent of new waters will be considered jurisdictional under the Section 404 program. However, the data used to compute costs for Section 404 comes from submitted Section 404 permit applications for FY2009-2010. The economic analysis does not acknowledge or recognize that, under the proposal, additional waters, currently not jurisdictional (and thus, with no permit submissions), will become jurisdictional. This reasoning is flawed and does not give a true accounting of potential costs or benefits. (p. 9)

Agency Response: See the Economic Analysis and the Summary Response in this section regarding how the agencies accounted for potential additional waters becoming jurisdictional relative to recent practice.

Palo Alto County Board of Supervisors (Doc. #14095)

11.2.37 Concern about the accuracy of the economic analysis. We object to the flawed economic analysis prepared for the proposed rule. It is based upon an obviously flawed assumption of jurisdictional expansion and it includes no consideration for the regulatory taking costs associated with denied vested rights to drain. It is our belief that far more acres of jurisdictional waters will be assumed in our county alone than the economic analysis claims will be the case for the entire country. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. See Summary Responses in this section for a discussion of the potential change in jurisdiction relative to recent practice. See also Technical Support Document on the issue of “takings.”

Maricopa County Board of Supervisors (Doc. #14132.1)

11.2.38 **Cost-Benefit Analysis Flawed**

While the agencies have performed cost-benefit analysis of the definitional changes on CWA programs, they have acknowledged that the data used and the assumptions made to craft the analysis may be flawed. Additionally, the methodologies used to determine economic costs and benefits to the proposed rule are misleading. In its economic cost analysis for the proposed rule, the agencies have indicated that 2.7 percent of new waters will be considered jurisdictional under the Section 404 program. However, the data used to compute costs for Section 404 comes from submitted Section 404 permit applications for FY2009-2010.

The economic analysis does not acknowledge or recognize that, under the proposal, additional waters, currently not jurisdictional (and thus, no permits have been submitted), will become jurisdictional. This reasoning is flawed and does not give a true accounting of potential costs or benefits. (p. 2-3)

Agency Response: See Economic Analysis and Summary Response in this section on how the agencies address additional waters becoming potentially jurisdictional relative to recent practice.

Florida League of Cities, Inc. (Doc. #14466)

11.2.39 Economic Impact of the Proposed Rule.

The Florida League of Cities is a member of the Florida H2O Coalition¹⁶, as a partner in the Coalition's efforts an economic study of the proposed regulations was conducted. That report¹⁷; which is attached, found striking differences in the proposed economic impact released by EPA.¹⁸ Undoubtedly, other commenters have cited to the report in their comments. However, it is important to reference specifics and to that end an example is provided for Sarasota County, Florida. Sarasota County, located in southwest Florida, is a Phase 1 MS4 that owns and operates many stormwater collection and treatment systems and is an ongoing participant in efforts to protect Sarasota Bay, the Myakka River and Charlotte Harbor. If the proposed rule were implemented, Sarasota County, its partner cities, and other stakeholders would need to expend significant resources to provide treatment so that these stormwater conveyances would meet Florida's numeric nutrient criteria (NNC) for streams.¹⁹

In an effort to effectively analyze the potential cost for Sarasota County a GIS analysis was completed to highlight the areas of the county that are currently jurisdictional waters and those that would be considered jurisdictional should the rule pass as promulgated. For Sarasota County, a 25 percent reduction in total nitrogen (TN) would be needed to meet Florida's Numeric Nutrient Criteria (NNC) water quality standard for streams. A reduction for total phosphorus (TP) is not required due to the higher TP limit in the west-central Florida region. Based upon the load to the system, the cost for designing and constructing treatment facilities is shown in the following table. The unit costs for treatment were applied to the required load reduction to get the estimated total cost to meet water quality criteria in the new WOTUS jurisdiction.

¹⁶ The Florida H2O Coalition is a broad stakeholder group consisting of members of local government, agriculture, utilities, and business interests. The Coalition was originally formed to research and discuss the effects of recent federal and state water regulations.

¹⁷ Applied Technology & Management, Inc. Estimated Fiscal Impacts for Selected Municipal Separate Storm Sewer System Permittees (August 29, 2014)

¹⁸ EPA released economic figures of \$390 to \$510 million in benefits versus \$160 to \$278 million in costs. See http://www2.epa.gov/sites/production/files/2014-09/documents/facts_about_wotus.pdf

¹⁹ Estimated Fiscal Impacts at 9.

	Runoff (acre-feet)	TN (lb/yr)	TP (lb/yr)
Nutrient Load Under Current WOTUS Practice (lb/yr)	352,795	2,183,457	404,726
Nutrient Load Under Proposed WOTUS Regulations Loads (lb/yr)	392,694	2,422,741	447,803
Difference in Current and Proposed WOTUS Loads (lb/yr)	39,899	239,285	43,077
Average Runoff Concentration (mg/L)		2.21	0.40
Numeric Nutrient Criteria (NNC) (mg/L)		1.65	0.49
% Reduction Needed to Meet NNC in New WOTUS		25.34%	N/A
Load Reduction Needed to Meet NNC in New WOTUS (lb/yr)		60,642	N/A
Estimated Costs to meet WQ Criteria in New WOTUS (Median)		\$229,281,000	N/A

Based upon the load to the system, the cost for designing and constructing treatment facilities is shown in this table.

The estimated cost range to meet water quality criteria in the new WOTUS jurisdiction is \$6 million to \$476 million for nitrogen reduction. Recently, the City of Miramar submitted comments (attached) to us regarding the potential cost of the proposed rule on the city's stormwater management system. The City of Miramar is 31 square miles in size and has over 280 manmade lakes, ponds and canals to mitigate flood impacts and improve water quality. Under the proposed definitions of WOTUS, all of the water bodies located in Miramar can be subject to numeric nutrient criteria that have not yet been established. The city estimates that the potential rule could cost the city roughly \$4 million dollars, or a 900% percent increase in an assessment fee for stormwater management. (p. 2-3)

Agency Response: See Summary Response to Topic 11.4 (Other CWA Programs) for a discussion of water quality standards and criteria.

Big Horn County, State of Wyoming (Doc. #14571)

11.2.404) The proposed rule imposes significant direct impacts on county government and significant indirect impacts to county economies. Neither is adequately quantified by the agency's economic analysis. (p. 3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice, and imposes no direct impacts. See Summary Response under Topic 11.

Soil and Water Conservation District (Doc. #14943)

11.2.41 Under the proposed rule, agencies expect that a very small number of additional waters (3.2 percent) will be added to the new rule. The EPA's economic analysis is flawed and misleading. The figures of analysis was done exclusively based on 2009/2010 data, a period of economic contraction. The EPA did not attempt to determine the number of acres of watersheds, ephemeral drains, ditches, isolated wetlands or low spots which will be newly regulated under the proposed rule.

The agencies should have done a full-blown economic analysis and the number would have increased significantly. Looking at the EPA's maps, under the Waters of the US, the number of waters that are presented would not even come close to the EPA map if it is all jurisdictional or even on a case by case basis as is stated in the proposed rule. This is not including vast areas of land or watershed that could come under EPA's jurisdiction. (p. 4-5)

Agency Response: See Summary Response for Topic 11 as well as this section on how the agencies adjusted the analysis to account for 2009/2010 data.

San Joaquin Tributaries Authority (Doc. #14992)

11.2.42 The Proposed Rule Expands the Jurisdiction of the EPA and Corps

The Proposed Rule expands the scope of covered hydrological features under the CWA in relation to the current rule (40 CFR 230.3) The Proposed Rule incorporates all adjacent waters, not just wetlands adjacent to territorial seas, waters susceptible to use in interstate commerce, interstate waters, and tributaries. In addition, other waters that the EPA and the Corps deem to have a "significant nexus" with waters susceptible to use in interstate commerce, interstate waters, and the territorial seas are considered WOTUS. (Proposed Rule, at (s)(6)-(7).) The economic analysis for the Proposed Rule states that roughly an additional three percent of the Nation's hydrological features will fall under EPA and Corps jurisdiction as WOTUS under the Proposed Rule. (Economic Analysis, at 12.) It is unclear whether the estimate of three percent is accurate; support for this estimate must be provided to provide for adequate public review. In addition, even at three percent, this increase will incorporate a great number of hydrological features not currently covered under the current rule, creating significant change in these areas. (p. 2)

Agency Response: The rule is narrower in scope than the existing regulations and historical practice. See the Summary Response for Topic 10 (Legal Analysis). See the Economic Analysis and the Summary Response to this section on how the agencies reached the three percent figure.

Harris County Flood Control District (Doc. #15049)

11.2.43 The economic cost analysis for the proposed rule indicates that 2.7 percent of new waters will be considered jurisdictional under the Section 404 program. However, the data used to compute costs for Section 404 comes only from submitted Section 404 permit

applications for FY2009/2010 not taking into account more recent permitting trends in an improved economy and is therefore underestimated. The economic analysis does not acknowledge or recognize that sites containing only non-jurisdictional wetlands would not have applied for Section 404 permitting. The economic cost analysis does not give a true accounting of potential costs or benefits because it did not account for non-jurisdictional wetlands that would not require permitting. Furthermore, the economic analysis states that the "programs may subsequently impose direct or indirect costs as a result of implementation." These additional direct and indirect costs must be quantified as part of the economic cost analysis. The District suggests a more robust analysis be completed using the additional information suggested above to determine the Waters of the U.S. that will become jurisdictional as a result of this rule and reassess the economic analysis. (p. 3)

Agency Response: See the Summary Response to this section. The agencies have adjusted the analysis to reflect more current jurisdictional determination data.

National Association of Counties (Doc. #15081)

11.2.44 Incomplete Data was Used in the Agencies' Economic Analysis

As part of the proposed rule, the agencies released their cost-benefit analysis on Economic Analysis of Proposed Revised Definition of Waters of the U.S. (March 2014). We are concerned about the limited scope of this analysis since it bases its assumptions on a narrow set of CWA data not applicable to other CWA programs. Since EPA has held its 2011 Federalism briefing on "waters of the U.S.," we have repeatedly raised concerns about the potential costs and the data points used in the cost-benefit analysis—these concerns have yet to be addressed.^{20 21 22}

The economic analysis uses CWA Section 404 permit applications from 2009-2010 as its baseline data to estimate the costs to all CWA programs. There are several problems with this approach. Based on this data, the agencies expect an increase of approximately three percent of new waters to be jurisdictional within the Section 404 permit program. The

²⁰ Letter from Larry Naake, Exec. Dir., Nat'l Ass'n of Counties to Lisa Jackson, Adm'r, EPA & Jo Ellen Darcy, Assistant Sec'y for Civil Works, U.S. Dep't of the Army, "Waters of the U.S." Guidance (July 29, 2011) available at <http://www.naco.org/legislation/policies/Documents/Energy,Environment,Land%20Use/Waters%20US%20Draft%20guidance%20NACo%20Comments%20Final.pdf>.

²¹ Letter from Larry Naake, Exec. Dir., Nat'l Ass'n of Counties to Lisa Jackson, Adm'r, EPA, Federalism Consultation Exec. Order 13132: "Waters of the U.S." Definitional Change (Dec. 15, 2011) available at http://www.naco.org/legislation/policies/Documents/Energy,Environment,Land%20Use/Waters%20US%20Draft%20guidance%20NACo%20Comments%20Dec%2015%202011_final.pdf.

²² Letter from Tom Cochran, CEO and Exec. Dir., U.S. Conf. of Mayors, Clarence E. Anthony, Exec. Dir., Nat'l League of Cities, & Matthew D. Chase, Exec. Dir., Nat'l Ass'n of Counties to Howard Shelanski, Adm'r, Office of Info. & Regulatory Affairs, Office of Mgmt. and Budget, EPA's Definition of "Waters of the U.S." Under the Clean Water Act Proposed Rule & Connectivity Report (November 8, 2013) available at <http://www.naco.org/legislation/policies/Documents/Energy,Environment,Land%20Use/NACo%20NLC%20USCM%20Waters%20of%20the%20US%20Connectivity%20Response%20letter.pdf>.

CWA Section 404 program administers permits for the “discharge of dredge and fill material” into “waters of the U.S.” and is managed by the Corps.

First, we are puzzled why the agencies chose the span of 2009-2010 as a benchmark year for the data set as more current up-to-date data was available. In 2008, the nation entered a significant financial recession, sparked by the housing subprime mortgage crisis. Housing and public infrastructure construction projects were at an all-time low. According to the National Bureau of Economic Research, the recession ended in June 2009,¹⁶ however, the nation is only starting to show signs of recovery.²³ By using 2009-2010 data, the agencies have underestimated the number of new waters that may be jurisdictional under the proposed rule.

Second, the economic analysis uses the 2009-2010 Corps Section 404 data as a baseline to determine costs for other CWA programs run by the EPA. Since there is only one “waters of the U.S.” definition used within the CWA, the proposed rule is applicable to all CWA programs. The Congressional Research Service (CRS), a public policy research arm of the U.S. Congress, released a report on the proposed rule that stated “costs to regulated entities and governments (federal, state, and local) are likely to increase as a result of the proposal.” The report reiterates there would be “additional permit application expenses (for CWA Section 404 permitting, stormwater permitting for construction and development activities, and permitting of pesticide discharges...for discharges to waters that would now be determined jurisdictional).”²⁴

We are concerned the economic analysis focuses primarily on the potential impacts to CWA’s Section 404 permit program and does not fully address the cost implications for other CWA programs. The EPA’s and the Corps economic analysis agrees, “...the resulting cost and benefit estimates are incomplete...Readers should be cautious in examining these results in light of the many data and methodological limitations, as well as the inherent assumptions in each component of the analysis.”²⁵

Recommendation:

- NACo urges the agencies to undertake a more detailed and comprehensive analysis on how the definitional changes will directly and indirectly impact all Clean Water Act programs, beyond Section 404, for federal, state and local governments
- Work with national, state and local stakeholder groups to compile up-to-date cost and benefit data for all CWA programs (p.6-7)

²³ Cong. Budget Office, The Budget & Economic Outlook: 2014 to 2024 (February 2014).

²⁴ U.S. Cong. Research Serv., EPA & the Army Corps’ Proposed Rule to Define “Waters of the U.S.,” (Report No. R43455; 10/20/14), Copeland, Claudia, at 7.

²⁵ Econ. Analysis of Proposed Revised Definition of Waters of the U. S., U.S. Env’tl. Prot. Agency & U.S. Army Corps of Eng’r, 11 (March 2014), at 2.

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The Economic Analysis provided with the Proposed Rule measures potential impact from a recent practice baseline, and used 2009-2010 data as the most recent data available. The agencies have since updated the data supporting the analysis. See the Economic Analysis for the final rule and the Summary Response in this section for more details.

Rio Grande Water Conservation District (Doc. #15124)

11.2.455. The EPA's Economic Analysis is Flawed

Notwithstanding what appears to be a significant expansion of federal CWA jurisdiction under the proposed rule, the EPA estimates that there would be at most 1,332 additional acres subject to CWA regulation. The EPA bases this estimate on an economic analysis performed by the EPA as part of this rulemaking. However, several independent reviews of the March 2014 Economic Analysis Report have determined that the analysis employed in the report is fundamentally flawed and that the report significantly understates the amount of new land that would fall within the purview of the CWA. These same reviews also cast serious doubt on the projected net economic benefit to the public of 388 million to 514 million dollars.

In one report prepared for the Water Advocacy Coalition, University of California professor Dr. David Sunding writes, "the EPA analysis relies on a flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of the definitional change." That report goes on to find that "[t]he errors, omissions, and lack of transparency in EPA's study are so severe as to render it virtually meaningless." Many analysts, including American Farm Bureau Federation economist Veronica Nigh, have stated that the proposed regulation could impact a significant percentage of the more than 106 million acres of wetlands that are currently being used for agricultural purposes. This is far cry from the EPA's 1,300 acre projection and, if true, would represent an alarming and unsupportable expansion of the regulatory reach of the EPA and Corps under the CWA.

The fact that there is such a chasm between many well-respected scholars and the promulgating agencies regarding the potential impact of the proposed rule alone warrants further analysis and consideration. (p. 7)

Agency Response: See the Summary Response for Topic 11 and in this section, as well as under Topics 11.3 and 11.4, for details on how the agencies have updated the economic analysis.

Sacramento County, California (Doc. #15518)

11.2.46 Agency's cost-benefit analysis assumptions and methodologies are flawed

As previously mentioned, while the agencies have performed cost-benefit analysis of the definitional changes on CWA programs, they have acknowledged that the data used and

the assumptions made to craft the analysis may be flawed. Additionally, the methodologies used to determine economic costs and benefits to the proposed rule are misleading. In its economic cost analysis for the proposed rule, the agencies have indicated that 2.7 percent of new waters will be considered jurisdictional under the Section 404 program. However, the data used to compute costs for Section 404 comes from submitted Section 404 permit applications for FY2009-2010. The economic analysis does not acknowledge or recognize that, under the proposal, additional waters, currently not jurisdictional (and thus, no permits have been submitted), will become jurisdictional. This reasoning is flawed and does not give a true accounting of potential costs or benefits.

Further, to date, neither the EPA nor the Corps has performed any objective and detailed cost-benefit analysis to support a determination of the nature and scope of the economic impacts to the regulated community that would surely result if the proposed rule is adopted. We echo the comments submitted by the Small Business Administration, Office of Advocacy, stating the proposed rule would have a "direct and potentially costly impact on small businesses" and that EPA and the Corps used contradictory data and relied on Han obsolete baseline improperly diminish[ing] the effects of this rule" on small businesses. (p. 3-4)

Agency Response: The rule is narrower in scope than existing regulations and historical practice (See Summary Responses under Topics 10 and 11). The economic analysis for the Proposed Rule uses a recent practice baseline, and is based off of the most recent data available to the agencies at the time. See Summary Response under this section for how the agencies updated the jurisdictional determination data used for the analysis.

Republican River Water Conservation District (Doc. #15621)

11.2.475. The EPA's Economic Analysis is Flawed

Notwithstanding what appears to be a significant expansion of federal CWA jurisdiction under the proposed rule, the EPA estimates that there would be at most 1,332 additional acres subject to CWA regulation. The EPA bases this estimate on an economic analysis performed by the EPA as part of this rulemaking. However, several independent reviews of the March 2014 Economic Analysis Report have determined that the analysis employed in the report is fundamentally flawed and that the report significantly understates the amount of new land that would fall within the purview of the CWA. These same reviews also cast serious doubt on the projected net economic benefit to the public of 388 million to 514 million dollars.

In one report prepared for the Water Advocacy Coalition, University of California professor Dr. David Sunding writes, "the EPA analysis relies on a flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of the definitional change." That report goes on to find that "[t]he errors, omissions, and lack of transparency in EPA's study are so severe as to render it virtually

meaningless." Many analysts, including American Farm Bureau Federation economist Veronica Nigh, have stated that the proposed regulation could impact a significant percentage of the more than 106 million acres of wetlands that are currently being used for agricultural purposes. This is far cry from the EPA's 1,300 acre projection and, if true, would represent an alarming and unsupportable expansion of the regulatory reach of the EPA and Corps under the CWA.

The fact that there is such a chasm between many well-respected scholars and the promulgating agencies regarding the potential impact of the proposed rule alone warrants further analysis and consideration. (p. 7)

Agency Response: The rule is narrower in scope than the existing regulation. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

Delaware County Department of Watershed Affairs (Doc. #16936)

11.2.48(...) For example, they could not explain how the cost/benefit analysis was calculated because it was beyond their level of confidence to do so. While sympathetic to their situation, their response is not adequate they can't explain it as an EPA staff member, how do you expect anyone to understand it? This is a critical issue because their will be costs to comply including capital and opportunity costs associated acquiring a permit. How did EPA conclude that there was a net positive benefit? How does one measure what we consider to be immeasurable water quality benefits? How can we comment on the cost/benefit analysis if an EPA staff member can't explain the results? (p. 2)

Agency Response: See the Economic Analysis for the final rule which describes the methodologies used for estimating change in jurisdictional determinations, costs and benefits. See also Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

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

11.2.4914. Insufficient Cost Benefit Analysis

The cost-benefit analysis should be expanded to include local and state costs. The Economic Analysis for the proposed rule is insufficient because it only accounts for federal agency costs. The Economic Analysis of Proposed Revised Definition of Waters of the United States was released by the agencies, consisting of a cost-benefit analysis across CWA programs. The analysis states, "The economic analysis is necessarily based on readily available information and the resulting cost and benefit estimates are incomplete." The analysis contends that the new definition of Waters of the U.S. would have minimal costs to MS4 permittees and agriculture, but did not take into account any additional monitoring, assessment, program realignment, training and outreach, BMPs, reporting, or permitting costs for these entities that would result from the expanded definition of Waters of the U.S. The report should be revised or amended to address these

additional potential implications of changing the definition of Waters of the U.S. At a minimum, the Economic Analysis should be amended to account for additional monitoring, assessment, program realignment, training and outreach, BMPs reporting or permitting costs, due to the expanded definition of Waters of the U.S. at the state and local levels.

Example: The Economic Analysis indicated minimal costs to MS4 permittees and other agencies. However, the proposed rule will require San Diego County time and costs for program administration, including planning, monitoring, training, implementation, and permitting costs. These all include additional costs that were not considered as part of the Economic Analysis. (p. 10)

Agency Response: The final rule is narrower in scope than the existing regulations. See Summary Response under Topic 11.4 on how the agencies expect this rule to impact MS4s.

Nevada County Board of Supervisors, State of California (Doc. #18894)

11.2.50 Economist and University of California-Berkley faculty member Dr. David Sunding²⁶ has reported that the proposed rule contains numerous errors, lacks transparency and would greatly expand federal control over land that was previously not regulated by the federal government. For example, he notes that EPA's economic impact analysis uses FY 2009/2010 as the baseline year to estimate impacts. This was a "period of significant contraction in the housing market due to the financial crisis..... it is apparent that choosing FY 2009/2010 as representative years is problematic, as building permit filings were at an all-time low during this period." (p. 3)

Agency Response: The agencies have updated permit data to account for the referenced recession. See the Economic Analysis for the final rule and the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on how the agencies have updated the economic analysis.

Mississippi Valley Flood Control Association (Doc. #19488)

11.2.51 The Agencies' Economic Analysis Underestimates Costs

The agencies' cost-benefit analysis of the Proposed Rule⁴¹ severely underestimates its associated costs. The agencies' reliance on requests for jurisdictional determinations in fiscal years 2009–2010 as a baseline for the Proposed Rule's economic impacts skews the effects downward. It is widely known that economic activity was severely constrained and construction activity was at a low point during that time due to the recession. For example, per U.S. Census Bureau data on seasonally adjusted monthly total construction,

²⁶ Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States, Dr. David Sunding, May 15, 2014

the average monthly spending on construction for that two-year baseline period was lower than any month since 2002.²⁷ (p. 10)

Agency Response: The agencies have updated permit data to account for the referenced recession. See the Economic Analysis for the final rule and the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on how the agencies have updated the economic analysis.

California Central Valley Flood Control Association (Doc. #19571)

11.2.52D. If adequate guidance and permit assistance are not provided, the Economic Analysis for this rule must accurately assess the impact of these rules without adequate guidance.

Currently, the Economic Analysis for this rule states, “Any incremental costs for routine maintenance of waterways (such as drainage ditches that might newly meet the definition of tributary as proposed in this rule) incurred by local, state, or federal authorities would likely be minimal because of the general permits that the Corps issues to reduce the regulatory requirements for these minor activities.” This is simply untrue. The Association in this letter has identified multiple additional costs incurred by the likely increase in landside levee permitting. Additionally, there are likely to be economic, public safety, and public health costs associated with the proposal that have not been recognized or explored in the analysis.

The Association also begs that perspective be applied to considerations of cost. An increase of project costs by \$1 million may seem minor, in the scheme of public works projects. However, recall that some Central Valley and California flood control agencies may have maintenance budgets of \$50,000 or less. Flood control agencies must borrow the money for special projects from commercial banks. An additional \$1 million could mean the difference between loan approval and loan denial.

It is not clear from the rule package as proposed that the Corps will be issuing new general permits or a Regulatory Guidance Letters for local governments working on public safety projects. The economic impacts analysis states that coverage by general permits is “routine”; however, that has not been the experience of the local agencies that operate and maintain California’s flood control efforts. Particularly for “special projects,” such as plant remediation, project-specific permits are nearly always required. In combination, these rules mean that levee projects will more often require permitting, and costs will not be minimal.

As stated earlier, the Association objects to this rule, which will expand the Corps’ and EPA’s jurisdiction to the entirety of California’s Central Valley and Delta. The economic

²⁷ U.S. Census Bureau, Construction Spending: Annual Rate for Total Construction: U.S. Total—Seasonally Adjusted Total Construction [Millions of Dollars], Period: 2006 to 2014, Data Extracted on: May 14, 2014.

analysis provided by EPA simply fails to capture the full costs, and fails to provide perspective as to the impacts of these costs on flood control and reclamation districts. Minimally, the Association requests and requires that the rule be withdrawn and re-promulgated alongside more permitting assistance and more general permits, as well as additional, helpful guidance from the Corps that is specific to drainage ditches in California's Central Valley and Delta. (p. 7)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. This rule does not change current permit programs. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

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

11.2.53I. The agencies have not provided an adequate or comprehensive economic analysis, and must undertake a more complete economic analysis prior to promulgating the rule.

The EPA's Economic Analysis for the proposed "waters of the United States" rule fails to provide a reasonable assessment of the proposed rule's costs and benefits. The Economic Analysis suggests that the proposed rule will increase overall jurisdiction under the CWA by only about 3 percent. But the EPA arrives at this percentage using a questionable methodology that only accounts for the Section 404 program, relies on figures extrapolated from statistics from FY 2009-2010 (a period of extremely low construction activity during one of our nation's greatest recessions), and fails to account for the universe of waters and features for which landowners have not previously sought CWA permits. Even the agencies note that "there is uncertainty and limitations associated with the results," due to data and information gaps, as well as analytic challenges. The analysis does not quantify all possible costs and benefits, and values are meant to be illustrative, not definitive.²⁸ Relying on this percentage throughout the Economic Analysis, the EPA systematically and hugely underestimates the impact of the proposed rule's new definition of "waters of the United States."

The EPA's calculations of incremental costs and benefits are also deficient. The EPA's cost analysis is focused on costs associated with the section 404 program and largely ignores the cost impact of the changes to other CWA regulatory programs due to lack of data. Moreover, the benefit calculation is based on a problematic methodology that relies on studies that are largely irrelevant, do not provide accurate estimates of benefits, and were conducted 10-30 years ago.

²⁸ Congressional Research Service (CRS), "EPA and the Army Corps' Proposed Rule to Define 'Waters of the United States'", September 10, 2014 p. 11

As a result of the incompleteness and inaccuracies of the EPA's Economic Report, we believe it is necessary for to recalculate the economic analyses to more accurately project the impacts of the proposed rule, and identify effects that the EPA failed to consider the first time. A rule of this magnitude deserves a much more accurate and defensible analyses and accounting of future costs and benefits. (p. 2-3)

Agency Response: The agencies have updated the economic analysis to reflect public comments and the final rule. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

National Association of Towns and Townships (Doc. #1864)

11.2.542. The Agencies Have Not Provided an Adequate or Comprehensive Economic Analysis, and the Regulated Community Needs Adequate Time to Undertake a More Complete Economic Analysis.

The EPA's Economic Analysis for the proposed waters of the United States rule fails to provide a reasonable assessment of the proposed rule's costs and benefits. The Economic Analysis suggests that the proposed rule will increase overall jurisdiction under the CWA by only 2.7 percent. But the EPA arrives at this percentage using a questionable methodology that only accounts for the Section 404 program, relies on figures extrapolated from statistics from FY 2009-2010 (a period of extremely low construction activity during one of our nation's greatest recessions), and fails to account for the universe of waters and features for which landowners have not previously sought CWA permits. Relying on this percentage throughout the Economic Analysis, the EPA systematically and hugely underestimates the impact of the proposed rule's new definition of "waters of the United States."

The EPA's calculations of incremental costs and benefits are also deficient. The EPA's cost analysis is focused on costs associated with the section 404 program and largely ignores the cost impact of the changes to other CWA regulatory programs due to lack of data. Moreover, the benefit calculation is based on a problematic methodology that relies on studies that are largely irrelevant, do not provide accurate estimates of benefits, and were conducted 10-30 years ago.

As a result of the incompleteness and inaccuracies of the EPA's Economic Report, it is necessary for members of the public to provide their own economic analyses to project the impacts of the proposed rule, and identify effects that the EPA failed to consider. Additional time is required for commenters to gather the necessary data and develop sound economic methodology to properly assess the proposed rule's likely increase in jurisdiction as well as its projected costs and benefits. The comment period should be extended so that the public can adequately assess the economic implications of the proposed rule. (p. 2-3)

Agency Response: The agencies have updated the economic analysis to reflect public comments and the final rule. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

North Houston Association, et al. (Doc. #8537)

11.2.55 The unreasonable extension of federal jurisdiction will have another adverse effect. There is no reasonable expectation of significant additional federal money for support of the increased work load at the Corps. As a result, even with the best efforts of federal employees, the time and cost to obtain permits will increase. This will further disincentivise the move to green infrastructure and service and act as a drag on the economy of the Houston Region. (p. 3)

Agency Response: The agencies were unable to quantify the potential reduction in workload due to increased certainty. See the Summary Response under Topic 11.3 for details on the current approach to the economic analysis. The agencies recognize that cities have turned to green infrastructure, using existing natural features or creating new features that mimic natural hydrological processes that work to infiltrate or evapotranspire precipitation, to manage stormwater at its source and keep it out of the conveyance system. These engineered components of stormwater management systems can address both water quantity and quality concerns, as well as provide other benefits to communities. This rule is designed to avoid disincentives to this environmentally beneficial trend in stormwater management practices.

California State Association of Counties (Doc. #9692)

11.2.56 Cost Benefit Analysis: CSAC believes the Economic Analysis for the proposed Rule is insufficient because it only accounts for federal agency costs. The Economic Analysis did not account for increased federal agency costs associated with the need to increase the agencies' staffing levels to handle the increased workload resulting from the potential we see for expanding CWA authority. The Economic Analysis also did not account for the likelihood that the agencies' staffs will not be increased to handle the increased workload, resulting in costs on counties associated with delays caused by permit processing. The analysis contends that the new definition of WOUS would have minimal costs to MS4 permittees and agriculture, but they did not take into account various costs and activities. CSAC believes at a minimum the Economic Analysis should be amended to account for the following additional costs at the state, regional and local levels due to the expanded definition of WOUS: increased federal, state and local agency staffing levels to process the increased number of permits; lost capacity and for function of infrastructure due to delays caused by additional permit processing times and the likelihood of federal, state and local agencies being unable to get the funding needed to handle the increased permit load; increased permit outreach, and BMPs reporting; and permitting costs, including compensatory mitigation. (p. 2)

Agency Response: The final rule is narrower in scope than the existing regulations. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

Kentucky League of Cities (Doc. #15227)

11.2.57 One of the most pressing concerns with the proposed rule is the lack of a thoroughly vetted economic analysis. The EPA and the Corps have yet to conduct a full economic analysis on the cost of the impact of the proposed on all CWA programs beyond the 404 program, including the 402 National Pollutant Discharge Elimination System (NPDES) program, 303 Water Quality Standards, total maximum daily loads (TMDLs), stormwater and green infrastructure. According to the EPA and the Corps' own Economic Analysis of the Proposed Revised Definition of Waters of the US, the impact of the definitional change is largely unknown because the findings are "incomplete" due to the "data and methodological limitations, as well as the inherent assumptions in each component of the analysis." proposed rule of this magnitude should not base its limited economic analysis on flawed assumptions with incomplete data.

As previously mentioned, the data sets from the limited economic analysis performed by EPA and the Corps is also a concern for local communities. The limited economic analysis performed by EPA and the Corps on the proposed rule indicated that about three percent (3%) more would be found jurisdictional under the proposed definitional change. Unfortunately, EPA based this calculation on Section 404 permits submitted for review rather than waters that would be jurisdictional under the proposed rule, where permits are not currently required. An additional concern is the calculation was based off of 2009-2010 data, which was the height of the Great Recession. This time period marked an all-time low for construction and other types of development. The limited economic analysis performed by EPA and the Corps used faulty and incomplete data during a poor sample time period. The uncertainty brought about by such a poor economic analysis should lead to further consideration of withdrawing the proposed rule.

The direct and indirect costs on local governments of determining whether or not Municipal Separate Storm Sewer Systems (MS4s) and other stormwater systems and components comply with the proposed rule are of significant concern. If a determination is made that an MS4 system is a jurisdictional water, this could lead to additional permit application costs, wetland and stream mitigation costs, and could result in project delays. There is absolutely no reason to subject stormwater systems to Section 404 permits on a nationwide " basis and add further delays and costs to an already cumbersome permitting process. (p. 1-2)

Agency Response: The exclusion for stormwater control features in paragraph (b)(6) of the rule is intended to address engineered stormwater control structures in municipal or urban environments. Stormwater control features are designed to address runoff that occurs during and shortly after precipitation events; as a result, stormwater features that convey runoff are expected to only carry ephemeral or

intermittent flow. For ease of implementation, the agencies want water features to be dealt with under only one provision of the rule; the agencies do not expect the scope of ditches excluded to be different under the exclusion of ditches at paragraph (b)(3) of the rule and (b)(6). See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis, including permit period data and effect on MS4s.

The United States Conference of Mayors, et al. (Doc. #15784)

11.2.58 Moreover, we remain concerned that the data used in the analysis is insufficient. The economic analysis used in 2009-2010 data of Section 404 permit applications as a basis for examining the impacts of the proposed rule on all CWA programs. It is insufficient to compare data from the Section 404 permit program and speculate to the potential impacts to other CWA programs. Additionally, 2009-2010 was at the height of the recession when development (and other types of projects) was at an all-time low. The poor sample period and limited data creates uncertainty in the analysis's conclusion. (p. 3)

Agency Response: See Summary Response in this section on how the agencies updated the jurisdictional determination data to reflect more current information.

Oklahoma Municipal League (Doc. #16526)

11.2.59 The Economic Analysis of Proposed Revised Definition of Waters of the U.S. fails to consider the proposal's true costs to state and local governments. By limiting its financial review to 404 programs, it ignores the proposal's significant economic impact on all programs under the CWA and other water-quality regulations.

Additionally, the Economic Analysis is scientifically unsound due to its restricted consideration of data to submitted 404 permits rather than the full range of permitting requirements that would exist under the proposed rule. Costs arising under enlarged permit application and compliance requirements are direct and substantial economic burdens to state and local governments. (p. 2)

Agency Response: The agencies did take into account CWA programs beyond 404. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

Michigan Association of Conservation Districts (Doc. #16583)

11.2.60 CWA Jurisdiction. EPA and USAGE have continued to state that the proposed rule does not increase CWA jurisdiction but they have also stated that there's an estimated 3% increase in jurisdiction after completing their economic analysis. The amount of expansion is difficult to predict but if the proposal were to pick up all adjacent waters and most isolated wetlands and ditches it would be significantly greater than 3% as estimated by EPA. The ambiguity regarding the 3% estimate raises significant questions about the economic analysis. For example, how it was conducted, what methodology was used,

what will be the specific impact in each state. We recommend a thorough analysis of the impact of the proposed rule be conduct to include specific information for each state that includes the number and location of new jurisdictional acres and the marginal impact on costs and revenue of these acres. Therefore, MACO is in agreement with NACD's opinion that a 3% increase in jurisdictional areas is significant considering the number of acres and the associated potential economic impact. (p. 3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

Maine Municipal Association (Doc. #16630)

11.2.61 The economic analysis document accompanying the proposed rule indicates the regulatory changes will likely increase costs to all branches of government. If the implementation of this new concept of "neighboring" waterbody results in broader EPA/Corps jurisdiction, the fiscal note underestimates the financial impact of compliance at the local level. Expanding jurisdiction to include ditches, as referenced above, would be a significant broadening of the existing rule, with resultant sizable impacts on municipal staff budgets. By providing such a wide estimate of the total incremental costs associated with the rule, estimated by your agencies at between \$1 62 million to \$279 million annually, it appears that identifying the exact impact of this rule will be difficult. Even the higher range of the fiscal note seems conservative, and a rule that has as its goal providing maximum clarity to the public ought to result in a more precise financial impact assessment. (p. 2)

Agency Response: The agencies have used the feedback we received from public outreach efforts as the source of early guidance and recommendations for refining the proposed rule. Specifically, stakeholder input received during public outreach events in combination with the written comments received during the public comment period have reshaped each of the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.” This rule is narrower in scope than existing regulations and historical practice. See Summary Response under Topic 13.2.4 (Unfunded Mandates Reform Act) on the effect to other branches of the government. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4, for details on the current approach to the economic analysis.

Wyoming Association of Conservation Districts (Doc. #17348)

11.2.624. Further, the q/a fact sheet 7 includes the following as it pertains to expansion over existing regulation:

3. Doesn't the Economic Analysis indicate jurisdiction would expand by at least 3 percent compared to the existing regulation?

ANSWER: The economic analysis examines the costs and benefits of the proposal. In doing so, the agencies compared the proposed rule to current practices. This analysis indicates that there would be a three percent increase, or roughly 1500 acres nationwide, in cases where the agencies would find waters jurisdictional. This increase is largely a result of clarifying the current confusion and difficulty of assessing "other waters." When the proposed rule is compared to the agencies' existing regulations, however, the proposed rule reflects a substantial reduction in waters protected by the CWA as a consequence of recent decisions of the Supreme Court. (p. 3)

Agency Response: This rule is narrower in scope than existing regulations and historical practice. See Summary Response under Topic 11 (Costs/Benefits), as well as Topic 10 (Legal Analysis).

11.2.63 **Cost Analysis**

The Association believes that the cost analysis 16 failed to take a hard look at the economic impact of the proposed rule on the regulated community as well as state and local governments.

EPA on one hand argues that 60% of the nation's waters are not clearly protected under today's jurisdictional requirements. EPA suggests that this rule will provide protection, pro se, to all of these waters. Yet EPA claims an increase of 3% or an estimated 1,500 acres in jurisdiction after completing the analysis. So the Association assumes, the impact in increased jurisdictional waters would range between the 3% and 60% of waters. Is it then assumed that of the 60% "not clearly protected waters" 57% will remain "not clearly protected"?

Further, the cost analysis discussion as it relates to sections 303 and 305 in essence claims that since states typically incorporate what may have been non-jurisdictional into their water quality standards, water quality assessment reports and TMDL/watershed programs, the rule would essentially have no impact.

While the Association concurs that the state and local governments do address water quality efforts within their local watershed(s) on what would arguably be considered non-jurisdictional waters, this currently is a matter of practice due to EPA's expectations. There are a number of waters being addressed within these programmatic processes that the Association would argue are non-jurisdictional.

The Association believes the cost analysis fails to recognize the significant cost savings to the federal, state and local governments should those waters appropriately non-

jurisdictional be left to state and local government entities to address. For example, as indicated earlier, due to EPA requirements the state currently spends on average \$150,000 per TMDL. Many of these would encompass waters that the Association believes would fall outside EPA jurisdiction and therefore may not require the costly and expensive processes. Yet all of these tributaries are evaluated and best management practices are implemented locally at a much more efficient rate.

Further, as discussed below in the Rapanos decision, the cost of 404 permitting can be quite extensive adverse to claims made by EPA in this proposed rulemaking:

The burden of federal regulation on those who would deposit fill material in locations denominated "waters of the United States" is not trivial. In deciding whether to grant or deny a permit, the U.S. Army Corps of Engineers (Corps) exercises the discretion of an enlightened despot, relying on such factors as "economics," "aesthetics," "recreation," and "in general, the needs and welfare of the people," 33 CFR § 320.4(a) (2004).FN1 The average applicant for an individual permit spends 788 days and \$271,596 in completing the process, and the average applicant for a nationwide permit spends 313 days and \$28,915-not counting costs of mitigation or design changes. Sunding & Zilberman, The Economics of Environmental Regulation by Licensing: An Assessment of Recent Changes to the Wetland Permitting Process, 42 Natural Resources J. 59, 74-76 (2002). "[O]ver \$1.7 billion is spent each year by the private and public sectors obtaining wetlands permits." Id., at 81. These costs cannot be avoided, because the Clean Water Act "impose[s] criminal liability," as well as steep civil fines, "on a broad range of ordinary industrial and commercial activities." 2215Hanousek v. United States, 528 U.S. 1102, 1103, 120 S. Ct. 860, 145 L.Ed.2d 710 (2000) (THOMAS, J., dissenting from denial of certiorari). In this litigation, for example, for backfilling his own wet fields, Mr. Rapanos faced 63 months in prison and hundreds of thousands of dollars in criminal and civil fines. See United States v. Rapanos, 235 F.3d 256, 260 (C.A.6 2000).²⁹ (p. 6-7)

Agency Response: See Summary Response for this section (Topic 11.2). This rule is narrower in scope than existing regulations and historical practice. An increase of approximately 3% represented the agencies' estimate of increased jurisdiction over recent practice. The agencies use the Sunding & Zilberman article referenced above, as well as updated jurisdictional determination data and permit application data from the Corps to estimate permitting costs related to the rule. See the Economic Analysis and the Summary Response under Topic 11.4, and the Summary Response under Topic 11.3.

U.S. Chamber of Commerce (Doc. #14115)

11.2.64Sand, Stone, and Gravel Operations - Aggregates, such as sand, stone, and gravel, are the chief ingredient in asphalt pavement and concrete. They are used in nearly all residential,

²⁹ Rapanos v. United States, 547 U.S. 715, 720-22 (2006)

commercial, and industrial building construction and in most public works projects, including roads, highways, bridges, dams, and airports. Many aggregate deposits were created by water, so the deposits are often located near water. The availability of future sources of high quality aggregates is now a significant problem in many areas of the country, and permitting issues have made the problem more acute. This proposed rule will make matters worse. A change in what is considered jurisdictional can have a significant impact on aggregate reserves, which affects the life of facilities and delays the start-up of new sites. The concern is not only that these facilities will face more uncertainty and significant new costs, but that other industries will also be affected. Without a supply of readily available aggregates, the construction of highways, public works, and residential and commercial building projects would be seriously impacted. (p. 18-19)

Agency Response: This rule is narrower in scope than the existing regulations and historical practice. See Summary Response in this section.

Georgia Chamber of Commerce (Doc. #14430)

11.2.65 Economic Impact Analysis

This proposed rulemaking is a wide ranging measure that EPA claims will have an annual national cost of \$162-279 million, while delivering \$318-514 million in benefits.

Chamber members have little confidence in those outcomes ever being achieved.

The vagueness of this rule makes any informed analysis of costs and benefits all but impossible to undertake.

There is a big difference between theoretical modelling outcomes and the real business costs that will be borne by individuals and businesses left to grapple with the inefficiencies of federal government agencies and the layers of uncertainty evident in this draft rule.

The Chamber has reviewed a critique of EPA's *Economic Analysis of Proposed Revised Definition of Waters of the United States* prepared for the Water Advocacy Coalition by David Sunding, Ph.D. and is alarmed by the summary and conclusions of his report:

The Environmental Protection Agency's (EPA) March 2014 Economic Analysis of Proposed Revised Definition of Waters of the United States (EPA analysis) presents the agency's estimates of the probable costs and benefits associated with a definitional change to the term "waters of the United States" used throughout Clean Water Act (CWA) programs. EPA is proposing an expansion of the definition of the term "waters of the United States" to include categories of waters that were previously never regulated as waters of the United States, such as all waters in floodplains, riparian areas, and certain ditches. The inclusion of these waters will broaden the scope of the CWA and will increase the costs associated with each program. Unfortunately, the EPA analysis relies on a flawed

methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of the definitional changes. This is compounded by the exclusion of several important types of costs and the use of a flawed benefits transfer methodology, which EPA uses to estimate the benefits of expanding jurisdiction. The errors, omissions, and lack of transparency in EPA's study are so severe as to render it virtually meaningless. The agency should withdraw the economic analysis and prepare an adequate study of this major change in the implementation of the CWA.

The estimates associated with section 404 compensatory wetland mitigation, which contain some of the most glaring errors, represent approximately 40% of the total costs and 85% of the total benefits. This suggests the entire analysis is fraught with uncertainty as to render it insufficient for evaluating programmatic impacts of this scale. Estimates of economic impacts to other programs rely on an incremental jurisdiction determination that is deeply flawed. Additionally, the systematic exclusion of various costs and benefits ignores important impacts to permit applicants and permitting agencies.

In addition to the methodological errors discussed above, EPA's analysis suffers from a lack of transparency. Explanations of calculations, basic assumptions, and discrepancies between various EPA analyses are rarely provided. This is particularly troubling given that the entire report is based on records from the Corps' internal ORM2 database, which is unavailable to outside entities. The author of this report spent considerable time replicating the calculations used in the analysis, but was unable to vet the validity of the underlying data. Any errors or inconsistencies in documentation, sample selection, or data extraction are necessarily overlooked. These shortcomings indicate that a more thorough analysis is required to properly assess the economic impacts of a definitional change.

The Chamber supports Dr. Sunding's recommendation that:

The agency should withdraw the economic analysis and prepare an adequate study of this major change in the implementation of the CWA. (p. 17-18)

Agency Response: See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4 for information on how the agencies are updating the economic analysis.

Atlantic Legal Foundation (Doc. #15253)

11.2.66(...) The cost-benefit analysis is deeply flawed, employing decades old cost estimates that were not adjusted for inflation, or current economic and market conditions.

The proposed rule will place undue regulatory burdens and limitations on persons attempting to use their land responsibly and efficiently, would add new regulatory dead

weight to the economy and would produce no meaningful gains for the environment, the economy or the nation. (p.2-3)

Agency Response: The agencies have updated costs for inflation, as well as current conditions in the economy. See the Summary Response in this section, as well as under Topics 11, 11.3, and 11.4 for information on how the agencies are updating the economic analysis.

11.2.67b. Estimated Costs

Under the proposed rule, estimated permit application costs are projected to impact only 1,332 additional acres. The agencies derived this number by manipulating and excluding several potential sources of permit costs and acreage. First, this estimate is based upon the artificially low projected three (3%) percent increase in jurisdiction. Thus, if the amount of “other waters” rises, the quantity of impacted acreage would likewise increase. Second, the acreage estimation only takes into account section 404 permits, ignoring any permits issued under other sections that may be impacted by the proposed rule, such as section 402.³⁰ Finally, this estimate only pertains to permits issued for permanent impacts and excludes “ecological restoration and conversion activities, as well as temporary impacts.”³¹ We believe all of these additional sources or permit jurisdiction should be included in the calculation in order to make an accurate projection of the impact of the proposed rule. (p. 7)

Agency Response: The agencies have updated the Economic Analysis with current data. See the Summary Response in this section on other waters, and Topic 11.4 on non-404 aspects of the economic analysis, including 402 permits.

11.2.68c. Estimated Benefits

To calculate “benefits” of the proposed rule, the report took a benefits transfer approach that combined data from ten different studies that had attempted to “assess the value of waters expected to provide services similar to the waters incrementally protected under the proposed rule.” These studies employed the contingent valuation method (CVM), where “willingness to pay”³² (WTP) per household was measured via surveys that assessed respondents’ stated WTP to preserve certain wetlands.³³ Based on these studies, the agencies determined that the annual WTP for all regional acres ranged from \$0.36 to \$3.86 depending on the region, with a mean of \$2.30.³⁴ Extrapolating from these figures,

³⁰ See id. at 6 (“Permitting for construction and development stormwater, concentrated animal feeding operations (CAFOs), and pesticide application are three areas of CWA 402 implementation where there may be potential new costs.”).

³¹ Id. at 14.

³² Id. at 21.

³³ See id. at 20.

³⁴ See id. at 29.

the agencies claimed that, “on a per acre basis, benefits vary by region, ranging from approximately \$26,000 to \$287,000 per year with an overall average of \$193,000.”³⁵

This method is fundamentally flawed. First, the studies relied upon are outdated: the most recent study used was published in 2000 with the rest were published from 1986 to 1999.³⁶ Next, many in the scientific community find CVM to be both inaccurate and improper for large scale evaluations.³⁷ These studies often suffer from hypothetical response biases which lead to inflated values, strategic questioning, large disparities between willingness to pay and willingness to avoid, and difficulties in verifying data.³⁸ Finally, even the agencies acknowledge that in general, CVM “elicits ‘stated preferences’ rather than revealed (or actual) preferences, which is not ideal for quantifying benefits”³⁹ and that “it is important to recognize up front that there is uncertainty and limitations associated with the [report’s] results.”⁴⁰ Furthermore, the report concedes that WTP may be incomparable between the respondents from the older studies and the individuals who actually use the services in areas potentially affected by increased assertion of jurisdiction.⁴¹ Aggregating household WTP from a few outdated sources to arrive at a nationwide average ignores these methodological flaws, allowing the agencies to arrive at a convenient number that may bear little resemblance to the actual value of an acre of mitigated land. We believe basing a broad expansion in federal jurisdiction on such a flawed analysis is unsound. (p. 7-9)

Agency Response: See Summary Response in Topic 11.3.2 for how the agencies adjusted the 404-related benefits.

11.2.694. Economic Report

The economic report relied upon for the proposed rule states that the revised definition of “waters of the United States” will only increase federal jurisdiction by three (3%)

³⁵ Id.

³⁶ See id., app. B at 54–58.

³⁷ See, e.g., Jerry Hausman, Contingent Valuation: From Dubious to Hopeless, 26 J. OF ECON. PERSPECT. 43, 44 (2012) (“Responses to contingent valuation surveys for a single environmental issue are typically based on little information, given the limited time involved for each survey respondent. Thus, the results of such surveys are unlikely to be accurate predictors of informed opinion. . . Contingent valuation does not provide a good basis for either informed policymaking or accurate damage assessments in judicial proceedings.”); see also David W. Eberle & Gregory F. Hayden, Critique of Contingent Valuation and Travel Cost Methods for Valuing Natural Resources and Ecosystems, J. ECON. ISSUES 649, 683 (1991) (“The CV [contingent valuation] and TC approaches lack methodological, theoretical, and empirical grounding. Their continued use will mislead valuation attempts and frustrate policy intended to restore a viable environment.”).

³⁸ See Hausman, supra, at 43.

³⁹ Economic Analysis at 20.

⁴⁰ Id. at 21.

⁴¹ See id. at 20.

percent.⁴² Furthermore, the rulemaking documents assert that the proposed rule will impose few indirect costs and that those costs are easily outweighed by the potential benefits. The evidence supporting these claims is scant. Moreover, the economic report repeatedly stresses that its cost/benefit estimates are incomplete.⁴³ Nowhere is there any meaningful attempt to capture the potential costs of expanded jurisdiction. Instead, the report mainly focuses on possible benefits including “ecosystem services” such as biodiversity, wildlife habitat, and recreational use.⁴⁴ Most of these alleged economic benefits are vague and difficult to monetize, as the report concedes⁴⁵, and provide little to justify the potentially unlimited jurisdictional authority the agencies propose. We believe any proposed regulation should be supported by a rigorous cost/benefit analysis. The economic report for the proposed rule is unpersuasive.

a. Increase in Jurisdictional Waters.

The three (3%) percent increase in jurisdictional wetlands estimated by the agencies was based on a limited study; however, that study fails to account for (1) the proposed rule’s expanded definition of “waters of the United States” and (2) the agencies’ enhanced incentives to increase substantially the number of “other waters.”⁴⁶

Jurisdiction was considered for three separate categories of water bodies: streams, wetlands, and “other waters.” According to the report, “other waters” are defined as non-navigable waters that lack a direct surface connection to other waterways.⁴⁷ During the two-year period none of the “other waters” were considered jurisdictional, as opposed to nearly 100% of streams and wetlands. The economic report’s authors then measured 1,000 individual “other waters” during the two-year period and found 17% of them to be jurisdictional.⁴⁸

⁴² U.S. ENVIRONMENTAL PROTECTION AGENCY & U.S. ARMY CORPS OF ENGINEERS, ECONOMIC ANALYSIS OF PROPOSED REVISED DEFINITION OF WATERS OF THE UNITED STATES 12 (2014) (hereafter “Economic Analysis”).

⁴³ See *id.* at 2 (“The economic analysis is necessarily based on readily available information and the resulting cost and benefit estimates are incomplete.” (emphasis added)); *id.* at 17 (“The Corps also provided an estimate of 43,000 acres of wetland mitigation and 530 miles of stream mitigation period . . . This total may be incomplete.” (emphasis added)); see also, *id.* at 14 (“The agencies recognize that time and impact avoidance and minimization costs can be significant for some share of permit applicants. However . . . the agencies did not estimate compliance costs for these categories as part of the economic analysis.”).

⁴⁴ See *id.* at 8.

⁴⁵ See *id.* (“The ecosystem services identified . . . have no market values. Some are closely related to market goods, which may facilitate valuation, whereas others are far removed from the end product of market value.”).

⁴⁶ The baseline data supporting the economic report is derived from a two-year period (2009-2010), which was the most economically depressed since the Great Depression of the 1930s and was characterized by extremely low construction activity. Using period that as a baseline to estimate may skew the incremental acreage impacted by the proposed rule.

⁴⁷ See Economic Analysis. at 11.

⁴⁸ See *id.* at 12.

It is highly probable that the baseline data during the two-year period contains an artificially low number of reported “other waters.” Under the original framework no “other waters” could be determined to be jurisdictional; thus, neither the agencies, landowners, nor developers felt compelled to seek permit determinations because during the study period this form of “reporting” was deemed unnecessary, and this would explain the relatively low number of “other waters” recorded.⁴⁹

The authors of the report concede that the category of “other waters” may be unrepresentative, stating, “if a significant amount of the [other] waters are not included in the FY 2009-2010 data because of presumed non-jurisdiction on the part of landowners and developers, then the overall percent increase in [other] waters that become jurisdictional would be somewhat greater” (emphasis added).⁵⁰ This is an understatement. Even a modest increase in the amount of “other waters” recorded would result in a significant expansion of jurisdiction. The small number of reported “other waters” reflects a previously understood standard that property owners could rely upon. The proposed framework for determining jurisdiction may call into question the categorization of almost any body of water and thus landowners will have an incentive to seek permit determinations to reduce the uncertainty regarding the status of their property. The two-fold increase in “other waters” the EPA estimated does not capture the severity of this problem. If the number of “other waters” reported were to approach that of streams and wetlands (which is plausible), expansion of jurisdiction would be considerable. (p. 6-7)

Agency Response: While it is possible that the category of “other waters” may increase due to entities not previously seeking jurisdictional determinations, the agencies have taken this possibility into consideration when conducting the economic analysis. However, this rule is narrower than existing regulations and historical practice, and there is limited evidence that entities chose to change historical behavior as opposed to seeking clarification in recent years. See the Summary Response in this section on how the agencies account for potential changes in jurisdictional determinations.

International Brotherhood of Boilermakers, et al. (Doc. #15373)

11.2.70 Despite the Agencies' reassurances, the Boilermakers believe that the Proposed Rule will result in a significant expansion of the jurisdictional scope of what will be considered a "water of the United States." For example, the Agencies are proposing to find that **all** tributaries and "adjacent waters" are jurisdictional, even ephemeral and intermittent streams that do not have continuous flow. Currently, because these types of waters are subject to a case-specific jurisdictional determination, at least some of the waters, in fact,

⁴⁹ Total reported agency records showing jurisdictional status of aquatic resources: 95,476 streams; 38,280 wetlands; 8,209 “other waters.” See *id.*

⁵⁰ Economic Analysis at 43.

are found not to be jurisdictional. Thus, by any measure, the unilateral declaration that all tributaries and adjacent waters are jurisdictional extends the scope of waters classified as "waters of the United States." Therefore, the Agencies' assumption that the Proposed Rule will result in a narrowed jurisdictional scope is misplaced and renders the Economic Analysis fatally flawed.

As part of any final rule, the Agencies must reconsider and reissue an Economic Analysis that recognizes the expansion of water bodies that will be subject to regulation under the CWA. Moreover, such Economic Analysis must properly recognize and assess the fact that unilateral classification of all tributaries and adjacent waters as "waters of the United States," undoubtedly, will increase permitting and compliance requirements under the CWA. (p. 2-3)

Agency Response: This rule is narrower in scope than existing regulations and historical practice. The agencies have revised the definitions of tributaries and adjacency to provide greater clarity. See the Summary Response in this section, as well as Topic 11.

11.2.71B. The Agencies Underestimate the Indirect Costs Associated with the Proposed Rule

The Agencies must take into consideration the full scope of indirect costs associated with the Proposed Rule. In particular, the Agencies must consider the indirect impacts on employment by virtue of permitting delays, higher risks of project failure, and effects on overall employment levels due to higher mitigation and compliance costs affecting overall project budgets. The Economic Analysis describes the potential indirect costs as including:

This proposed rule could result in new indirect costs on regulated entities such as the energy, agricultural, and transportation industries; land developers, municipalities, industrial operations; and on governments administering regulatory programs, at the tribal, state and federal levels ... These indirect costs may include " application costs, associated environmental compliance costs, wetlands mitigation, stream mitigation, and project re-design and relocation expenses. In addition, there would be program management, training, and associated environmental compliance costs to government associated with administering the CWA."⁵¹

Fundamentally, such a narrow scope of the indirect costs associated with the Proposed Rule is flawed by the lack of any consideration of adverse impacts on employment. The Agencies must reevaluate the economic impact of the Proposed Rule by including employment-specific factors related to permitting delays, increased project costs, and most importantly, a decrease in overall project availability because of the increased

⁵¹ Id. at 6 (emphasis added).

compliance costs associated with constructing energy projects in light of the new rule. (p. 3)

Agency Response: This rule is narrower in scope than existing regulations and historical practice. The agencies conducted an illustrative economic analysis based on changes relative to recent practice. However, impacts on employment are not within the scope of this analysis. See Summary Responses under Topic 11 and corresponding subsections.

11.2.72C. Agencies' Assertions of "Economic Benefits" from Additional Regulatory Certainty are Overstated

The Agencies assert that the Proposed Rule's new definitions will promote greater certainty and that such "certainty" will lead to more willingness to invest in projects.⁵² The Boilermakers respectfully disagree with this assertion. In essence the Agencies are suggesting that the "certainty" that a project will now be subject to CWA regulation will make entities more willing to invest. To the contrary, uncertainty is not driven by whether or not a permit or compliance is required, but actually by the assertion of jurisdiction and resulting permitting and compliance requirements, costs, and timelines.

An expansion of CWA jurisdiction will create more regulatory uncertainty since a broader range of activities will now be subject to the vagaries and delays of the Agencies' regulatory regime under CWA. The potential for regulatory permitting regimes, associated delays in permitting, and additional costs imposed as part of a regulatory scheme are key drivers for uncertainty and increase risk factors for investment. By unilaterally expanding the scope of water bodies that will become subject to CWA regulation, the only "certainty" that the Agencies actually have achieved is the certainty of higher risks in delay and costs-which, in turn, will reduce the likelihood of investment and cost the U.S. economy the type of jobs that are a foundation of growth. (p. 3-4)

Agency Response: Along with a narrowing of jurisdiction, the final rule also significantly reduces the uncertainty and number of case-specific determinations that will be required. The agencies analyzed changes in assertion of jurisdiction based on recent practice for the Economic Analysis. See the Summary Response in this section, as well as Topic 11.

11.2.73D. The Economic Analysis Fails to Accurately Articulate "Permitting Time Costs"

The Economic Analysis does not accurately articulate the permitting time costs associated with the Proposed Rule. The Agencies define permitting time costs to include: financial or opportunity costs of carrying development capital for longer periods of time; opportunity costs of foregone public services and benefits from not proceeding with the

⁵² Id. at 10 (emphasis added).

project sooner rather than later.⁵³ There are other types of cost considerations that should be captured within the "permitting time costs" element. Specifically, delays in permitting have a consequent impact on employment rates that must be captured within the Economic Analysis.

Uncertainty and extended permitting periods can have significant negative impacts on the timing and extent of hiring activities for a project. Particularly, a project developer is unlikely to hire work forces for construction until there is a high likelihood of permit issuance and certainty as to start times. Likewise, increased expenses driven by regulatory requirements oftentimes result in developers cutting expenses by hiring fewer workers or reducing benefits. These types of costs must be recognized and addressed in the Economic Analysis.

The Agencies Economic Analysis also is flawed by the choice not to estimate permitting compliance costs because "there is not a defensible, ready basis for estimating these costs." The Agencies could have (and should have) requested comment in the Proposed Rule on ways to estimate these costs. Therefore, the Agencies must take comment on the estimated time and impact avoidance and minimization costs and then revise the Economic Analysis to properly capture the potential for these impacts and provide both qualitative and quantitative analysis of the potential impacts. (p. 4)

Agency Response: See Summary Responses under Topic 11.3.1 and 11.4 for discussion on how the agencies address costs in the economic analysis.

11.2.74N. The Proposed Rule Fails to Streamline Permitting and Compliance Costs and Procedures

Core infrastructure projects now face a significant array of federal regulatory rules and regulations that increase the time and costs of projects. Subsequently, these increased costs and risks adversely affect the level and timing of employment for the development and maintenance of infrastructure projects.

The compliance costs presented by the Proposed Rule are of a significant concern to the Boilermakers. For example, the Portland Cement Association has submitted to the Agencies an economic study showing that, for its cement manufacturing members, alone, the Proposed Rule could add nearly \$73 million in compliance costs over a five-year time horizon. Further, based on reasonable changes in assumptions, the Portland Cement Association believes that compliance costs to its cement manufacturing facilities could range from a low of \$55 million to a high of \$103 million. This estimate is just a single snapshot of the significant economic impacts that would result from the Proposed Rule. The simple fact is that other industrial sectors will have similar, if not higher, compliance costs under this Proposed Rule. 9 79 Fed. Reg. at 22,220.

⁵³ Id. at 13.

In finalizing any new definition of "waters of the United States," the Boilermakers urge the Agencies to take into consideration the need to foster economic growth consistent with other Administration priorities and Executive Actions. Further, the Agencies also must take parallel actions to streamline the CWA permitting process so as to avoid the lengthy delays that are often required to obtain a permit and, in some cases, can affect whether projects move forward at all. (p. 5)

Agency Response: See Summary Responses under Topic 11.3.1 and 11.4 for discussion on how the agencies address the Portland Cement Association comments on costs.

National Association of Manufacturers (Doc. #15410)

11.2.75V. THE PROPOSED RULE IS NOT SUPPORTED BY A VALID COST-BENEFIT ANALYSIS

The NAM agrees with the other commenters that have demonstrated that extending the Clean Water Act's jurisdiction over such bodies of water with no or insignificant connections to a navigable-in-fact water would impose significant costs on American manufacturers, businesses, and—ultimately—consumers that are disproportionate to any benefit. For example, as the Waters Advocacy Coalition has demonstrated, the proposed rule would require States to undertake expensive scientific analyses of flood control projects as to why standards for "fishable, swimmable" uses should not be set for those projects; routine maintenance on stormwater conveyance would now in many instances require a section 404 permit; NPDES permits would be required for storm flows diverted to water supply projects; and potentially thousands of miles of roadside ditches could be treated as "waters of the United States."⁵⁴

Executive Order No. 12866 appropriately requires executive agencies to assess all the costs and benefits of available regulatory alternatives, including the alternative of not regulating. Exec. Order No. 12866 §§ 1(a) & 1(b)(5), 58 Fed. Reg. 51734, 51735-36 (Sept. 30, 1993). Here, the agencies have failed to undertake a valid cost-benefit analysis. Cf., *Michigan v. EPA*, 213 F.3d 663, 679 (D.C. Cir. 2000) (statutes should be read to authorize "regulations with benefits at least 'roughly commensurate with their costs, unless there is a clear legislative statement to the contrary'") (quoting Cass R. Sunstein, *Interpreting Statutes in the Regulatory State*, 103 Harv. L. Rev. 405, 487 (1989)). As explained in greater detail by the Waters Advocacy Coalition, the EPA's analysis relies on a flawed methodology for estimating the extent of newly-jurisdictional waters that systematically underestimates the incremental wetlands acreage that will be impacted,

⁵⁴ See Waters Advocacy Coalition, Comments on Proposed WOTUS Rule for All CWA Programs.

excludes several important types of costs, and uses a flawed benefits transfer methodology.⁵⁵

The NAM's members could face an enormous increase in costs if the proposed rule were finalized—costs that will make American businesses less competitive in the global marketplace and will drive those businesses to expand their operations overseas— costs that are not offset by any tangible environmental benefit. These costs are only multiplied when, as would be the case here, key aspects of the rule are not sufficiently defined and there will be substantial uncertainty as to whether many bodies of water are jurisdictional. Resolving that uncertainty will almost certainly require regulated companies to engage in expensive, time consuming, and fact-intensive expert hydrological analysis any time a decision must be made.

The proposed rule should be withdrawn and only re-proposed once a valid cost-benefit analysis has been completed and it is demonstrated that the potential environmental benefit is commensurate with the high costs the proposed rule could bring to bear on industry. (p. 27-28)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See the Summary Response in this section, as well as Topic 11. In addition, see Summary Response to Topic 13.2.2 on Executive Order 12866.

Grand Junction Area Chamber of Commerce (Doc. #15425)

11.2.76 Furthermore, there is great concern that the Environmental Protection Agency (EPA) has not completed their Economic Analysis of the Waters of the U.S. We would ask that the proposed rule and Economic Analysis be revised to include the findings and recommendations of stakeholders and businesses. As this proposed rule has the potential to greatly affect business, their voice and the impacts to them should be considered and included in the rule making process. The impacts of Federal oversight will impact many businesses in Western Colorado including but not limited to, private development, irrigation providers, and drainage districts as well as municipalities.

The proposed rule is concerning to business as the economic impacts have not fully been measured, the cost has not been assessed and stakeholders have not been consulted. The proposed rule would add another level of permitting, costs and time to proposed projects in Mesa County. The Grand Junction Area Chamber of Commerce would like to be part of the rule review process as a voice of business, and ask that the EPA consider the

⁵⁵ See Waters Advocacy Coalition, Review of EPA Economic Analysis of Proposed Revised Definition of Waters of the United States.

comments and reach out to the chamber to provide access to the appropriate stakeholders. (p. 1-2)

Agency Response: The agency has taken into account comments submitted during the public comment period. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Missouri and Associated Rivers Coalition (Doc. #15519)

11.2.77Economic analyses of the costs associated with the proposed rule are woefully understated. They are based on assumptions made using a very narrow timeframe during an economically depressed period for Colorado. Additionally, the assumptions were mainly based on 404 permit costs yet this rule will result in significant additional expenses. The full economic impact of this proposed rule cannot be adequately estimated or analyzed until it is known exactly which waters will be regulated by the rule. (p. 3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

South Carolina Association of Counties (Doc. #15573)

11.2.78The economic analysis acknowledges that there will be increased assertion of federal CWA jurisdiction when compared to baseline practices under existing regulations. The agencies further admit that cost to regulated entities will likely increase for permit expenses, compensatory mitigation, and best management practices (page 32). The agencies further acknowledge that cost will likely increase to specific groups investing in infrastructure. The agencies specifically name state and local governments as among the most likely to be impacted. In the economic analysis report, the agencies caution that the data used and the assumptions made to craft the analysis may be flawed (page 2). Since states, local governments, and their agencies implement and enforce CWA programs, we believe the "Waters of the U.S." definitional change will have a substantial direct cost on our counties. The economic analysis agrees, stating that CWA "programs may subsequently impose direct or indirect costs as a result of implementation" (page 2). (p. 2)

Agency Response: The accompanying economic analysis considers changes that may occur relative to recent practice. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.79Agency's cost-benefit analysis assumptions and methodologies are flawed

As previously mentioned, while the agencies have performed cost-benefit analysis of the definitional changes on CWA programs, they have acknowledged that the data used and the assumptions made to craft the analysis may be flawed. The methodologies used to determine economic costs and benefits to the proposed rule are misleading. In its economic cost analysis for the proposed rule, the agencies have indicated that approximately three (3) percent of new waters will be considered jurisdictional under the Section 404 program. However, the data used to compute costs for Section 404 comes from submitted Section 404 permit applications for 2009- 2010 fiscal year. The economic analysis fails to acknowledge or recognize that, under the proposal, additional waters, currently not jurisdictional (and thus, no permits have been submitted), will become jurisdictional. This reasoning is flawed and does not give a true accounting of potential costs or benefits. (p. 3)

Agency Response: See Summary Comments on in this section regarding the 2009-2010 jurisdictional determination data, as well as the possibility of additional waters being impacted relative to recent practice.

Federal Water Quality Coalition (Doc. #15822)

11.2.80B. Increased Burden.

1. Burden on Landowners.

The general response to concern over expanded regulation from EPA and the Corps of Engineers has been: “don’t worry; just get a permit. This answer ignores the time, money, and effort required to secure a permit and will impose an economic burden that has not been quantified in the regulatory impact analysis accompanying the rule.

2. Burden on State and Local Governments.

The agencies have failed to quantify the burden on state and local governments (and the federal government) from the expansion of jurisdiction. The proposed rule will affect state and county highway departments, flood control agencies, local governments with municipal separate storm sewer systems, and economic development agencies. For example, the Tennessee Department of Economic and Community Development recently was told by the Corps that a field that they had designated as an industrial development site was a water of the U.S., after the Tennessee regulatory personnel had evaluated the property and determined that the erosion features in the field were not streams or tributaries, but instead were “wet weather conveyances,” an approved designation under the state’s water quality standards program.⁵⁶ This regulatory determination applies the proposed rule’s definition of “tributary” and belies agency assertions that farmers’ fields will not be regulated. As a result, state agencies seeking to develop such property will have to incur significant permitting and mitigation costs to develop this property.

⁵⁶ See supra pp. 6-8. A photograph of the field is attached as Appendix A.

3. Burden on Regulators.

The agencies also have failed to quantify the burden on regulators from increased jurisdiction. EPA's ATTAINS database that tracks TMDL development reports a total of 3,533,205 river and stream miles in the United States based on data reported by states using the National Hydrography Dataset (NHD). The NHD is a database that interconnects and uniquely identifies the millions of stream segments or reaches that comprise the Nation's surface water drainage system and is based on the USGS 1988 1:100,000-scale Digital Line Graph (DLG) hydrography dataset integrated with reach-related information from the USEPA Reach File Version 3.0-Alpha release (RF3-Alpha).

According to EPA's report on "The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest" (EPA/600/R-08/134) (Nov. 2008), even the high resolution NHD "may grossly underestimate the number and length of drainage networks," i.e., ephemeral streams. "Heine et al. (2004) reported that USGS 1:24,000-scale maps under-represented drainage networks by 64.6 percent in a study in Kansas."

EPA's ATTAINS database that tracks TMDL development reports a total of 107,700,000 wetlands acres. Again, the agencies have not reasonably estimated the increase in potential wetland acreage under the proposed rule. Their estimate of only a 2.7 percent increase in jurisdictional wetlands is based on applications for jurisdictional determinations, when in fact landowners would not have applied for JDs for most of the ditches, ephemeral features, isolated wetlands in floodplains and riparian areas, and "other water" wetlands that would be considered jurisdictional under the proposed rule.

EPA's currently approved ICR (EPA ICR No. 1560.10, Nov. 2011) for both water quality reporting and TMDL development activities estimate the cost to States for those programs at \$193,568,080 a year. Of that amount, \$21,390,991 is for assessment activities. The remaining costs of \$172,267,089 are for TMDL development and EPA assumes 4,000 TMDLs a year, averaging \$43,000 per TMDL.

The agencies have failed to include the cost to states of increased regulation under the proposed rule. What would be the total increase in stream miles if ephemeral streams that show up in the NHD at a high resolution become waters of the United States? What is the increase in acres of waters and wetlands regulated if all broadly-interpreted adjacent waters and wetlands become jurisdictional? What would be the total cost to States to assess those additional miles and acres? What will it cost to develop new water quality criteria, designated uses, and TMDLs for waters not currently regulated?

While the agencies have failed to include these costs in the regulatory impact analysis of the proposed rule, some states have provided cost estimates. According to the State of Missouri, if it had to regulate all stream miles discernable at the 1:24,000 scale of the National Hydrology Dataset, it would add an additional 158,565 miles of stream (183,591 miles total) to its existing classified waters network and would more than double the

state's monitoring costs from about \$11.2 million to \$24.2 million.⁵⁷ The state also would incur additional costs for use designations and total maximum daily load development.

The agencies must calculate these increased costs for every state and include them in the regulatory impact analysis for the rule. (p. 57-59)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. This is not a regulatory impact analysis. The agencies estimated costs to both public and private entities, including costs of permit application, administration, and compliance. Cost estimates are based on estimates of increased jurisdiction derived from recent data. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Minnesota Chamber of Commerce (Doc. #16473)

11.2.81Economic Implications Need Greater Consideration. The Proposed Rule's jurisdictional expansion, which will apply throughout and make fundamental changes to all CWA programs, will have widespread economic impacts and consequences that the Agencies have not thoroughly considered. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Kentucky Association Manufacturers (Doc. #16525)

11.2.82The limited economic analysis performed by EPA and the Corps on the proposed rule indicated that about three (3) percent more waters would be found jurisdictional under the proposed definitional change. Unfortunately, EPA based this calculation on Section 404 permits submitted for review rather than waters that would be jurisdictional under the proposed rule, where permits are not currently required. With the farreaching impact the proposed rule could have on the Section 402 and Section 404 permitting programs, potential dischargers are entitled to a fully vetted economic analysis from the agencies. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the

⁵⁷ See MO Regulatory Impact Report, supra n. 11 at 25, 35.

assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Water Advocacy Coalition (Doc. #17921)

11.2.83C. The Economic Analysis Is Cursory and Grossly Underestimates the Impacts of the Proposed Rule.

The Economic Analysis for the proposed “waters of the United States” rule fails to provide a reasonable assessment of the proposed rule’s costs and benefits. Professor David L. Sunding, Ph.D., Thomas J. Graff Chair of Natural Resource Economics at the University of California, Berkeley, completed a review of the agencies’ Economic Analysis that provides an analysis of the calculations employed by the agencies and documents the analysis’s numerous flaws.⁵⁸ As Professor Sunding notes, “The errors, omissions, and lack of transparency in EPA’s study are so severe as to render it virtually meaningless.” Id. at 2.

The Economic Analysis fails to provide a reasonable assessment of the proposed rule’s increase in jurisdictional waters. The Economic Analysis suggests that the proposed rule will increase overall jurisdiction under the CWA by only 2.7 percent. But the agencies arrive at this percentage using a flawed methodology. The agencies’ reliance on data from the Corps’ ORM2 database is problematic. As explained by Professor Sunding, the agencies cannot accurately quantify the proposed rule’s increase in jurisdiction by using the ORM2 database because the database only accounts for the section 404 program, and its data do not fit this exercise. Id. at 4-9.

Indeed, the Economic Analysis looks at Corps jurisdictional determinations (“JDs”) that concluded under current regulations there is no jurisdiction but that would change under the proposed rule. But this analysis fails to recognize that landowners and project proponents would not have sought JDs for most of the features that would now newly be considered “waters of the United States” under the proposed rule, such as ditches and ephemeral washes. Id. at 8.

In addition, the Economic Analysis relies on figures extrapolated from statistics from FY 2009-2010, a period of extremely low construction activity. Id. at 10-11. Moreover, the agencies’ calculation of increased jurisdiction fails to account for the universe of waters and features for which landowners have not previously sought CWA permits. Id. at 8. Relying on the 2.7 percent calculation throughout the Economic Analysis, the agencies systematically and drastically underestimates the impact of the proposed rule’s new definition of “waters of the United States.”

⁵⁸ Sunding Review, Exhibit 19.

The agencies' calculations of incremental costs and benefits are also deficient. The cost analysis is focused on costs associated with the section 404 program. Yet the analysis omits the costs of avoidance and delay, which are likely the largest out-of-pocket expenses of the permitting process. Sunding Review at 17. The Economic Analysis largely ignores the cost impact of the changes to other CWA regulatory programs due to lack of data. Id. at 20. Costs to other programs, like the section 303 program (State WQS and implementation plans) and section 402 (NPDES and stormwater), are assumed to be "cost-neutral or minimal" without providing any analysis to support this conclusion. Id. Although the effects of the proposed rule's definitional change are likely to vary significantly from program to program, the agencies omit careful assessment of program-specific effects, and instead offer simplistic, generalized estimations.

Likewise, the Economic Analysis's benefit calculation overestimates benefits and is riddled with errors. Professor Sunding concludes that the benefit transfer analysis used to approximate section 404 benefits is poorly documented and not consistent with best practices in environmental economics. Id. at 27. The agencies use third-party studies conducted 10-30 years ago to estimate an average willingness to pay for wetland mitigation. These studies are largely irrelevant and do not provide accurate estimates of benefits. Id. Moreover, the agencies' benefits calculation is based on an unstated and improbable assumption that all of the incremental wetlands affected by the proposed rule's definitional change would be filled (destroyed) if federal jurisdiction is not expanded to cover these areas. Id. at 28.

In addition to the methodological errors, the Economic Analysis suffers from a lack of transparency. Professor Sunding explains that "[e]xplanations of calculations, basic assumptions, and discrepancies between various EPA analyses are rarely provided." Id. at 32.⁵⁹ For all of these reasons, the Economic Analysis is inaccurate and incomplete. It does not even begin to cover the impacts of the proposed rule.⁶⁰ As recommended by Professor Sunding, the agencies should withdraw the analysis and perform a new, thorough review of the economic impacts of the proposed rule. (p. 87-88)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3,

⁵⁹ This is not surprising, given the GAO's recent conclusion that in its regulatory impacts analyses, EPA frequently fails to communicate information supporting regulatory decisions, including baselines, alternatives considered, and other information a reader might need to understand the analysis. U.S. Government Accountability Office, EPA Should Improve Adherence to Guidance for Selected Elements of Regulatory Impact Analyses, GAO-14-519 at 12 (July 2014) ("GAO-14-519").

⁶⁰ GAO 14-519 also noted that EPA often fails to monetize important costs and benefits, thus limiting the usefulness of its impact analyses. See id. at 16.

11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis, including those of Professor Sunding.

Water Advocacy Coalition (Doc. #17921.15)

11.2.84 EPA is proposing an expansion of the definition of the term “waters of the United States” to include categories of waters that were previously never regulated as waters of the United States, such as all waters in floodplains, riparian areas, and certain ditches. The inclusion of these waters will broaden the scope of the CWA and will increase the costs associated with each program. (p. 52)

Agency Response: The rule is narrower in scope than existing regulations and historical practice.

11.2.85 Unfortunately, the EPA analysis relies on a flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of the definitional changes. This is compounded by the exclusion of several important types of costs and the use of a flawed benefits transfer methodology, which EPA uses to estimate the benefits of expanding jurisdiction. The errors, omissions, and lack of transparency in EPA’s study are so severe as to render it virtually meaningless. The agency should withdraw the economic analysis and prepare an adequate study of this major change in the implementation of the CWA. (p. 52)

Agency Response: See Summary Responses under Topic 11 and subtopics for details on how the agencies addressed concerns with the economic analysis.

11.2.86 A threshold problem with EPA’s analysis is that it deals only with the “other waters” category of CWA jurisdiction. The economic analysis focuses on how jurisdiction might change for “isolated waters” that are not jurisdictional under the current CWA framework as a result of SWANCC, but are likely to become jurisdictional under an expanded definition of “other waters”. This would allow for jurisdiction over isolated areas that, when aggregated, are found to have a significant nexus to traditional navigable waters.

According to EPA’s analysis, “‘other waters’ is a regulatory term for wetlands and non-wetlands waters that do not fall into the category of waters susceptible to interstate commerce (e.g., ‘traditional navigable waters’ or TNWs), interstate waters, the territorial seas, tributaries, or waters adjacent to waters in one of the first four categories on this list.” As discussed in more detail below, to determine how jurisdiction would change for the “other waters” category, the U.S. Army Corps of Engineers (Corps) performed a sample review of 262 project files from the Corps’ ORM2 database “isolated waters” category. All of these 262 records are considered outside the scope of CWA jurisdiction under current regulatory policies, but the agencies predicted that approximately 17% of these records would be subject to CWA jurisdiction under the new rule.⁶¹ The agencies

⁶¹ Given the existing confusion regarding 404 jurisdiction that has been well documented, see GAO-04-

did not do a similar sample review to determine how jurisdiction might change for other jurisdictional categories of waters (i.e., tributaries and adjacent waters, as newly defined). EPA's Economic Analysis simply assumes that the small percentage of FY 2009-2010 ORM2 streams and wetlands records that are not jurisdictional under current regulatory policies (2% of streams and 1.5% of wetlands) would become jurisdictional under the new rule.

But the agencies' draft rule does much more than just expand the scope of the "other waters" category. As previously explained, it also includes several new categories of jurisdiction and new definitions for regulatory terms, which will result in regulation of new features and areas that are not jurisdictional or considered waters of the United States under the current CWA framework. These changes will sweep in many new areas yet EPA's analysis does not quantify or address this change.

This report provides an analysis of the calculations employed by EPA. In many cases, the lack of transparency and supporting documentation in EPA's analysis made the replication of calculations difficult. The following sections address the methodology behind the incremental acreage determination, the program cost calculations, and the benefit calculations. (p. 53-54)

Agency Response: The final rule does not cover waters that were not historically protected. See the Economic Analysis for the final rule as well as the Summary Responses under Topic 11 and subtopics for details on how the agencies addressed concerns with the economic analysis.

11.2.87II. EPA Cannot Accurately Quantify Increases in Jurisdiction by Using the Corps' ORM2 Database

To quantify the increased extent to which EPA and the Corps will assert CWA jurisdiction as a result of the draft waters of the U.S. rule, EPA evaluated data records from FY 2009-2010 in the Corps' ORM2 (Operation and Maintenance Business Information Link, Regulatory Module) database. Although records from the Corps' internal ORM2 database are not available to the public, we obtained a portion of the underlying ORM2 data used for these calculations through a Freedom of Information Act request. EPA's use of the ORM2 numbers to calculate how much the draft rule will increase CWA jurisdiction is problematic because the ORM2 database was not designed for this purpose and its data do not fit this exercise.

EPA cannot accurately quantify increases in jurisdiction by relying solely on the Corps' ORM2 database for several reasons. As is explained more fully below, the categories of ORM2 records do not marry up with the draft rule's categories of jurisdictional waters. In addition, the ORM2 data fail to capture the entire universe of areas that are jurisdictional

297, it is questionable whether the assertion of jurisdiction by the Corps was consistent or accurate. Indeed, many have questioned existing assertions as overbroad.

under the current CWA framework because it only accounts for situations in which regulated entities engage in the section 404 jurisdictional determination or permitting process. Even for those instances where regulated entities engage in that process, the ORM2 database does not capture all aquatic resources on the subject parcel because the Corps focuses only on impacted areas and mitigation sites. Finally, because Corps staff is not required to fill in the “aquatic resource type” field in the ORM2 database, EPA failed to account for a large portion of records in its calculations of the increase in jurisdiction. (p. 54-55)

Agency Response: See Summary Response in this section regarding the scope of jurisdiction.

11.2.88A. THE ORM2 RECORDS ARE NOT COMPATIBLE WITH THE DRAFT RULE’S JURISDICTIONAL CATEGORIES

The categories of records available on the ORM2 database do not match up with the categories of jurisdictional waters provided in the proposed “waters of the US” rule. The ORM2 records are categorized according to “aquatic resource types” based on EPA’s and the Corps’ 2008 Guidance on Clean Water Act Jurisdiction Following the Supreme Court Decision in *Rapanos v. U.S.* and *Carabell v. U.S.* Therefore, the ORM2 database records are categorized based on concepts developed by the agencies after *Rapanos* and *SWANCC*, such as “traditional navigable waters,” “relatively permanent waters,” “wetlands adjacent to relatively permanent waters,” and “isolated waters.”⁶²

In the draft rule, the agencies introduce new categories of jurisdictional waters and new definitions for important terms. The draft rule provides, for the first time, a regulatory definition of “tributaries,” which explicitly includes ditches. It also includes an “adjacent waters” category that includes both wetlands and non-wetlands. As it did previously, the draft rule defines “adjacent” as “bordering, contiguous or neighboring.” But the rule, for the first time, defines “neighboring” to include riparian areas and floodplains, and provides new, broad definitions of “riparian area” and “floodplain.” The rule also, for the first time, provides a regulatory definition for “significant nexus,” and provides that “other waters” may be jurisdictional on a case-specific basis if they, individually or when aggregated with other similarly situated waters, have a significant nexus with other jurisdictional waters.

⁶² When inputting records into the ORM2 database, a Corps field officer can select any one of the following aquatic resource types: (1) traditional navigable waters (TNWs); (2) wetlands adjacent to TNWs; (3) relatively permanent waters (RPWs) that flow directly or indirectly into TNWs; (4) wetlands directly abutting RPWs that flow directly or indirectly into TNWs; (5) wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs; (6) non-RPWs that flow directly or indirectly into TNWs; (7) wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs; (8) tributary consisting of both RPWs and non-RPWs; (9) isolated (interstate or intrastate waters), including isolated wetlands; (10) uplands; (11) wetlands assessed for delineation purposes only (and not for jurisdictional purposes); and (12) impoundments. Alternatively, as discussed below, the Corps field officer may input records without completing the “aquatic resource type” field.

Importantly, the ORM2 database does not track information on these new terms and categories of jurisdiction. For example, EPA’s analysis recognizes that the ORM2 “isolated waters” category does not take into account the rule’s new aggregation principle and explains that EPA could not assess the potential impacts of aggregation of other waters within a watershed without “actual field experience.” Indeed, EPA’s analysis also acknowledges that there will be additional costs to the Corps to update the ORM2 system to “reflect needed data elements” as a result of the rule’s new jurisdictional categories. But EPA does not alter its analysis to account for this major deficiency. As a result, numbers extrapolated from the ORM2 records, which do not marry up with the draft rule’s categories of jurisdiction, are not useful for approximating the percentage of increase in jurisdiction or the increase in jurisdictional acreage. (p. 55-57)

Agency Response: See Summary Response in this section regarding the ORM2 database and Section 4 of the Economic Analysis for further discussion of the methodology used..

11.2.89B. THE ORM2 RECORDS UNDERREPRESENT THE UNIVERSE OF JURISDICTIONAL AREAS

The ORM2 data does not capture the entire universe of jurisdictional areas under the current CWA framework. First, the Corps records account only for situations in which regulated entities seek a section 404 permit, approved jurisdictional determination (AJD), or wetland delineation. The ORM2 database does not include records for preliminary jurisdictional determinations (PJDs), which allow for a party to voluntarily waive or set aside questions regarding CWA jurisdiction over a particular site, usually in the interest of allowing the landowner to move ahead expeditiously to obtain a Corps permit. With a PJD, the landowner agrees to treat all waters and wetlands that would be affected in any way by the permitted activity on the site as if they are jurisdictional waters of the U.S.⁶³ Thus, EPA’s Economic Analysis fails to account for large numbers of acres across the country that may be impacted by the regulations. Indeed, most regulated entities in the 404 program have relied on PJDs after 2008 due to the uncertainty of jurisdiction stemming from inconsistency across agency policies. Waters for which jurisdiction is unclear is precisely the group of waters that the agencies are purporting to address in this draft rule. Accordingly, EPA’s claim that these waters are irrelevant for analyzing the draft rule’s economic impacts is incorrect.

Second, EPA purports to account for its failure to capture the entire universe of jurisdictional areas by explaining,

Landowners and developers may assume that some waters are non-jurisdictional and not request a determination or engage in the permitting process. These waters would not be represented in the ORM2 FY2009-2010 database. However, these

⁶³ See U.S. Army Corps of Engineers, Regulatory Guidance Letter 08-02 (June 26, 2006).

waters are also likely to be the most isolated and the least connected to other waters and therefore the least likely to have their status changed under this proposed rule.

In other words, EPA is saying that the waters for which a reasonable person is likely to have never needed a JD are only those so isolated that they would not be jurisdictional anyway. But the new rule, by capturing ditches, intermittent streams, streams that are connected only underground, adjacent waters, and waters that have been disconnected from downstream waters by barriers, includes many waters that no reasonable person every would have thought of as jurisdictional.

In relying on the Corps' ORM2 database, EPA's Economic Analysis does not recognize the instances in which landowners have not engaged in the section 404 permitting process because they have not sought to fill areas of their land or because their property is not jurisdictional under the current regulatory framework. This situation is not limited to areas with isolated waters. The draft rule brings in many features (e.g., adjacent waters, ditches) that were not previously jurisdictional and would not be included in the Corps' ORM2 records.

Third, even for those instances where landowners engage in the jurisdictional determination or permitting process, the ORM2 database does not capture all aquatic resources on the subject parcel. Rather, the Corps records focus on impacted areas and mitigation sites. For example, if an applicant seeks a permit to impact .25 acres on a 5-acre parcel of land, only the aquatic resources on the .25 acres that would be impacted are captured in the ORM2 database. Aquatic resources on the remainder of the parcel would not be captured.

Fourth, "aquatic resource type" is not a required field for Corps staff to fill out in the ORM2 database. As a result, of the 196,208 ORM2 FY2009-2010 records used by EPA in its calculations, 36,063 (18.4%) did not have an associated aquatic resource type selected. This "water type null" category was not accounted for in EPA's calculation of the 2.7% increase in jurisdictional waters under the new rule or any other calculations in the economic analysis.

Finally, by relying on only ORM2 data, EPA fails to evaluate the extent to which the expansion of jurisdiction could have consequences for activities other than the discharge of dredged or fill material. EPA's analysis simply assumes that the distribution of water body types and the relative distribution of jurisdictional vs. non-jurisdictional waters will be the same, regardless of whether the activity in question is the discharge of dredged or fill material, the discharge of wastewater or stormwater, or an activity subject to CWA section 311 or similar spill control requirement. EPA did not make any attempt to evaluate whether the numbers and types of water affected by these activities were the same as those affected by activities subject to 404.

For all these reasons, EPA’s use of ORM2 data throughout its economic analysis to quantify the increase in jurisdiction is highly suspect and results in woefully inaccurate projections.⁶⁴ (p. 57-59)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Response in this section regarding the ORM2 data and scope of jurisdiction.

11.2.90III. Errors with EPA’s Incremental Acreage Calculations

Calculations of costs and benefits in EPA’s analysis rely on an estimate of the acreage that would become jurisdictional under a definitional change. The Corps estimates this incremental acreage by examining their ORM2 database of CWA permit applications. Corps staff reviewed a sample of 262 old project files relating to section 404 using the new jurisdictional criteria. Of these files, 67% pertained to streams, 27% to wetlands, and 6% to “other waters.” The Corps found that 98% of the streams, 98.5% of the wetlands, and 0% of the other waters were jurisdictional under existing guidance. Under the new criteria, it found that 100% of the streams and wetlands and 17% of the other waters would become jurisdictional.⁶⁵ Corps staff concluded that an expanded definition of “waters of the United States” would result in 2.7% more jurisdictional waters than under the current definition. These calculations are summarized in Table 1.

Table 1: Calculation of Increased Jurisdiction

	No. ORM Records	No. Positive Juris.	Proj. Positive Juris.	% Total ORM2 Records	% Positive Juris.	Proj. Positive Juris.
Streams	95,476	93,538	95,476	67%	98.0%	100.0%
Wetlands	38,280	37,709	38,280	27%	98.5%	100.0%
Other Waters	8,209	0	1,396	6%	0.0%	17.0%
Total	141,965	131,247	135,152	100%	92.5%	95.2%

Table 1 Calculation of Increased Jurisdiction

EPA’s analysis arrives at the conclusion that the new rule will result in a total of 1,332 acres of added impacts from additional permits under section 404 alone. This incremental acreage represents a 2.7% increase in the number of permits multiplied by the average impact per permit (see Table 3). Although EPA argues that it has used upper bound estimates of costs for many of the cost categories, its analysis is flawed in at least four major ways. This leads to a significant underestimation of total added impacts.

⁶⁴ As explained more fully below, EPA’s sensitivity analysis does not adequately make up for this deficiency because the 2.7% percentage increase figure used throughout the economic analysis is based on ORM2 data without sensitivity analysis calculations.

⁶⁵ EPA reviewed a subset of 50 project files for “other waters” and determined 15% would be jurisdictional.

The analysis uses FY 2009/2010 as the baseline year to estimate impacts. FY 2009/2010 was a period of significant contraction in the housing market due to the financial crisis. As Figure 1 indicates, construction spending during these two fiscal years was 24% below that of the previous two-year period. In statistical terms, this is an issue of sample selection, where due to exogenous events the sample selected for the analysis is not representative of the overall population. The report bases its finding on a period of extremely low construction activity, which will result in artificially low numbers of applications and affected acreage. Even if the percent increase in added permits is correct, using the number of permits issued in 2010 as a baseline is very likely a significant underestimation of the affected acreage in years not subject to a crisis in the building sector.

Figure 1: United States Construction Spending, 2007-2010

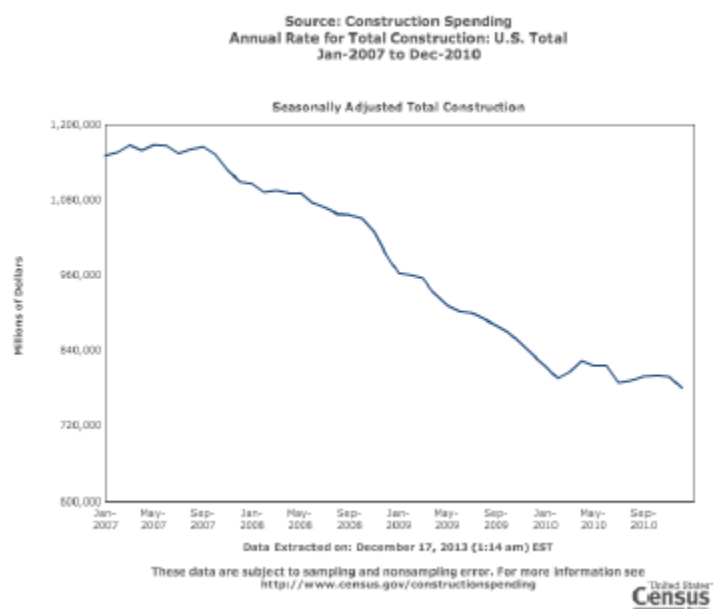
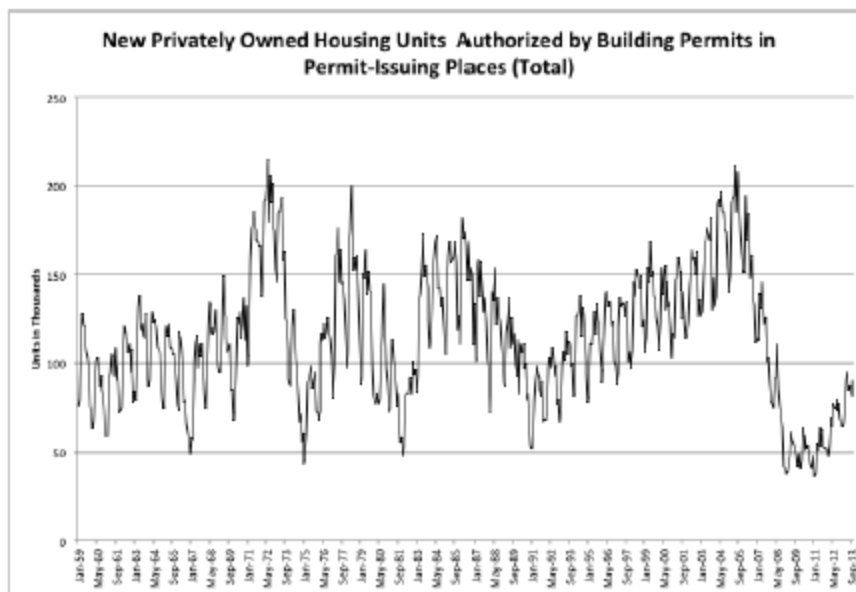


Figure 1: United States Construction Spending, 2007-2010

If one examines building permit data for all types of construction since 1959, it is apparent that choosing FY 2009/2010 as representative years is problematic, as building permit filings were at an all-time low during this period. Figure 2 displays Census data on building permits at the national level. Again, this figure shows that the baseline time period chosen by EPA is not representative and biases the added acres calculation downwards, unless the nation's building sector never recovers.

Figure 2: New Privately Owned Housing Units Authorized by Building Permits

**Figure 2: New Privately Owned Housing Units Authorized by Building Permits**

EPA’s analysis uses an expert review to calculate a percent increase in jurisdiction. In order to arrive at the 2.7% estimate, EPA reviewed historical filing and made judgment calls as to which filings would be subject to the new rule. According to its analysis the projected percent of positive jurisdiction would rise to 100% for streams and wetlands filings (up from 98% and 98.5%, respectively) and 17% for “other waters” (up from 0%). This analysis assumes that the new rule will not affect the number of total filings. It is clear that projects that were previously not thought to be subject to the new rules did not file permitting requests. Under the new rules, however, more projects likely will be required to seek permits. What this means is that the share of projects entering the permitting process is likely to increase, which will increase the projected number of positive jurisdictional determinations and the incremental acreage estimates.

Although the report’s conclusions remain unchanged, EPA provides a brief sensitivity analysis to address the influx of new applicants that had previously not entered the permitting process. It acknowledges that permit applications associated with “other” waters could double under the proposed rule and provides several alternative estimates of the incremental effects associated with this increase. These scenarios are included in Table 2, which is reproduced from the EPA analysis.

Table 2: Alternative Incremental Jurisdiction Results from EPA Analysis ⁶

Scenario ¹	Description	Option 1: Proportional Doubling ²		Option 2: Non-Juris. Doubling ³	
		% Other Waters Juris.	% Incremental Increase	% Other Waters Juris.	% Incremental Increase
A	5% of non-jurisdictional other waters are jurisdictional under the proposed rule	21.0%	2.9%		
B	10% of non-jurisdictional other waters are jurisdictional under the proposed rule	26.0%	3.2%		
C	There are double the number of other waters	17.0%	3.5%	8.5%	2.7%
D	There are double the number of other waters and 5% of non-jurisdictional other waters are jurisdictional under the proposed rule	21.0%	4.0%	13.0%	3.2%
E	There are double the number of other waters and 10% of non-jurisdictional other waters are jurisdictional under the proposed rule	26.0%	4.5%	18.0%	3.6%
1	Scenarios A and B do not include a doubling of records. Their impacts are listed under the proportional doubling columns for simplicity				
2	Proportional doubling refers to the doubling of records for both jurisdictional and non-jurisdictional other waters "in the same proportions as the original set of records"				
3	Non-jurisdictional doubling refers to the doubling that "includes only [non-jurisdictional] other waters, and that adjacent other waters are only represented in the original set of records".				

Table 2: Alternative Incremental Jurisdiction Results from EPA Analysis

EPA suggests that the doubling of records for only non-jurisdictional waters and an additional 5% increase in jurisdictional waters (scenario D, option 2) is the most likely alternative. Thus, EPA's upper bound estimate of the incremental increase in jurisdiction associated with a definitional change is 3.2%. However, the assertion is completely unjustified and is not accompanied by an explanation for why the number of section 404 permits may double with only a 5% increase in residual positive jurisdictional determinations. Additionally, this assessment is completed as an afterthought to the economic analysis and has no bearing on the calculations of costs and benefits associated with a definitional change.

The analysis considers only permitting data from section 404 and applies the estimated shares to all other relevant sections of the CWA. There is no reason to believe that this is a valid approach given the significant differences in the location of these types of economic activities and the nature of the activities that give rise to permitting requirements across the sections. EPA recognizes this limitation, writing "while there is only one CWA definition of 'waters of the United States,' there may be other statutory factors that define the reach of a particular CWA program or provision."⁶⁶ Unfortunately, this warning is ignored in the current analysis, and the incremental acreage estimation for all programs relies wholly on section 404 estimates.

EPA derived the number of acres per permit using the FY 2009/2010 data, taking the total number of acres permitted during that period and dividing this number by the

⁶⁶ EPA 2011. Draft Guidance on Identifying Waters Protected by the Clean Water Act. p 3.

number of permits issued. The analysis as presented does not allow one to study the underlying heterogeneity at the state level. There is a danger of significantly underestimating the impacts by using a 2.7% increase in combination with the average project size. If the new rules disproportionately affect larger projects, the proposed approach using averages underestimates the affected acres. There is no way of knowing whether this is the case without being able to review the expert judgment analysis conducted by EPA and the Corps.

Before turning to the calculation of incremental costs, it is worth noting that there are scientifically valid approaches to determining the number of acres that would become jurisdictional under the proposed rule. For the reasons describe above, the ORM2 database used by EPA is not a valid basis for inferring incremental impacts. The most important reason is that it is not a random or representative sampling of all affected projects and areas, rather it suffers from potentially severe selection bias. (p. 59-64)

Agency Response: See Summary Response in this section regarding incremental increase in assertion of jurisdiction using ORM2 data.

11.2.91VI. Conclusion

The estimates associated with section 404 compensatory wetland mitigation, which contain some of the most glaring errors, represent approximately 40% of the total costs and 85% of the total benefits. This suggests the entire analysis is fraught with uncertainty as to render it insufficient for evaluating programmatic impacts of this scale. Estimates of economic impacts to other programs rely on an incremental jurisdiction determination that is deeply flawed. Additionally, the systematic exclusion of various costs and benefits ignores important impacts to permit applicants and permitting agencies.

In addition to the methodological errors discussed above, EPA's analysis suffers from a lack of transparency. Explanations of calculations, basic assumptions, and discrepancies between various EPA analyses are rarely provided. This is particularly troubling given that the entire report is based on records from the Corps' internal ORM2 database, which is unavailable to outside entities. The author of this report spent considerable time replicating the calculations used in the analysis, but was unable to vet the validity of the underlying data. Any errors or inconsistencies in documentation, sample selection, or data extraction are necessarily overlooked. These shortcomings indicate that a more thorough analysis is required to properly assess the economic impacts of a definitional change. (p. 81-82)

Agency Response: See Summary Responses for Topics 11, 11.3.1, and 11.3.2 regarding 404 costs and benefits. See also the Economic Analysis for the final rule.

Western States Land Commissioners Association (Doc. #19453)

11.2.92(...) Whereas, the EPA fails to fully disclose and evaluate the negative economic impacts that will be caused by the rule, including the enormous impacts to land values, permitting and litigation costs, and costs of project delays, all of which will severely harm the

economies of the western states and impede the development, conservation, and productive use of public and private lands and scarce water resources; and (...)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

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

11.2.93(...) In conclusion, this Proposed Rule will result in adverse economic impacts on the regulated community and the public. The Agencies failed to take into consideration the additional permitting costs, the increased delays associated with expanded federal jurisdiction, and the costs of new land use restrictions. In other words, the economic impact analysis undertaken by the Agencies is woefully inadequate given the broad scope of changes included in this Proposed Rule. This Proposed Rule will have a significant adverse impact on the regulated community and the public nation-wide due to its broad expansion of the scope of the Agencies' CWA jurisdiction. Minimal or no environmental gain would be realized in the application of this Proposed Rule, while a significant spike in resources will be necessary for its implementation. Minnkota recommends the withdrawal of this Proposed Rule. (p. 4)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs, as well as anticipated benefits. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Houma-Terrebonne Chamber of Commerce (Doc. #19624)

11.2.94Our concern is that more waters would become WOTUS under the proposed rule, and as a result, countless new applicants will need to obtain an individual permit from the Corps of Engineers (Corp) and/or the Environmental Protection Agency (EPA), triggering even more companion federal permitting processes which will be costly and time consuming given that federal agencies are not bound by a specific time limit. Over \$1.7 billion is currently spent each year by the private and public sectors on administrative costs to obtain wetlands permits, without taking into account the cost of required mitigation, and it is clear that this proposed rule will dramatically increase both the dollar amount and the time required to obtain these permits. (p. 1)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting

impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Southern Nevada Home Builders Association (Doc. #3251)

11.2.95 These new rules will also impact various projects and efforts across the country to develop alternative energy and boost domestic energy production. In addition, these new rules will undoubtedly have significant negative effects on economic development and the economic recovery, which is of particular concern to the Southern Nevada Home Builders Association and its members. As evidenced by the last recession (which was the worst on record since the Great Depression), homebuilding and real estate development is a very important sector of the national and even the global economy. This is especially the case here in Nevada, where construction is one of its primary industries and provides many of the jobs to its residents. Nevada was impacted as much or worse than any other region in the country by the 2007-2009 downturn in the housing market. Nevada, like many other states, is still in the very early and fragile stages of economic recovery, and there is no way to accurately predict what the consequences may be of the CWA rule changes that the EPA is now proposing. What is certain however, is that if jurisdiction under the CWA is expanded (as we expect will inevitably be the case if the proposed rule changes are adopted), the economy and real estate market of Nevada and many other similarly situated states will be adversely affected. (p. 3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

American Concrete Pressure Pipe Association et al. (Doc. #3306)

11.2.96 In the proposal, the agency ignores U.S. Supreme Court precedent and congressional intent by significantly broadening the definition of what “waters” fall under the CWA's jurisdiction. The NPRM is so expansive that it could potentially place every ditch, retaining pond, and seasonal stream within the ambit of the EPA's regulatory authority. Such an unprecedented extension of the agency's jurisdiction will have a severe impact on construction-related industries by increasing costs, causing delays, and possibly deterring many projects all together. The CWA's permitting process can take years to navigate and hundreds of thousands of dollars. New permitting requirements and regulatory compliance costs will be added to already stringent state and local water laws. Moreover, the expansive reach of the proposed rule will have the effect of making many areas of the country “off limits” to construction and development because of the expense

associated with obtaining new permits or installing the required mitigation measures on newly regulated waters of United States." (p. 1)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Kolter Land Partners and Manatee-Sarasota Building Industry Association (Doc. #7938.1)

11.2.97**Fails to Recognize the True Economic Impacts.** Among numerous other procedural flaws, the proposal fails to sufficiently recognize and quantify the costs associated with the expanded definition of "waters of the United States." Indeed, many of these costs, including those associated with increased permitting, mitigation, and regulatory uncertainty, will be borne by home builders and other small businesses. Using inadequate data and improper baselines to assess the costs of the rule, however, the Agencies have wrongfully certified the rule will not impose a significant economic burden on small businesses. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.1, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Southern States Energy Board (Doc. #13011)

11.2.98(...)WHEREAS, the proposing agencies' economic analysis for this rule did not consider impacts of the full range of CWA programs affected or of economic impacts to small businesses and the analysis relies on nearly 20-year old cost data that has not been adjusted for inflation and, in concluding that the proposed rule would increase the waters subject to permitting requirements by only 2.7 percent, the proposing agencies rely on a data base that is incomplete and not representative of those waters that are subject to jurisdiction under current regulation; and (...) (p. 2)

Agency Response: The agencies did take into consideration other CWA programs, and adjusted cost data for inflation. See Summary Responses under Topic 11, 11.2, 11.3.1, and 11.4.

11.2.99(...) An economic analysis is completed that fully identifies impacts of the proposal and any revised proposal on economic development, including the impact on efforts to streamline infrastructure permitting and siting under current executive orders, guidance,

and regulations, and it should include a thorough analysis of economic impacts to the economy as a whole; and (...) (p. 3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. See also Summary Responses under Topic 13 regarding executive orders.

National Ready Mix Concrete Association (Doc. #13956)

11.2.100 **New Economic Analysis:**

NRMCA has concerns that this rule will greatly increase the cost of doing business for ready mixed concrete producers, as well as raise the cost of all construction projects across the country to unacceptable and unnecessary levels. As mentioned above, ready mixed concrete is a mixture of cement, aggregates and water.

Both aggregates and cement, essential ingredients, make up a large part of the volume of concrete. NRMCA suggests EPA take great consideration of the economic analysis of both materials prepared by the National Stone, Sand and Gravel Association (NSSGA) and the Portland Cement Association (PCA), respectively.

Because many aggregate deposits were created by water, the deposits are often located near water. Any change in what is considered jurisdictional will have a significant impact on the ability to obtain the necessary high quality aggregates used for producing ready mixed concrete. Without a readily available supply of aggregates, our members' ability to produce concrete will be impacted leading to delays and other issues with the construction of highways, public works projects like locks and dams, and residential and commercial building projects. We understand that the aggregates industry is extremely concerned about this rule. One aggregate producer estimates that the increase in wetland mitigation costs alone for their operations will increase nearly 14 times, from \$200,000, to nearly \$2.75 million.⁶⁷ Furthermore, the Portland Cement Association estimates that this rule would add nearly \$73 million in compliance costs over a five year period. Depending on the variables considered, these costs could be as low as \$55 million or as high as \$103 million.⁶⁸ These raw material costs will have a significant impact on ready mixed concrete producers and their customers.

⁶⁷ Comments of the National Sand Stone and Gravel Association to Proposed Rule: Definition of "Waters of the United States" Under the Clean Water Act; Docket No. EPA-HQ-OW-2011-0880

⁶⁸ Comments of the Portland Cement Association to Proposed Rule: Definition of "Waters of the United States" Under the Clean Water Act; Docket No. EPA-HQ-OW-2011-0880

NRMCA members are extremely familiar with the costs associated with compliance with new CWA rules, and the agencies are as well. When EPA promulgated Phase II stormwater requirements under §402 in 1999 – EPA estimated that the cost per construction site for the program would be between \$2,143 and \$9,646 for sites between one and five acres.⁶⁹ Clearly if more features like ditches, ephemeral streams, and all adjacent waters are jurisdictional, costs like these will need to be incurred on more construction sites in more places.

NRMCA estimates significant compliance costs being associated with the proposed rule in its current form. When taking into consideration materials costs increases, new permit costs, physical plant infrastructure changes, and then the necessary continued associated maintenance costs, the ready mixed concrete industry places compliance well into the hundreds of millions of dollars annually. NRMCA believes this would be a devastating cost to the industry and with no proven improvement to the environment or waters of the United States. The Agencies estimate that compliance costs for the rule are between \$163 million and \$279 million. NRMCA requests that the Agencies redo their cost estimates now that they have received additional economic analyses during the comment period. (p. 11-13)

Agency Response: The rule is narrower in scope than existing regulations and historical practice, including practice when the Phase II stormwater requirements were promulgated. The accompanying economic analysis considers the changes in jurisdictional determinations that may occur relative to recent practice and the resulting impacts to CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.101 NRMCA believes it is important for the agencies to do a better, more thorough analysis of the economic impacts of changes to jurisdiction under the CWA. NRMCA is extremely disappointed that the agencies failed to do the proper outreach to small entities and that their economic analysis did not fully take into account compliance costs for §402, §311 oil spill prevention, as well as federal and state water quality standard under § 401, §303, §304, and §305. Without obtaining information on how the proposal will impact small businesses, NRMCA believes the current proposal lacks complete, accurate, timely and relevant data and information to craft and eventually finalize the proposal. EPA needs to appropriately and further consider the rule's affects on all the small businesses it intends to regulate. (p. 14)

Agency Response: The scope of the term “waters of the United States” is a question that has continued to generate substantial interest, particularly within the small business community, because permits must be obtained for many discharges

⁶⁹ United States Environmental Protection Agency, Economic Analysis of the Final Phase II Stormwater Rules ES-4 (1999)

of pollutants into those waters. In light of this interest, the EPA and the Corps determined to seek wide input from representatives of small entities while formulating the proposed and final definition of this term that reflects the intent of Congress consistent with the mandate of the Supreme Court’s decisions. Such outreach, although voluntary, is also consistent with the President’s January 18, 2011 Memorandum on Regulatory Flexibility, Small Business, and Job Creation, which emphasizes the important role small businesses play in the American economy. This process has enabled the agencies to hear directly from these representatives, throughout the rule development, about how they should approach this complex question of statutory interpretation, together with related issues that such representatives of small entities may identify for possible consideration in separate proceedings. The agencies have prepared a report summarizing their small entity outreach, the results of this outreach, and how these results have informed the development of this rule. This report, *Final Summary of the Discretionary Small Entity Outreach for the Revised Definition of Waters of the United States* (Docket Id. No. EPA-HQ-OW-2011-0880-1927), is available in the docket. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Response under Topic 11.1 RFA/SBREFA.

El Dorado Holdings, Inc. (Doc. #14285)

11.2.102 I. Economic Impact Analysis

1. The agencies’ economic impact analysis significantly understates costs, at least in Arizona: The agencies’ March 2014 Economic Analysis of Proposed Revised Definition of Waters of the United States (the “Analysis”) estimates (p. 12) that implementation of the proposed rule would result in an increase in jurisdiction of roughly 2.7%, based on a review of Corps records for fiscal years 2009 and 2010. The agencies estimate that this translates, on a nationwide basis, to an estimated 75 additional individual permits per year (p. 14), with associated additional “stream” mitigation costs of \$8.7 million to \$13 million per year (p. 18).

These estimates likely significantly understate the costs associated with the proposal, at least in Arizona, for the following reasons:

a. *The selected period for analysis results in understating the number of additional permits that would be required under the proposal:* The selected time period (fiscal years 2009-2010) corresponded to a period of very low activity due to the so called “Great Recession,” particularly in the housing industry, which is a very large “customer” of Section 404 permits. As noted in a report prepared by The Brattle Group,⁷⁰ the amount of

⁷⁰ Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States

construction spending and building permit applications in that two year period were at historically low levels, meaning that the period in questions is not representative of a typical 2 year period for the industry. Although we have not seen similar data for the public sector, it is reasonable to assume that public spending on infrastructure type projects likely to require a Section 404 permit also was at a low level during those challenging economic times. Therefore, the time period used by the agencies to estimate additional permits that would be required by the proposed rule likely led to a significant under-estimation of that number, even if the agencies' estimate of a 2.7% increase in permits were accurate (which, at least in Arizona, it likely is not, as discussed in the next section).

Recommendation: The agencies should look at a more representative period when trying to estimate the number of additional permits that might be required if the proposed rule is adopted. (p. 50-51)

Agency Response: The agency has updated the “representative period” in the economic analysis. See Summary Response to Topic 11.2.

- 11.2.103 b. *The 2.7% estimated increase in permits required is likely woefully low:* At least in Arizona, the estimate of a 2.7% increase in permits is likely inaccurate as well. An E&E Water Policy Report article published on October 15 of this year⁷¹ noted that 13 of 15 AJDs approved in 2014 and available on the Corps' web site found a lack of significant nexus, and thus a lack of jurisdiction. All 13 addressed ephemeral drainages. The two AJDs approved in 2014 that found a nexus both addressed features where water was present at least seasonally.

In Arizona, most applicants have used PJDs since they became widely available in 2008, because securing a PJD is less expensive, and less time-consuming, than preparing an AJD with a significant nexus analysis. As noted above, a PJD presumes that all waters on a site are jurisdictional, and essentially ignores the requirement that a significant nexus be demonstrated. Data on PJDs is not publicly available, so it is not clear by what percentage the total number of permits required by the Arizona office would go up if the cases where no jurisdiction was found were to require a permit under the proposed rule. However, that number (13) is 17% of the increased number of permits that the agencies have estimated would be required nationwide. Moreover, the fact that all (13 of 13) AJDs involving ephemeral washes in 2014 concluded that there was no significant nexus strongly suggests that many PJDs for ephemeral washes may be resulting in an applicant conceding jurisdiction where none would exist were a significant nexus analysis conducted. This would mask the extent to which the proposed rule, if adopted, would actually represent an expansion in jurisdiction over the current guidance. The joint commenters performed their own analysis of AJDs in Arizona posted on the Corps Los

(May 15, 2014) (prepared for the Waters Advisory Coalition).

⁷¹ <http://www.eenews.net/stories/1060007241>

Angeles District's web site. On that site, 32 AJDs are listed as having been completed in 2013 or the first 10 months of 2014. After excluding those AJDs where no link to supporting information was provided, or where the supporting information was so limited that an accurate assessment was not possible based on what was publicly available online, 22 AJDs were left for analysis. Six of the 22 AJDs involved relatively permanent waters, all of which were found to be jurisdictional. The remaining sixteen AJDs addressed ephemeral washes, only one of which resulted in a finding of jurisdiction (encompassing washes immediately adjacent to a flowing portion of the Gila River). Of the fifteen AJDs involving ephemeral washes that concluded no jurisdictional waters were present, three did so on the basis of a lack of an OHWM, and the remaining twelve did so based on the lack of a significant nexus between the washes AJDs).

For this nearly two year period, therefore, 68% (15 of 22) of Arizona AJDs analyzed by the joint commenters found no jurisdictional waters to be present. When only AJDs involving ephemeral washes are considered, 94% of Arizona AJDs in this period (15 out of 16) resulted in a finding of no jurisdiction. For the 13 AJDs where a significant nexus analysis was done on ephemeral washes where OHWM was present, 92% (12 of 13) concluded that a significant nexus with a TNW did not exist. Absent some clarification to the proposed definition of "tributary," some or all of these currently non-jurisdictional washes seemingly would become regulated if the proposed rule is adopted.

For these reasons, the estimated 2.7% increase in the number of permits required is likely woefully low, at least in Arizona.

Recommendation: (1) The agencies should consider regional data (such as that discussed above) when trying to estimate the number of additional permits that would be required if the proposed rule were adopted, and the resulting economic impact. (2) The agencies also should acknowledge that many applicants have been conceding jurisdiction under PJDs, even where it may not exist, simply to expedite the permitting process. Failure to account for this fact leads to underestimating the change that would result from adoption of the proposed rule. (p. 51-52)

Agency Response: See Summary Response to Topic 11.2 on jurisdictional determinations, including PJDs.

- 11.2.104 c. *Estimated additional mitigation cost estimates are too low:* The Analysis (p. 18) estimates that increased mitigation costs will be \$8.7 million to \$13 million per year nationwide, based on an estimated additional 49,075 feet of stream that would be regulated under the proposal. For the reasons noted above, the estimated additional number of permits, and therefore of mitigation associated with those additional permits, has likely been underestimated. At least in Arizona, so has the cost per acre of mitigation (typically, the Corps in Arizona has based mitigation on acreage of waters impacted, not linear stream feet) is high and increasing, even where (as is typical) the impacted water is an ephemeral wash.

Arizona has no approved mitigation banks. There have been some approved in lieu fee (“ILF”) programs available in the past, with costs ranging up to around \$25,000 per acre of credit. However, ILF programs currently are limited in Arizona because few have been approved under the agencies’ 2008 mitigation rule, which established more rigorous (and less flexible) requirements for approval of ILF programs. Moreover, for those under consideration, costs are likely to increase significantly if they are approved. For example, in a recent meeting, representatives of the Arizona Game and Fish Department told representatives of one of the joint commenters that based on the Department’s preliminary analysis, the cost of credit at a site it was working with the Corps to get approved under the ILF program was likely to be in range of \$85,000 per acre.

Recommendation: The agencies’ estimated costs should be revised to reflect more realistic costs per acre that are likely to be required for mitigation under the Section 404 program. (p. 52-53)

Agency Response: The agencies have updated mitigation costs as more reliable information has become available. See the Economic Analysis associated with the Final Rule.

11.2.105 d. Project design changes caused by having to obtain a Section 404 permit are not considered: If a Section 404 permit is required, it can be issued only if the applicant implements the least environmentally damaging practicable alternative, which includes avoiding and minimizing impacts to jurisdictional waters. See 40 C.F.R. § 230.10(a). Thus, if a permit is required, an applicant may be required to construct a different (typically smaller) project than would have been possible if no jurisdictional waters had been determined to be present at the site. A common example in Arizona is a mixed use development project in a location with many small ephemeral washes present; if those washes are identified as jurisdictional, the project’s density (and profitability) can be reduced significantly. Therefore, in cases where no permit would be required today but a permit would be required if the proposal is adopted, there will often be significant lost opportunity costs related to the requirement to obtain the permit. The agencies do not appear to have considered this cost, which can often be significant.

e. Some costs associated with obtaining a permit also have not been considered: In many cases, a Section 404 permit is the only federal permit associated with a particular activity. This is especially true of construction in states with delegated NPDES programs, like Arizona. In those cases, the determination that a Section 404 permit is required triggers other federal requirements, including the National Environmental Policy Act (“NEPA”), the National Historic Preservation Act, and the Endangered Species Act,⁷² none of which

⁷² Even if there is no federal permit required, some requirements of the ESA would apply, such as the prohibition on take of listed animal species. But if a federal permit is required, the scope of ESA analysis expands (for example, critical habitat restrictions come into play, as do impacts to listed plant species), and the formal Section 7 consultation process is triggered.

would be implicated in the absence of the Section 404 permit. When these additional requirements are triggered, they can significantly increase the costs and time needed to accomplish a project (especially if an EIS is determined to be required under NEPA). An applicant typically will be required to retain consultants and prepare additional reports, followed by sometimes extensive give and take with a regulatory agency based on the results of those studies (e.g., with the State Historic Preservation Officer after cultural resource studies are prepared under the National Historic Preservation Act). These delays in permitting, in turn, lead to delays in an applicant's ability to generate income at a site. The agencies have not acknowledged any of these costs in their proposed economic impact analysis.

Recommendation: The final analysis of costs should recognize that any expansion in Section 404 permit requirements has the potential to result in additional federal permitting and consultation costs, as well as delayed business opportunities, and should attempt to quantify those costs. (p. 53-54)

Agency Response: The agencies have quantified costs associated with a change relative to recent practice and identified where costs could not be monetized, though the rule is narrower than existing regulations and historical practice. See Summary Responses under Topic 11.3.1 for 404 costs and 11.4 for costs in other CWA programs.

Vulcan Materials Company (Doc. #14642)

11.2.106 Should rulemaking proceed despite widespread and significant objections from broad sectors of the U.S. economy, then prior to proceeding with the rulemaking, a comprehensive economic analysis of impacts should be prepared and the analysis used as a basis for re-review of the rule under the government oversight processes. (p. 3)

Agency Response: Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Home Builders Association of Mississippi (Doc. #19504)

11.2.107 **Fails to Recognize the True Economic Impacts.** Among numerous other procedural flaws, the proposal fails to sufficiently recognize and quantify the costs associated with the expanded definition of "waters of the United States." Indeed, many of these costs, including those associated with increased permitting, mitigation, and regulatory uncertainty, will be borne by home builders and other small businesses. Using inadequate data and improper baselines to assess the costs of the rule, however, the Agencies have wrongfully certified the rule will not impose a significant economic burden on small businesses. (p. 3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. In addition, the rule is definitional and does not impose any direct costs. See Summary Response to Topic 11.1 RFA/SBREFA.

National Association of Home Builders (Doc. #19540)

11.2.108 **The Proposed Rule Fails to Recognize the True Economic Impacts.** Among numerous other procedural flaws, the proposal fails to sufficiently recognize and quantify the costs associated with the expanded definition of "waters of the United States." Indeed, many of these costs, including those associated with increased permitting, mitigation, and regulatory uncertainty, will be borne by home builders and other small businesses. Using inadequate data and improper baselines to assess the costs of the rule, however, the Agencies have wrongfully certified the rule will not impose a significant economic burden on small businesses. (p. 3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.109 **VIII. The Economic Analysis Supporting the Proposed Rule is Inadequate.**

Agencies are subject to a number of statutes and executive orders (E.O.s) that direct them to conduct specific types of economic analyses to accompany proposed rules. As EPA recognizes in its Economic Analysis of Proposed Revised Definition of Waters of the United States, "estimates of the economic costs and benefits that may indirectly be imposed on governments and regulated entities can help inform the public and policymakers of some of the implications associated with this proposal."⁷³ Despite this recognition, the Agencies' have developed an economic analysis of the proposed rule that relies on a flawed methodology for estimating the extent of newly-jurisdictional waters, uses dated and incomplete cost figures, and underestimates, the impact of the proposed definitional change. Contrary to the analysis, the proposal will have a significant impact on the home building industry and will negatively impact housing affordability.

a. EPA's Economic Analysis of the Proposed Rule is Fundamentally Flawed.

There are numerous problems with the methodology followed to complete the economic analysis that render it unreliable. For example, it only addresses and studies the "other waters" category of CWA jurisdiction and assumes the jurisdictional status of tributaries

⁷³ EPA Economic Analysis at 2.

and wetlands will not change. To make this determination, the Corps performed a sample review of 262 project files from the Corps' ORM2 database "isolated waters" category. All 262 records are considered outside the scope of CWA jurisdiction under current regulatory guidance, but the Agencies predicted that only 17% of these "isolated waters" would be subject to CWA jurisdiction under the proposed rule. Further, given that very little detail is provided to describe exactly how this comparison was completed or how and if the ORM2 data is an appropriate source for making such an assessment, the public is left with virtually no recourse but to believe the agencies. This complies with neither the Administrative Procedure Act nor the "transparency" and "reproducibility" standards of the Federal Information Quality Act. Equally troubling, the Agencies did not conduct a similar sample review to determine how jurisdiction might change for other jurisdictional categories of waters (i.e., "tributaries" or "adjacent waters," as newly and broadly defined). This is unfortunate, as it is clear that the status of many of these areas will change, as well, including those wetlands located within floodplains that are not proximate to a traditional navigable water and would not have likely been considered jurisdictional before, but would be under the proposal.

Similarly, economist Dr. David Sunding, the Thomas J. Graff Professor at the University of California-Berkeley's College of Natural Resources, acknowledges the unreliable data sample the EPA uses in the Analysis:

"The analysis uses FY 2009/2010 as the baseline year to estimate impacts. FY 2009/2010 was a period of significant contraction in the housing market due to the financial crisis. Construction spending during these two fiscal years was 24% below that of the previous two-year period. In statistical terms, this is an issue of sample selection, where due to exogenous events the sample selected for the analysis is not representative of the overall population. The report bases its finding on a period of extremely low construction activity, which will result in artificially-low number of applications and affected acreage. Even if the percent increase in added permits is correct, using the number of permits issued in 2010 as a baseline is very likely a significant underestimation of the affected acreage in years not subject to a crisis in the building sector."⁷⁴

Much of the other data used, however, is equally problematic, as many are dated and/or incomplete. Indeed, rather than collecting data specific to support this rulemaking, the Agencies are attempting to meld the data they have into the forms they need to fill. For example, the permit cost estimates are over 20 years old and have not even been adjusted for inflation. Many of the mitigation costs are so low as to be laughable. Further, those estimates were provided at a very different time in the housing industry, so are hardly reflective of today's realities. Likewise, although EPA acknowledges that the sponsors of many private sector as well as public sector projects that are subject to CWA Section 404

⁷⁴ Sunding Review of EPA's Economic Analysis at 10.

permitting can also incur non-trivial permitting time costs and/or impact avoidance and mitigation costs, the compliance costs for those categories are not estimated because "there is not a defensible, ready basis for estimating these costs."⁷⁵ Just because the data are not readily available does not give the agencies an out. Such a response is absurd and results in the calculation of incremental costs that is wholly deficient.

Finally, EPA uses a flawed methodology for its calculation of benefits. EPA's Analysis adopts an all-or-nothing approach to assessing benefits by assuming that all wetlands affected by the proposed rule's definitional change would be filled. On the flipside, EPA makes the assumption that the proposed rule would preserve or mitigate land if federal jurisdiction is extended by the rule. These unrealistic assumptions contribute to an inflated benefits calculation.

It is clear that the Economic Analysis has major flaws in approach, methodology and data. Indeed, the fact that EPA readily states that "the economic analysis is necessarily based on readily available information and the resulting cost and benefit estimates are incomplete,"⁷⁶ should give anyone pause. And it has. According to Dr. Sunding "the errors and omissions in EPA's study are so severe as to render it virtually meaningless." EPA must withdraw the Economic Analysis and prepare an adequate study of this major change to the CWA. Yet again, the Agencies are painting an inaccurate picture of how this regulation will impact small businesses. (p. 135-137)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. See also Topic 13 on Administrative Procedures.

11.2.110 b. The Agencies Use an Incorrect Baseline to Estimate the Economic Impacts of the Proposed Rule.

In the preamble of the proposed rule, the Agencies claim that because "this proposed rule is narrower than that under the existing regulations . . . fewer waters will be subject to the CWA under the proposed rule than are subject to regulation under the existing regulations," and "[a]s a consequence, this action . . . will not have a significant adverse economic impact on a substantial number of small entities . . ."⁷⁷ The "existing regulations" that the Agencies reference here is the 1986 rule defining "waters of the United States."⁷⁸ Yet, in EPA's Economic Analysis, the Agencies assess the regulation with respect to current practice under the 2008 Rapanos Guidance and determine the rule

⁷⁵ EPA Economic Analysis at 14.

⁷⁶ Id. at 2.

⁷⁷ 79 Fed. Reg. at 22,220

⁷⁸ 51 Fed. Reg. at 41,206.

will increase CWA jurisdiction by approximately 3%. The Agencies' claims in the preamble and the Economic Analysis contradict one another.

The proper baseline from which to assess the proposed rule's economic impact, as guidance from OMB's Office of Information and Regulatory Affairs (OIRA) substantiates, is that of current practice. OIRA's Circular A-4 provides guidance to federal agencies on the development of regulatory analysis and states that "[t]he baseline should be the best assessment of the way the world would look absent the proposed action."⁷⁹ The 1986 regulation has been abrogated by both SWANCC and Rapanos and is no longer in use. Indeed, the Agencies are currently operating under guidance issued in December 2008 which sought to bring jurisdictional determinations in line with these cases. By using the 1986 regulation as the baseline to certify the proposed rule will not have a significant economic impact on a substantial number of small entities grossly underestimates the costs associated with the proposed rule. The Agencies must compare the costs associated with the proposal to those incurred under the status quo 2008 Rapanos Guidance. (p. 137)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 10 and 11.

North Carolina Aggregates Association (Doc. #6938)

11.2.111 EPA's economic analysis is flawed, because it does not take into account the real costs of permitting and mitigation. The economic analysis relies on cost data that is almost 20-years old and is not adjusted for inflation. EPA and the Corps must also convene a Small Business Regulatory Flexibility Act panel as required by law to assess the impacts on small businesses. (p. 2)

Agency Response: The agencies did adjust for inflation. See Summary Response to Topic 11.3.1 and 11.4. See also Summary Response 11.1 on RFA/SBREFA.

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

11.2.112 **Specific Comment to U.S. EPA and U.S. Army Corps of Engineers
Regulatory Impact Analysis**

Affected acreage. EPA's analysis uses FY 2009/2010 as the baseline year to estimate impacts, which was a period of significant contraction in the market due to the financial crisis. EPA makes an assumption that the new rule will not affect the agency's overall workload. Under the new rules, jurisdiction will increase and more projects will likely be

⁷⁹ Office of Management and Budget, Circular A-4, Subject: Regulatory Analysis (September 17, 2003) at 15, available at http://www.whitehouse.gov/sites/default/files/omb/assets/regulatory_matters_pdf/a-4.pdf

seeking permits. EPA assumes the incremental impacts to Sec. 404 permitting can be applied to other CWA programs. EPA's analysis ignores important state- and size-specific variations in permit applications.

Costs. EPA's analysis uses data on permitting costs that are nearly 20 years old and are not adjusted for inflation or any other changes in the permit system. EPA analysis omits the costs of avoidance and delay, which are likely the largest out-of-pocket expenses. EPA claims that they use the same methods as their 2011 analysis to estimate the amount of mitigation. However, the baseline mitigation level and per acre cost of mitigation does not match the 2011 analysis. Further, the upper bound mitigation costs estimates used in the 2013 analysis are significantly lower than the 2011 analysis, without any explanation as to why. Costs to some programs, like Section 303 (state water quality standards and implementation plans) and Section 402 (National Pollutant Discharge Elimination System), are assumed to be "cost-neutral or minimal" without providing any analysis to support this conclusion. The effects of a definitional change are likely to vary significantly from program to program, however careful assessment of program-specific effects is omitted in lieu of simplistic, generalized estimations. EPA suggests that additional permit applications may require increased consultation with other agencies, which would drive up the costs of a definitional change. These costs are omitted from this analysis.

Benefits. EPA utilizes third-party studies to estimate an average willingness to pay for wetland mitigation that are outdated and do not provide accurate estimates of benefits. Nine of the ten studies relied upon by EPA are more than a decade old (the oldest is nearly 30 years old) and many were not published in peer-reviewed journals. Benefits are calculated based on an unstated and an immediately issued interpretive rule to provide assurance to the agricultural sector of an effort to preserve their exemption notwithstanding the breadth of this new proposed definition modification. The agencies acknowledge the overly expansive regulatory result of this proposal and therefore are taking policy corrective measures even prior to implementation of the new definition. This supplemental effort is awkward and highlights the underlying problem of the administrative overreach of this proposal.

Water Quantity. The agencies suggest the new proposed definition is not intended to supersede, abrogate or otherwise impair states' authorities to allocate quantities of water. The agencies announce development of new tools to make jurisdictional determinations. Underlying the use of helpful tools is the question of whether water quality (as defined by the states consistent with federal recommended criteria) become so broadly applicable to all waters of the United States, the states are essentially paralyzed. A desktop default that concludes all waters are jurisdictional and therefore there are no allocations that are permissible is indeed an abrogation of state authorities. The agencies' unreasonable application of the Clean Water Act will result in unreasonable consequences such as a wholesale limitation on water quantity allocations. (p. 17-18)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

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

11.2.113 The scope and reach of CWA jurisdiction has a direct impact on the costs of planning, financing, constructing, and operating an aggregates facility. Even under the current CWA regulatory scheme, opening a new aggregates operation is a very complicated process and often involves millions of dollars and often takes up to ten years. As reported by one NSSGA member, the expected sequence for opening a Greenfield (new) crushed limestone operation could take most of a decade and cost \$50 million dollars.

Even before investing the entire purchase price of a mining operation, aggregate producers expend tremendous amounts of time and money locating potential aggregate resources and determining their quantity and quality. They also spend large amounts of money and effort determining the feasibility of production; identifying potential environmental impacts from production; making certain their operations conform to the relevant laws; and obtaining the necessary permits to extract, process, and transport the aggregate.⁸⁰ For example, one NSSGA member reported having spent over 10 years and \$1 million dollars to obtain a Corps 404 permit. Further, even the Supreme Court in the Rapanos case recognized the tremendous costs and time required to obtain an individual Section 404 permit.⁸¹ During this process, operators incur additional costs to satisfy the permit and zoning requirements of states, counties, municipalities, and other governmental agencies.

In addition to the enormous capital investments needed to obtain the necessary permit approvals, an aggregates company would typically forgo other supply options, possibly close and reclaim other existing sources, develop markets and outlets, and, for vertically integrated companies, purchase, secure, or develop related operations that use and rely upon the mined material. These latter activities typically take years to plan, fund and implement. Although NSSGA takes issue with the jurisdiction increase percentage put forth by the EPA, even the artificially low EPA estimated increase of 3% for non-isolated wetland and a 17% in "other waters," will greatly increase the regulatory costs and delays

⁸⁰ Aggregate and the Environment, at 24.

⁸¹ In Rapanos, Justice Scalia, in the plurality opinion, even observed that "the average applicant for an individual permit spends 788 days and \$271,596 in completing the process and the average applicant for a nationwide permit spends 313 days and \$28,915, not counting costs of mitigation or design changes" (citing Sunding & Zilberman,)

in obtaining permits. This will undoubtedly have a ripple adverse effect on a broad range of companies' business investments.⁸²

The impact of the expansion of CWA jurisdiction under the proposed rule is especially serious given the slow economic recovery from the recession. Aggregates production has dropped 39% since 2006 (from 3.11 billion tons to 1.91 billion tons). EPA's 2014 "Economic Analysis of the Proposed Revised Definition of Waters of the United States" estimates that an increase in the regulations of wetlands and isolated "other waters" will result in an increase in mitigation costs from a low estimate of \$78.7 million to a high estimate of \$222.1 million. However, a review of EPA's Economic Analysis by University of California at Berkeley Professor David Sunding concludes that EPA significantly underestimates the costs because EPA fails to consider many major categories of impacts properly, including impacts from increased NPDES permitting, section 401 water quality certification, and section 311 oil spill control requirements. Dr. Sunding also feels that EPA's preliminary economic analysis lacks credibility and is speculative and misleading.⁸³

All told, it is undisputed that the already high costs of CWA regulation to aggregates operators will clearly increase under the proposed rule at a time when the industry and the public it serves can ill afford it.⁸⁴ One eastern U.S. aggregates producer finds that the expanded scope of the proposed rule significantly increases costs. The producer estimates that the new cost for mitigation would be \$2.75 million compared to the estimated \$200,000 under the current rule because the site is located within a floodplain and includes similarly situated waters that would likely be jurisdictional under the proposed rule. Another aggregates producer in the Midwest finds similar increases for site mitigation. The producer notes that expanding the current quarry will lead to additional mitigation costs of \$1.67 million under the proposed rule, based on a wetlands consultant's evaluation of the 14,000 linear feet of intermittent streams and potential connection to a nearby navigable river. A western producer estimates that because dry washes and ephemeral streams will now be jurisdictional, minable material will drop to half of the producer's original estimate of 30 million tons (Attachment 1). We base these examples on years of experience in dealing with on the ground Corps permitting and a careful review of the proposed rule.

Taken further, these examples show how the EPA cost estimates for the rule are vastly underestimated. For example, one aggregate producing company estimated a \$30 million impact from this rule for just one region because of resources that will no longer be

⁸² EPA, "Economic Analysis of Proposed Revised Definition of Waters of the United States" at 2 (Mar. 2014).

⁸³ Dr. David Sunding, "Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States" for Waters Advocacy Coalition (May 15, 2014) found that EPA's analysis "systematically understates the impact of the definitional changes" in the proposed rule.

⁸⁴ NSSGA adopts the comments of the Waters Advocacy Coalition including Dr. Sunding's study that describes the economic impacts in considerable detail.

available, as well as the increased costs of transporting material over long distances. If resources are placed off limits, the costs to states will also increase dramatically and could reach billions as some resources become too expensive to access due to increased mitigation costs. (p. 12-14)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.114 EPA's economic analysis of this rule does not accurately show what businesses like ours will end up paying if this rule is finalized. It is not even close. One NSSGA member calculated that to do the additional mitigation of a stream required under this rule would be more than \$100,000; this is just for one site in our industry. This is more than EPA has estimated the stream mitigation costs are for entire states in its economic analysis. For our business, time is money. Any new requirements lead to a long learning curve for both the regulators and the regulated. Just getting a jurisdictional determination can take months - permits can take years; how much longer will it take to break ground with so many vague and undefined terms in this rule?

The proposed rule has no clear line on what is "in" and what is "out," making it very difficult for our industry and other businesses to plan new projects and make hiring decisions. If it is determined development of a site will take too long or cost too much in permitting or mitigation, we won't move forward. That means a whole host of economic activity in a community will not occur--all of this in the name of protecting a ditch or farm pond.

Taken further, a significant cut in aggregates production could lead to a shortage of construction aggregate, raising the costs of concrete and hot mix asphalt products for state and federal road building and repair, and commercial and residential construction. NSSGA estimates that material prices could escalate from 80% up to 180%. As material costs increase, supply becomes limited, which will further reduce growth and employment opportunities in our industry. Increases in costs of our materials for public works would be borne by taxpayers, and delay road repairs and other crucial projects. Given that infrastructure investment is essential to economic recovery and growth, any change in the way land use is regulated places additional burden on the aggregates industry that is unwarranted and would adversely impact aggregates supply and vitally important American jobs. (p. 74-75)

Agency Response: The agencies have taken into consideration comments and have modified the rule language to take into consideration uncertainty and clarity of jurisdiction. See the Preamble for the rule.

Wyoming Mining Association (Doc. #14460)

11.2.115 **Increased Costs and Delays**

With the undoubted and significant expansion of jurisdiction that will come from the proposed definition of "WOUS" the volume of jurisdictional determinations and permits that will be required to comply with the rule will increase significantly. The proposed rule states that it will "... reduce time and resources demanding case specific analyses prior to determining jurisdiction...".⁸⁵ This statement is found to be false by the WMA. Not only will there be added time delays in the permitting process due to the sheer number of waters that will be considered jurisdictional, there will also be costs associated with the time delays as well as additional permitting and compliance expenses. (p. 7)

Agency Response: The agencies have modified the rule language and economic analysis in response to comments, and expect the rule to reduce delays related to uncertainty of jurisdiction. See the Preamble to the rule.

The Mosaic Company (Doc. #14640)

11.2.116 **Expansion of Jurisdiction Under the Proposed Rule will have Major Implications for all CWA Programs**

The proposed rule would broaden the scope of numerous CWA programs and result in additional obligations for Mosaic and other stakeholders. The rule, by its terms, extends federal CWA requirements to ephemeral drainages, ditches (including roadside, flood control, irrigation, stormwater, and agricultural ditches), waterbodies in riparian or floodplain areas, industrial ponds, and isolated waters that have not previously been regulated as "waters of the U.S." The new definition of "waters of the U.S." would apply for all sections of the CWA. 79 Fed. Reg. at 22,188. As a result, Mosaic could face costly new obligations under CWA sections 404,402,401,303,304,305, and 311. Neither the EPA Economic Analysis nor the preamble address these implications or explain how the new definition of "waters of the U.S." will be implemented throughout the various CWA programs.

The Economic Technical Report provided in Appendix A describes some of the proposed rule's implications for certain CWA programs. As written, the proposed rule may foster uncertainty, lengthen delays, raise compliance costs, increase permitting requirements, lead to inapposite statutory results, expose stakeholders to a broader array of enforcement actions and citizen suits, and increase environmental compliance burdens under other statutes. Increased burdens on States could lead to even more delays and lost opportunity costs for Mosaic and other stakeholders. (p. 29)

⁸⁵ 79 Fed. Reg. at 22,191

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.117 The estimated costs and benefits in the study do not provide useful information for assessing the consequences of the proposed WOTUS rule. Indeed, EPA states that “[r]eaders should be cautious in examining these results in light of the many data and methodological limitations, as well as the inherent assumptions in each component of the analysis.”(EPA Study, pg. 2) Based on our assessment, we concur that caution is appropriate. The study contains methodological flaws, suffers from the absence of direct data, and incorrectly applies the data that is available. As a result, the study is based on unreliable data: overestimating benefits and underestimating costs. In a seminal article published in Science magazine, a team of economists articulated eight principles for the appropriate use of benefit-cost analysis. One instance they felt benefit-cost analysis would not be useful is when the benefits and costs are too uncertain (Arrow et al. 1996). The EPA’s cautioning note and this review clearly show that in this case, the benefits and costs are too uncertain, and as explained in Section 4, the benefits in particular are overestimated and do not meet the requisite standard of reliability.

The approach relied on in the Study significantly understates costs. Key issues are:

- Use of non-representative permit data from 2009-10 during the “Great Recession”, which will underestimate future demand for permits
- Use of the ORM2 database, which could significantly underestimate the total acreage affected by the proposed rule
- Socio-economic costs and lost profits are not quantified
- Omits key Section 404 cost categories, which EPA notes could be significant.

In addition, because of the uncertainty of the magnitude and location of areas that would become jurisdictional, the Study assumes they have the same geographic distribution as current jurisdictional acres. This is a highly speculative assumption and could have a significant impact on costs given variation in mitigation credit prices both across and within states.

The approach adopted overstates benefits associated with mitigating impacted wetland acres resulting from the proposed rule. Benefits are measured by using stated preference studies that are inherently unreliable. Moreover, this approach cannot account for the fact that ecological benefits from the isolated waters decline with increasing isolation from traditional navigable waters (TNWs), and decline with their size. The assumption that per acre benefits are constant, with no basis for assuming their purported benefit estimates can be applied to the small wetlands and waterbodies is central to the proposed WOTUS

rule. The benefit estimates are also subject to double-counting, as the Study’s calculations ignore that more than half of all states already claim jurisdiction and require mitigation for current federal non-jurisdictional (isolated) waters. Notably, the EPA warns that these benefit estimates are “illustrative”.

It is our recommendation that EPA develop reliable data and methods that reduce the need for caution and take the analysis beyond illustrative. Specifically, we suggest:

- Collecting adequate data required for robust projections of CWA permitting activity.
- Improving estimates of impacted acreage under the proposed rule and developing a more accurate inventory of the waters subject to the expanded CWA jurisdiction.
- Developing approaches for estimating the types and level of ecological benefits the waters provide, particularly those remote to TNWs.
- Including appropriate compliance costs currently omitted from the current EPA’s estimates.
- Discarding benefit estimates based on hypothetical values in favor of avoided costs, which shows the cost of developing and maintaining an engineered solution providing the same services.
- Developing approaches for considering incremental, not average, benefits and costs.

Only with the additional data can the regulated community and decision-makers begin to determine whether the proposed CWA jurisdiction provides benefits above costs. (p. 40-41)

Agency Response: See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.118 2 Projected Scope of Impact

A necessary component of any economic analysis of a regulatory change is a measure of the scope of the change using a metric that has a meaningful link to costs and benefits. The EPA study projects the incremental increase in Section 404 permits and impacted acreage it expects would result if jurisdictional determinations in FY 2009-10 had been made according to the WOTUS definition described in the proposed rule. However, use of an inadequate and unrepresentative permitting database leads to underestimates in the percent increase in CWA jurisdiction.

Compounding this error, applicability of the estimated percent increase based on a single year of permitting activity at the height of the global financial crisis, leads to compounded under-estimates of the incremental increase in Section 404 permits and

impacted acreage expected under the proposed rule. A more reliable approach would be to build a database designed specifically to meet the requirements of this study, and to use historical permitting data to normalize the baseline period for the effect of the recent economic downturn on development projects. (p. 42)

Agency Response: See Summary Response to Topic 11.2 on scope of jurisdiction.

11.2.119 2.1 Overview of Approach

To project the increase in Section 404 jurisdiction, EPA examined applications for Section 404 permits, approved jurisdictional determinations (JD), and wetland delineations submitted in FY 2009-2010 and stored in the United States Army Corps of Engineers' (USACE) ORM2 database. Of the 141,965 applications, 133,756 were categorized as involving impacts to wetlands or streams. The remaining 8,209 were categorized as involving impacts to "other waters", a term referring to waters least likely to have a connection with traditional navigable waters (TNW) in the CWA. These "other waters" are an important component of the proposed rule. Based on its review, EPA projects 100 percent of the applications that impact wetlands and streams will also have areas that meet the revised definitions of "adjacent" and "tributary". This is projected to result in a 2 percent increase in jurisdiction of wetlands and streams. For other waters, based on review of 262 project files, the agencies determined the proposed WOTUS rule would impact the jurisdictional status of 17 percent of those projects. As illustrated in Exhibit 3 of the EPA Study, the analysis leads to an overall predicted 2.7 percent increase in CWA jurisdiction beyond current practices.

The next step in the EPA Study is to estimate the incremental increase in both the number of Section 404 permits that would be issued and the impacted acreage subject to compensatory mitigation under the proposed rule. Relying again on the ORM2 database, EPA multiplies the number of Section 404 permits issued in FY 2009/10 (51,917), by the 2.7 percent projected increase. This yields an incremental increase of 1,402 Section 404 permits that would need to be issued under this rule than under the 2008 Guidance. Multiplying these 1,402 incremental permits by the average number of acres impacted per permit (0.95 acres) results in an incremental increase of 1,332 acres of additional wetland impacts nationwide each year. Upon distributing the impacted acres to individual states in proportion to the actual JD acreages permitted in FY 2009-10, per acre cost and benefit estimates are used to arrive at total nationwide incremental cost and benefit associated with the proposed rule.

Unfortunately, this method of projecting the incremental number of new Section 404 permits and the corresponding increase in impacted acreage leads to a significant underestimation of the likely impact of the proposed rule. The drawbacks to the methods employed and the associated implications are discussed in the following sections, along with suggestions for improvement. (p. 42)

Agency Response: See Summary Response to Topic 11.2 on incremental jurisdiction.

11.2.120 2.2 The Baseline Does Not Account for the Effect of the Financial Crisis on Development

The EPA study selected FY 2009/10 as a baseline because it encompassed projects subject to CWA jurisdiction based on both the Supreme Court’s SWANNC (2001) and Rapanos (2006) decisions. Unfortunately, that same period, October 2009 – September 2010, represented the height of the recent residential and commercial real estate were among the hardest hit sectors of the economy. Total construction spending averaged \$0.86 billion in FY 2009/10, compared with \$1.1 billion per year during the previous 7 years (after adjusting for inflation per the U.S. Department of Commerce 2014a). Figure 1 illustrates that fewer new residential housing units were authorized for construction in FY 2009/10 than for any time over the previous 54-year period (U.S. Department of Commerce 2014b).

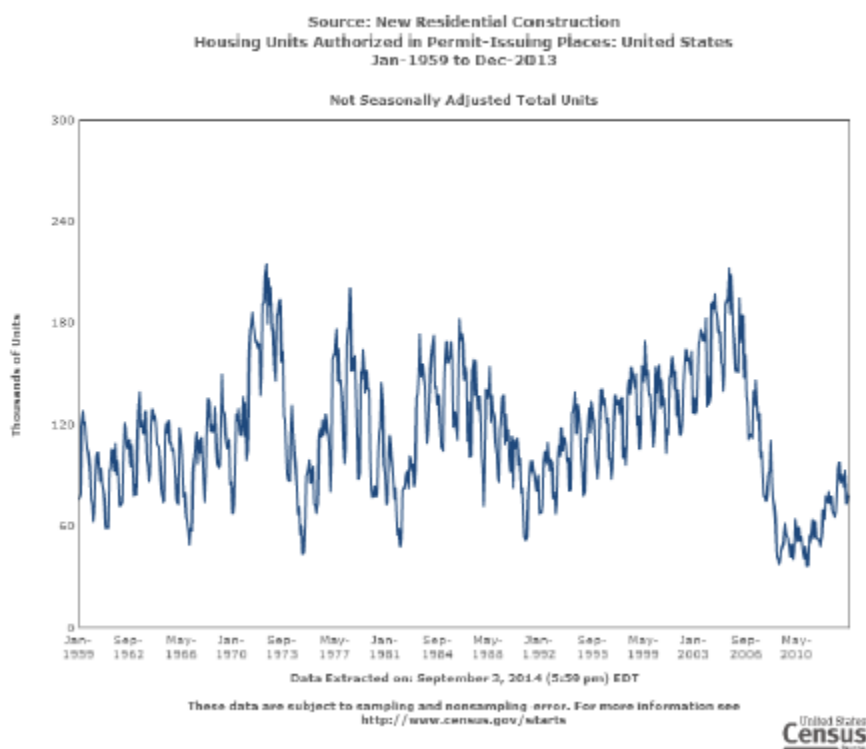


Figure 1. New Residential Housing Units Authorized for Construction, United States, 1959-2013

This evidence confirms that FY 2009/10 was likely a period with an unusually low issuance rate of Section 404 permits. Further, projects that did continue likely did so at a reduced scale, as funding for development contracted. As a result, the baseline number of Section 404 permits issued along with the average impacted acres per permit, would be

underestimated, which in turn underestimates both projected annual costs and benefits, but not in equal amounts.

As one of several steps needed to address this concern, the analysis should be updated using permit data for more recent years when the U.S. economy was at more normal levels. Alternatively, EPA could analyze historic Section 404 permitting data, then compare and correlate it to various economic indices, to “normalize” the effect of the financial crisis. Each of these approaches would provide a more informative and direct sensitivity analysis of the EPA’s baseline. (p. 43-44)

Agency Response: The agencies updated the jurisdictional determination estimates for the final rule using data from 2013-2014. See Summary Response to Topic 11.2 on the 2009-2010 permit data.

11.2.121 **2.3 The ORM2 Database is Unrepresentative of Proposed CWA Jurisdiction**

As explained above, use of the FY 2009/10 period from the ORM2 database does not adequately represent the number of applications or acreage subject to potential jurisdiction under the proposed rule. As a result, it is expected that both the number of permits and the jurisdictional acreage is underestimated.

By its nature, ORM2 data cannot include instances when project proponents did not seek a jurisdictional determination because they believed no wetlands were present, or instances where project proponents have forgone a formal process by agreeing to treat all waterbodies as jurisdictional. Because these instances most likely correlate with the very waters that would be captured as jurisdictional under the new rule, it is unreasonable to expect the Section 404 permit application rate to remain unchanged after the new rule goes into effect. As a result, the actual number of Section 404 permits issued in FY 2009/10 is expected to understate the baseline to which EPA applies its 2.7 percent projected increase factor.

In addition, ORM2 does not contain sufficient information to estimate the extent of potentially jurisdictional areas. Dr. David Sunding obtained records from the ORM2 database through a Freedom of Information Act request to conduct a review of the EPA study on behalf of The Waters Advocacy Coalition. In his findings, Dr. Sunding highlights that ORM2 records include impacted acreage, but not total acreage of waterbodies on a project site (Sunding 2014). Because the proposed rule will expand CWA jurisdiction, ORM2 cannot be used to reliably estimate the average impacted acres per project under the proposed CWA jurisdiction. Consequently, the additionally impacted acreage presented in Exhibit 5 of the EPA Study is underestimated (by the ratio of the averages of impacted acreage under current jurisdiction to total jurisdictional acreage under the proposed rule).

This underestimation can be illustrated by a representative portion of a Mosaic project. For a Mosaic project with a completed formal jurisdictional, 4,877 acres were considered wetlands or other waters. A review of that information, however, leads to an expectation that approximately 5,660 acres would be jurisdictional under the proposed rule. The

ORM2 database, however, would only contain the 4,877 acres of currently jurisdictional wetlands, understating the potential impact area under the proposed new rule by 16 percent. A significant fact that should be noted in this case, is that the proposed rule wouldn't provide an actual increase in benefits because the wetlands and other waters at issue are already considered jurisdictional by the state of Florida and require mitigation.

Nonetheless, this information demonstrates the inadequacy of ORM2 to directly support the EPA's economic analysis. If EPA intends to use ORM2, we recommend that other methodologies for estimating the expected number of additional permits resulting from the proposed rule be explored. To address the under-representation of jurisdictional waterbodies in the FY 2009-10 ORM2 records, EPA could compute the average impacted acreage per project using records that pre-date the SWANNC and Rapanos decisions. While jurisdictional guidelines differ from current and proposed guidelines, pre-SWANNC and pre-Rapanos projects more closely approximate the universe of waterbodies covered by the jurisdiction in the proposed rule than do projects in FY 2009-10. Use of pre-SWANNC and pre-Rapanos project data would also likely compensate for the scaled back project acreages that occurred in the FY 2009-10 time frame in response to the global financial crisis. (p. 44)

Agency Response: The agencies do not have data for pre-SWANCC determinations to use for this analysis. See Summary Response to Topic 11.2 and the Economic Analysis on adjusting for underrepresentation of jurisdictional waterbodies.

11.2.122 3.3 Lost Profits and Socioeconomic Costs

The EPA's Study estimate of compliance costs does not quantify lost profits in the private sector, nor does it account for associated reductions in spending on goods and services produced by other industries. If the proposed rule restricts operational flexibility and interrupts industry operations, it may also result in lowering output, jobs and wages. The resulting costs are demonstrated by a situation at one of Mosaic's phosphate rock mining operations located in Florida, which may have been idled for about three years if not for the operational flexibility preserved through CWA jurisdiction in 2010. At the time, the existing mining operation was not expected to have sufficient permitted reserves to continue operation during the preparation of a Phosphate District Area wide Environmental Impact Study (AEIS) and the subsequent time needed to permit a new parcel. Reserves on an adjacent unpermitted parcel of land, however, could be permitted for mining because the wetlands were considered isolated and nonjurisdictional by the USACE, and the permitting through the state could be conducted while the AEIS was in progress. This preserved Mosaic's ability to continue to operate and produce its needed phosphate rock supply. The mine generates approximately 1.7 million tons of phosphate rock annually, at a value of approximately \$169 million comprised—among other

things—of profits for Mosaic, along with wages associated with approximately 100 direct jobs that stimulate the economy through household spending.⁸⁶ In addition to direct economic benefits, the mine, its benefaction facility and Mosaic’s fertilizer production operations support the purchase of goods and services from other industries, indirectly resulting in profits, wages and associated household spending for other individuals and businesses, as well as tax revenue to state and local governments. However, if the proposed rule were in effect at the time, CWA jurisdiction over the isolated wetlands on the adjacent parcel would have likely triggered a temporary mine shutdown, while waiting for the USACE Section 404 permit to issue, since at the time the USACE would not issue permits before the AEIS was completed. This potential outcome would occur even with no corresponding wetland loss, as the state of Florida independently claimed jurisdiction and required mitigation for the isolated wetland at issue.

While this situation is specific to Mosaic, it clearly demonstrates the types of costs that could be borne by unknown permittee and non-permittee enterprises when operational flexibility is restricted by expanded CWA jurisdiction. These direct, indirect and induced effects of changes in industry output have been quantified and well-documented using IMPLAN data and software in hundreds of studies of the economic costs of environmental policy changes. These studies could be reviewed for approaches to estimating and incorporating such costs based on estimated changes in economic output and income by the regulated community. (p. 49-50)

Agency Response: See summary responses to topics 11, 11.3.1, and 11.4 on costs.

11.2.123 4.1 Values Reported in the Primary Studies are Hypothetical

The use of Stated Preference Survey (SPS) values in the EPA Study as a surrogate for “benefits” of the proposed rule are hypothetical in that they don’t reflect the value people actually place on wetlands. SPS studies derive values from statements about what people would pay, without data revealing what people actually have paid (EPA Study, p.20) or the value of benefits actually provided. SPS studies are plagued with a host of biases, as discussed in Daniel McFadden’s 1994 review of hypothetical bias in valuing wilderness areas in the Selway Bitterroot Wilderness Area, Contingent Valuation and Social Choice, as well as Daniel Kahneman’s 2011 book, Thinking Fast and Slow.

The use of SPS methods for valuing ecosystem services is particularly troublesome, because the survey questions assume the respondents are fully and accurately informed about the specific goods or services being valued. Because wetlands can provide a host of services, EPA uses a total value approach where “the values elicited account for the varying degree and interrelationships among services provided, ***assuming respondents are sufficiently informed***” (EPA Study, p.21). However, it is well known in the

⁸⁶ Area-Wide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District, U.S. Army Corps of Engineers, April 2013, Appendix H.

ecological literature that not even scientists and practitioners agree on a definition of ecosystem services, and values may vary depending on the distance from a TNW. Therefore, it is extremely unlikely that a typical respondent from a random household can properly value wetland function. (Fisher, Turner and Morling 2009; Barkmann et al. 2008).⁸⁷

The only reliable approach for estimating the functional benefit value provided by these waters of flood protection, water supply, and water quality, is based on actual investments made to engineer/create those services. This requires an inventory of the waters likely subject to CWA jurisdiction under the proposed rule, and some measure of the types and level of services provided. By developing the cost to create engineered solutions to provide the same types and level of services, EPA can begin to measure benefit values. This approach is not without limitations, as users are only willing to pay for engineered solutions, where they perceive an actual need, such that the location of the newly jurisdictional waters is an important determinant of the benefit value that EPA must consider. (p. 52)

Agency Response: See Summary Response to Topic 11.3.2 related to wetlands benefits.

11.2.124 4.2 Wetlands Valued in the Primary Studies are not Comparable with Wetlands Protected under the Proposed Rule

Putting aside the question of whether the SPS method is appropriate, at the very least, the wetlands valued in the primary studies must be similar in size and ecological function to the wetlands that are the subject of the proposed rule, in order for the “benefits transfer” approach to be reliable. A recent article that reviews the methodology and challenges of the benefits transfer approach points out that “[t]he heterogeneity of some environmental goods, such as wetlands, presents a challenge with respect to acquiring sufficient primary study data that satisfies the requirement for commodity consistency.” (Boutwell and Westra 2013). This is because wetlands have a high degree of heterogeneity between sites (and even within sites) that affects the characteristics of the services provided. For example, what constitutes an environmental improvement to wetland functionality in one area may not be applicable or even viable in another area. While EPA purports to have focused on studies that value a “bundle of services” or “total resource values” provided by wetlands, the high degree of heterogeneity between and within wetland sites means the services valued are likely to vary drastically from site to site (EPA Study, p.21). Further, the values EPA extracts from the primary studies are unlikely to adequately

⁸⁷ Fisher, Turner and Morling state “while there have been several attempts to come up with a classification scheme for ecosystem services, there has not been an agreed upon, meaningful and consistent definition for ecosystem services”. Barkmann et al. state “lay respondents are usually unfamiliar with the implications of scientific descriptions of ecosystem functioning. Thus, the applicability of stated preference methods for the valuation of ecosystem functions is a matter of debate.”

represent the varying type and function of the 1,332 wetland acres EPA estimates will be affected by the proposed rule across the entire United States. In addition, the 10 primary SPS studies cover only 13 states which account for less than 30 percent of the expected impacted acres (EPA Study, Exhibits 31 and 36; Heimlich et al. 1998). In fact, the entirety of the Mountain, Northeast and Southeast USDA ERS wetland regions utilized in aggregating household benefits are unrepresented by any of the primary SPS studies.

Even assuming all wetlands and their services are homogenous, the EPA's benefits transfer approach is unreliable because the scope and scale of the wetlands at issue in SPS studies do not correlate to the incremental scope and scale of wetlands at issue in the proposed rule. For example, Loomis et al. 1991 values 85,000 to 125,000 acres of wetlands within California's San Joaquin Valley, while Poor 1999 values expanding wetland areas within Nebraska's Rainwater Basin by 41,000 acres (EPA Study, Exhibit 36). Further, a SPS study by Land and Tobin in 1989 provide a value for approximately 1,500 acres of wetlands close to the EPA's estimated nationwide impact. That study area involved riparian corridors within Illinois and Iowa, very different from the fragmented wetland distribution pattern at issue in the proposed rule. The fact that none of the primary studies EPA relies upon value an area of wetlands as small and over a geographic area as large as in the EPA study, suggests the value of wetland preservation resulting from the proposed rule cannot be appropriately detected by SPS methods.

Finally, by assuming all of the acres impacted due to the proposed rule are wetlands, EPA's benefits calculation fails to recognize that certain waterbodies described in the proposed rule may in fact diminish ecosystem service function, or otherwise degrade the environment. For example, some man-made drainage features (ditches) that will be claimed as jurisdictional under the proposed rule even though they actually degrade ecosystem function by draining natural hydrology from wetlands and landscapes. Such features can serve to transport sediment and pollutants to downstream waters that would otherwise be trapped or infiltrated under the natural condition. This exposes two flaws in the benefits transfer methodology: First, the method assumes that all waterbodies (regardless of size, type, location, or purpose) under the proposed rule exhibit the same positive ecological function as the wetlands valued in the cited SPS studies. Second, the method overestimates the benefits by assuming all waterbodies covered under the proposed rule equally benefit the ecosystem in which they are located. (p. 52-53)

Agency Response: The agencies used the information available to adjust how they calculate benefits deriving from wetlands for the final rule. See Summary Response for Topic 11.3.2 and the Economic Analysis for more details.

11.2.125 4.3 EPA's Methodology Double-Counts Ecosystem Service Benefits Provided by State Wetland Regulations

The ecosystem benefit analysis presumes that without adoption of the proposed rule, the benefits being provided by the wetlands at issue would be lost with no mitigation provided as compensation. This assumption does not take into consideration that some

states already claim jurisdiction over the wetlands and waterbodies described by the proposed rule (EPA Study, p.3). The State of Florida, for example, claims jurisdiction over most, if not all, of the waterbodies that USACE currently does not consider jurisdictional. Consequently, in Florida, the ecosystem service benefits purportedly associated with the proposed rule are already being realized due to State mitigation requirements. The EPA economic analysis counts, but will not provide, any incremental benefit increase. Thus, the EPA Study overstates ecosystem service benefits to some degree, depending on the status of individual state claims with respect to wetland jurisdiction.

This fact is non-trivial for two reasons. First, the EPA study claims “that approximately half the states have some provisions that extend protections beyond waters of the U.S.” (EPA Study, p. 4). Second, recognizing state jurisdiction and mitigation requirements clearly means the regulated community will incur the costs of obtaining the USACE permit, for no incremental benefit over what is already achieved by state regulations. This imbalance is not explicitly recognized, nor adjusted for, in the EPA Study. Rather, the EPA Study states: “[t]o the extent states have elected to [implement CWA programs more broadly], the economic impacts may be smaller than presented here” [emphasis added] (EPA Study, p.3). The phrase “economic impacts” implies that both costs and benefits will be lower, when in fact, it is just the benefits that would be lower.

The implication of wetland protection through state-specific programs and requirements, indicates the EPA Study needs to be corrected to (as suggested in Section 3.1) to reflect the incremental acreage impacts associated with each state, instead of for the nation as a whole, and then to adjust the incremental benefits to recognize benefits that are already being achieved by state regulation. (p. 53)

Agency Response: The agencies consider impacts to be related to both costs and benefits, though a variety of factors could influence to what degree each might be smaller if states protect more broadly. See Summary Responses under Topic 11.

11.2.126 5 Conclusion

The EPA Study procedure has not produced reliable estimates of the cost and benefits associated with the proposed rule. Because the entire analysis is based on averages and large wetland systems, it does not account for the diminishing marginal benefit of wetland services and the increasing marginal cost of mitigation. Further, the Study relies on a permitting database designed for a different objective, with an unrepresentative baseline period. Thus, the new permitting activity projected from the baseline understates the projection of incremental CWA permitting and associated mitigation. This results in the inability to quantify significant components of permitting and mitigation costs and introduces such large uncertainties into the analysis, that the resulting cost estimates are unreliable. The EPA Study also uses hypothetical values for ecosystem services from unrepresentative SPS studies valuing incompatible resources. This results in what the EPA Study calls “illustrative” estimates of benefits associated with the proposed rule.

Given the significance of the proposed rule and its potential impact on stakeholders, a rigorous economic analysis of the associated costs and benefits is needed. Throughout this letter we have suggested ways for EPA and companion agencies to improve the reliability of the estimates presented in the economic analysis. Such revisions are needed to ensure full and fair disclosure of the potential costs and benefits the rule may impose and provide. (p. 54)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Devon Energy Corporation (Doc. #14916)

11.2.127 The initial cost-benefit assessment accompanying the 2014 Proposed Rule grossly underestimates the number of impacted waters, claiming that only 2.7% increase of waters would become jurisdictional.

The baseline for comparing the Proposed Rule appears to be based on pre-SWANCC and Rapanos which has a broader extent of Jurisdiction. Per the personal views of Mr. Barry Gale (attorney with the Corps) since the 2006 Rapanos Decision, the Corps not only developed an administrative process that completely negated both the Rapanos plurality and Kennedy opinions, but actually expanded its jurisdiction.⁸⁸ The baseline for this economic analysis should have been taken with respect to the correct application of jurisdiction following both post-SWANCC and post-Rapanos. If these court decisions were reflected in the jurisdictional baseline that EPA relied on to establish impacts from the proposal, the increase in jurisdiction would certainly be much more than 2.7% EPA is claiming. (p. 4-5)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice (post-2008 Guidance) and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Alaska Miners Association (Doc. #15027.1)

11.2.128 Finally, the proposed rule structure of jurisdiction, and the associated definitions, will have negative impacts to Alaska's miners and to virtually any other economic

⁸⁸ Gale, Barry, "Six Years After Rapanos: What's Changed" (Answer: Not Much), "Federal Regulation of Cultural Resources, Wildlife, and Waters of the U.S., Paper No. 13, Page No. 13-18 (Rocky Mt. Min. L. Fdn. 2012)

development project. Categorizing many new water features as “waters of the U.S.” and determining that all adjacent features also qualify would consequently subject nearly every parcel of land to jurisdiction under the Act. In Alaska, 175 million acres are classified as wetlands; this constitutes 45% of the land base. Alaska is the only state in the Union with extensive permafrost and Alaska’s coastline and tidally influenced waters exceed that of the rest of the nation combined. Thus any regulation or rule changed addressing wetland and coastal environments will have a potentially greater effect in Alaska than anywhere else in the nation, particularly if ill conceived. The combination of these Alaskaspecific issues and those that all stakeholders must manage, and Alaska’s miners have an enormous burden at stake. Obscure and poorly defined c result in conflict with other Federal regulations, such as 43 C.F.R. 3809 reclamation regulations, and will undoubtedly result in significant delay and additional cost burden in permitting.

If the agencies aim to develop a meaningful, balanced, and supportable rule, they must take a more precise and methodical approach, one that is supported by science, informed by a robust understanding of the State and local laws that address water issues, and is true to Congress’ intent and Supreme Court precedent. The Alaska Miners Association recommends that the agencies table this proposed rule and engage in meaningful dialogue with the regulated community and with the states about more appropriate and clear changes to existing regulations. Only then should the agencies replace the proposed rule with one that reflects those consultations and is supported by science and case law. Doing so will ensure responsible, legally defensible rulemaking that captures the intent of Congress and the Supreme Court, and does not place unnecessary burden on Americans. (p. 2-3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.”

American Petroleum Institute (Doc. #15115)

11.2.129 To illustrate the scope of the true economic impacts of the 2014 Proposed Rule, API commissioned an economic analysis to demonstrate the expected scope of jurisdictional changes and the associated costs. The study also provides an assessment and documents the myriad issues associated with the Agencies’ economic analysis. This

analysis comprises the second part of API's comment package. Extrapolating from this analysis to a national level using reasonable assumptions, the analysis shows that the 2014 Proposed Rule will have GDP cost impacts of \$8 billion. The 2014 Proposed Rule will delay and impede energy development across the country, leading to higher costs to produce energy, and likely job losses. (p. 4)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.130 **The Agencies' Economic Analysis of the 2014 Proposed Rule is Inaccurate and Flawed**

Given the lack of clarity in the 2014 Proposed Rule, it is difficult to precisely assess the full extent of costs that this rule would impose. Nonetheless, it is clear that the Agencies have significantly underestimated the cost impacts of the 2014 Proposed Rule. The Agencies underestimate the costs of obtaining permits, and also underestimate the number of additional permits required by increased federal jurisdiction by using permit applications shortly following the Great Recession of 2008-2009, when overall economic activity in the country including oil and natural gas development had slowed significantly. This baseline assumption is particularly erroneous in light of the fact that oil and natural gas activity (and the need for associated permits under the Clean Water Act) has substantially increased in the following years.

The Agencies also overstate the benefits of the 2014 Proposed Rule. They use baseline data from the period immediately following the Great Recession, and erroneously assume that all new waters under federal jurisdiction are not already under state protection. (p. 4)

Agency Response: The agencies have adjusted the period of analysis to account for the economic downturn in recent years. See Summary Response to Topic 11.2, and elsewhere in Topic 11 for other aspects of the economic analysis.

11.2.131 A thorough examination of the Proposed Rule revealed that it is virtually impossible to develop a complete and reasonably accurate cost estimate of the Proposed Rule for several reasons.

First, definitions pivotal to understanding the Proposed Rule are absent or unclear. These terms include, but are not limited to "uplands," "floodplain," "subsurface connection," "neighboring," "riparian area," "other waters," and "waste treatment."

Second, no quantifiable metrics currently exist for measuring the significance of a nexus so as to identify the "significant nexus" required to establish federal jurisdiction under the Proposed Rule. As of the writing of these comments, the scientific report charged with developing these metrics has not been finalized; however, the current version which has

been reviewed several times by the EPA’s Scientific Advisory Board contains no quantifiable guidance that policymakers or impacted stakeholders could use to determine the extent of nexus impacts under this Proposed Rule.

Third, the Agencies have issued changing and conflicting analyses⁸⁹ of jurisdiction under the Proposed Rule multiple times – claiming that it will decrease jurisdiction even after releasing an economic impact analysis indicating a jurisdictional increase⁹⁰ and offering conflicting terminology without explanation in subsequent Q&A documents sometimes not even entered into the docket.⁹¹ In August 2014, well after the Agencies issued the Proposed Rule, the Corps issued detailed, comprehensive guidance on the identification of an ordinary high water mark (OHWM), a key concept in the Proposed Rule for identifying jurisdictional tributaries.⁹² Issuing continually moving targets which cannot be reconciled with one another - not to mention placing the burden of discovering these changes wholly on stakeholders - creates an almost insurmountable barrier to both meaningful comment and a reasonably accurate economic analysis. (p. 49 – 50)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. The agencies have responded to comments on uncertainty, clarity, the economic analysis, and other issues in developing the final rule. See Preamble to the rule, accompanying Economic Analysis, and Summary Responses in Topic 11. EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.”

- 11.2.132 **3. Since the potential benefits of the Proposed Rule were overestimated and its costs were underestimated, it is unlikely to pass a cost-benefit analysis once multiple deficiencies in analytical methodology are addressed.**

The March 2014 *Economic Analysis of Proposed Revised Definition of Waters of the United States* (“Economic Analysis” or “PEA”) understates the costs and overstates the benefits that would result from the Proposed Rule change. Other reviews of the Agencies’ report have come to the same conclusion. The Brattle Group states: “Unfortunately, the

⁸⁹ Remarks of Gina McCarthy at Agricultural Business Council of Kansas City on Clean Water Proposal (July 10, 2014), available at <http://go.usa.gov/xmh>

⁹⁰ The Agencies’, Economic Analysis of Proposed Revised Definitions of Waters of the United States at 12 (March 2014), available at <http://www.regulations.gov/#!documentDetail;D=EPAHQ-OW2011-0880-003>.

⁹¹ See e.g., the definition of Ordinary High Water Mark in the Agencies’ June and September Q&A document

⁹² http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/west_mt_finalsupp_aug2014.pdf and <http://acwc.sdp.sirsi.net/client/search/asset/1036026>

EPA analysis relies on flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of the definitional changes. This is compounded by the exclusion of several important types of costs and use of flawed benefits transfer methodology.”⁹³ ARCADIS reviewed both the Economic Analysis and the Brattle Group’s report and has found that the analysis and conclusions in the Brattle Group’s report are correct.

The increase in federal jurisdiction (and the concomitant increase in the number of additional permits required) has been grossly underestimated due to exclusive reliance on incomplete data from one year of one regulatory database unavailable in the public domain. The database contained only projects for which jurisdictional determinations had been requested, during one of the most recessionary periods in modern history. The Agencies further assumed (incorrectly) that the Proposed Rule would not impact the number of permit filings. The resulting underestimate was subsequently used throughout the rest of the analysis. These are discussed in more detail below.

On the cost side, the PEA’s cost estimates significantly underrepresent the costs of obtaining virtually every permit the Agencies analyzed, and wholly omit key costs.

Some sections of the Clean Water Act (CWA) were assumed to include little or no additional compliance costs (Sections 303 and 402) but lack analysis to support such assumptions. The costs of CWA permitting expenses and mitigation costs were incomplete and omitted essential activities such as field work. Similar issues accompany their analysis of NPDES permits, storm water permits, water quality certification permits, and SPCC plans.

Some of the most significant costs neglected in the Economic Analysis are the costs of permitting delay, opportunity cost of increased regulatory burden, and impact avoidance and minimization costs. “However, because there is not a defensible, ready basis for estimating these costs, the agencies did not estimate compliance costs for these categories as part of this economic analysis.”⁹⁴

The potential benefits of the Proposed Rule were also overstated due to problematic data inputs and methodology. The estimated increase in jurisdictional scope led to a calculation that, annually, 1,332 acres (about 2 square miles) of wetlands would be additionally created or protected as a result of implementing the Proposed Rule. Though this incremental increase in absolute terms is vanishingly small compared to the estimated 110.1 million acres of wetlands in the conterminous United States,⁹⁵ the benefit

⁹³ Sunding, David. Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the U.S.” (2014).

⁹⁴ EPA and the Corps, Economic Analysis of Proposed Revised Definition of Waters of the United States, March 2014.

⁹⁵ Dahl, T.E. 2011. Status and trends of wetlands in the conterminous United States 2004 to 2009, U.S. Department of the Interior, Fish and Wildlife Service, Washington DC pp. 108.

of it was inflated using largely hypothetical contingent valuation studies and a controversial benefits-transfer model. The ten studies that the Agencies relied upon in the analysis are dated, many are not peer reviewed, and one was even such an outlier that excluding its valuation estimate from the average lowers calculated benefits by roughly \$100 million.

The Agencies should have conducted an original wetlands valuation study for the different regions of the country, as required by EPA’s Guidelines. The Agencies made no allowance for the fact that Proposed Rule will produce almost no benefit to the public in states that already protect “isolated waters.” Likewise, the benefits estimate from avoiding oil spills under CWA 311 is speculative and overstates the benefits of the Proposed Rule.

ARCADIS has built upon the Brattle Group’s conclusions in the following sections by providing appropriate estimates for the individual costs and benefits and discussing significant cost omissions from the Agencies’ analysis. (p. 56-57)

Agency Response: See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.133 3.1 The Agencies’ cost-benefit assessment dramatically underestimates the costs of the Proposed Rule in multiple ways.

3.1.1 The Agencies’ original economic analysis fails to capture the full cost of the Proposed Rule by using a limited, internal government database and recessionary economic data.

In estimating the increased jurisdiction and accompanying costs, the Agencies used records contained in the Corps’ Operation and Maintenance Business Information Link, Regulatory Module (ORM2) database from fiscal years 2009 and 2010. The exclusive reliance on this one database significantly underestimates the potential increase in jurisdictional waters resulting from the Proposed Rule.

First, it includes information only on actual impacted areas for projects for which a jurisdictional determination or permit was requested by project proponents – i.e., it does not include or provide a means of estimating increases for areas outside the project impacts, or for those projects which did not require a permit, or would not have been envisioned as requiring a permit. It excludes all Preliminary Jurisdictional Determinations, i.e., those which project proponents have questions about jurisdiction but decline to pursue them in the interests of reducing permit processing time. This may help to explain why some 98 percent of tributaries and 98.5 percent of adjacent wetlands were found to be already jurisdictional, prompting the Agencies to assume (erroneously, as we will show) that any increase in jurisdiction for these classes of waters would be negligible. As a result, detailed analysis was conducted only on isolated waters, which were evaluated by a team of USACE experts using a subset (262) of ORM2 project files. The Agencies further assume that any waters heretofore not considered jurisdictional are

“...likely to be the most isolated and the least connected to other waters, and therefore the least likely to have their status changed under the Proposed Rule.”⁹⁶

Unfortunately, that statement is an oversimplification and underestimation. Multiple scenarios and developments in the arid Southwest (e.g., discontinuous ephemeral drainage impacts) and the Midwest (e.g., isolated prairie pothole wetland impacts) currently do not require a permit but would require permits for impacts to newly regulated resources under the Proposed Rule.

Each of these developments not currently accounted for in the ORM2 database would add to the jurisdictional waters under the new rule.

It should be noted that the data is incomplete—roughly 18.4 percent of the data records for aquatic resources are blank—and the categories of water, defined under the 2008 CWA guidance, does not align in practice with the new definitions of the Proposed Rule. Therefore, the ORM2 database does not comprehend the full sampling universe of water features that might be subject to the Proposed Rule, and so using it exclusively to determine the percent increase in jurisdictional waters understates the true impact of the Proposed Rule.

The ORM2 database is not accessible on-line nor is access provided through the rulemaking docket, so for a detailed review of ORM2 records and their application in this rulemaking, a FOIA request would be required. Given the importance of ORM2 to the Agencies’ cost-benefit analysis, the Agencies should have provided instructions for public access to ORM2 in their economic analysis of the Proposed Rule.

Significantly, the Agencies’ Economic Analysis used the ORM2 data records from fiscal years 2009 and 2010 – a time when the U.S. economy was in a recession with the lowest number of housing starts on record.⁹⁷ Similarly, 2009-2010 was also characterized by a decrease in industrial development due to a reduction in capital expenditures. This time period included the only reduction in capital expenditure spending by the oil and gas majors in the past 20 years,⁹⁸ and comes just prior to a dramatic and continuing upturn in drilling and production associated with shale gas and liquids development, which has transformed markets and prospects for U.S. energy security. The selection of data for 2009-2010 may lead to an understatement in the number of permits submitted and the types of water evaluated; therefore, they would not be a true representation of the impacts under the current economic conditions.

⁹⁶ EPA, 2014.

⁹⁷ <https://www.census.gov/construction/nrc/pdf/startsan.pdf>

⁹⁸ Bloomberg - <http://www.resilience.org/stories/2014-03-04/beginning-of-the-end-oil-companiescut-back-on-spending>

The Agencies relied on ORM2 exclusively to calculate an increase in jurisdiction for 2 percent of streams, 1.5 percent of adjacent wetlands, and (based on case-by-case analysis by Army Corps of Engineer specialists, checked by outside experts) 17 percent of isolated “other” waters. That increase results in the total number of jurisdictional records in ORM2 increasing by 2.7 percent. **This number is used as the basis for all subsequent estimates of impacts and benefits arising from implementation of the Proposed Rule.**⁹⁹ For example, the Agencies determined that a 2.7 percent increase in jurisdiction would lead to a 2.7 percent increase in permits required: 75 additional individual permits and 1,327 additional general permits.

We will show later in this document some alternative analyses of potential jurisdictional increase that give far higher estimates than ORM2. Moreover, one of these analyses takes a “bottom-up” approach, looking specifically at the increase in permit requirements for oil and gas developments, and concludes that the increase is far higher than the proportional increase in jurisdiction owing to the non-linear, bracketed “threshold” nature of programmatic permit requirements. (p. 58-60)

Agency Response: See the Summary Response in this section and the Economic Analysis for how the agencies have adjusted the jurisdictional analysis since the proposed rule.

11.2.134 3.1.2 The Agencies significantly underrepresented the costs associated with obtaining virtually every type of permit analyzed.

The Agencies’ Economic analysis included a breakdown of the four types of CWA permitting costs: 1) permit application costs; 2) compensatory mitigation costs; 3) permitting time costs; and 4) impact avoidance and minimization costs. The Agencies recognized that the latter two could be significant “for some share of permit applicants,” however, they excluded these costs from the calculation on the assertion that no “defensible, ready basis for estimating these costs” exists.²² The oil and gas industry is certainly one of those for whom these costs will be significant, and this comment will endeavor to provide the estimates, lacking in the Economic Analysis.

Meanwhile, ARCADIS also estimates the first two costs, for permit applications and compensatory mitigation, to be considerably higher than those estimated by the Agencies. This section discusses issues with the Agencies’ methodology and provides more realistic cost estimates.

The Agencies’ Economic Analysis oversimplifies and understates the potential cost implications resulting from the Proposed Rule. As shown below, it is certain that the

⁹⁹ The PEA later provides a “sensitivity” calculation to estimates of increased permitting but it is applied subsequent to the estimate from the ORM2 database, and so addresses none of the shortcomings of reliance on this database, mentioned above.

increased costs from permit application fees, compensatory mitigation, SPCC, and NPDES permits will be significantly higher than the Agencies' current estimates. (p. 60)

Agency Response: See Summary Responses to Topics 11, 11.3.1 and 11.4 on costs.

11.2.135 3.1.3 Key costs associated from permitting were omitted from the economic analysis.

3.1.3.1 Opportunity costs of Permitting Delays were excluded from the Agencies' Economic Analysis

For the oil and natural gas industry, one of the most significant cost impacts is likely to be the lost production due to increased permitting time requirements, as well as lost opportunity costs. These costs are entirely and unjustifiably omitted from the Agencies' Economic Analysis.

For example, Sunding and Zilberman state that the average time to prepare and obtain an individual permit is 788 days, while the average time to obtain a general permit is 313 days.¹⁰⁰ As we anticipate the number of individual and general permits to increase significantly over current levels, so too will the impacts of this delay increase. Moreover, the required time periods to obtain these permits may also increase under the Proposed Rule for reasons that include but are not limited to the following: 1) more permits submitted for waters that are not currently jurisdictional, resulting in increased workload for Agencies' personnel that is far in excess of that predicted by the Economic Analysis; and 2) USACE will require more time to conduct pre-application visits and complete significant nexus determinations for other waters. Additionally, the increased 404 permitting requirements will require a commensurate increase in are already lagging behind the Corps in processing the 401 WQC applications. The increased permitting requirements will increase the burden on these agencies and may further create permitting delays for the applicants.

Simple short term delays may foreseeably extend beyond merely a longer permitting process. For example, slight delays may result in missed construction opportunities associated with suitable weather and/or special restrictions associated with sensitive resources (e.g., breeding season for amphibians or birds). Slightly longer delays can result in missed opportunities for rig scheduling, meaning that not all wells can be drilled at approximately the same time. Not only is this economically less efficient, it also extends the need to maintain some drilling infrastructure in the area and delays well completions, at which time the development assumes for the long term a lower profile to the community than the construction phase.

¹⁰⁰ D. Sunding and D. Zilberman. 2000. Analysis of the Army Corps of Engineers' NWP 26 Replacement Permit Proposal. Prepared for the National Association of Counties and the Foundation for Environmental and Economic Progress. (January).

However, much more significant cost impacts will be associated with more significant delay. As an example, in Pennsylvania, permitting would be handled under PADEP ESCGP-2 and the General Permit System, which have a 60 day review period under the most stringent conditions. It would not be difficult to envision a permitting increase from 6 to 9 months to over 2 years – especially if this responsibility is passed to the Corps. Significant increases in permitting timeframes will impact how the oil and gas industry manages projects and their risk. Given the volatility in the price of oil and gas, projects that are feasible today may not be feasible in two years, thus companies will potentially decrease spending which will have ramifications through the national economy in terms of job losses and less domestic production. Finally, given that typical lease terms are on the order of three years, a permit delay of two (or more) years could result in lost opportunity costs that include total loss of lease rights due to inactivity, resulting in foregone production, and lost revenues to the company, the landowner, and federal, state and local treasuries.

API estimates that the costs to the economy could reach \$8 billion in the first year alone, due to \$9.9 billion in forgone production and 67,200 lost jobs [see Section 6].

In the Economic Analysis, the Agencies recognize that these costs exist, however, they are not included because “...there is not a defensible, ready basis for estimating these costs.”¹⁰¹ This omission is unjustifiable. This additional permitting time and associated permitting delays must be addressed to accurately understand the cost impacts of the proposed rule change. API members are prepared to assist the Agencies in developing a basis for estimating these costs that is at least as defensible as that used for estimating benefits. A re-evaluation of the Economic Analysis should be conducted prior to finalization of the Proposed Rule. Once this significant cost is given fair consideration, there is every reason to expect that the Rule will fail the cost-benefit analysis. (p. 68-70)

Agency Response: See Summary Responses to Topics 11, 11.3.1 and 11.4 on costs.

11.2.136 3.1.3.2 *Costs of Complying with New State Regulations were also excluded from the Agencies’ economic analysis – as were the costs to the States of creating those regulations.*

The Agencies state in the Economic Analysis that a definitional change will have little to no effect on section 303 (state water quality standards and implementation plans) and section 402 (National Pollutant Discharge Elimination System (NPDES) permitting). This appears to be an unjustified assertion. Even in States where the State’s definition of waters may be broader than the Proposed Rule, an expanded federal definition will limit State regulatory ability and impose new costs on stakeholders. The Clean Water Act imposes a number of mandatory obligations on States that do not apply to purely “State” waters. These include, but are not limited to the following:

¹⁰¹ EPA and the Corps, 2014.

- Monitoring water quality for WOTUS
- Controlling and permitting of discharges into WOTUS
- Setting effluent limits for discharges into WOTUS;
- Designating beneficial uses for WOTUS
- Establishing water quality standards for WOTUS
- Establishing Total Maximum Daily Loads (TMDL) for WOTUS
- Listing all impaired WOTUS and developing a strategy for each segment failing to meet water quality standards;
- Inventorying all point source discharges into WOTUS and
- Identifying non-point sources contributing to failure of a water quality standard in “Waters of the U.S.”

For example, Kansas defines “waters of the State” broadly to include “all streams and springs, and all bodies of surface and subsurface water within the boundaries of the state...”¹⁰² This definition includes some areas like groundwater that fall outside of the Proposed Rule. Kansas, however, does not classify ephemeral streams as waters¹⁰³ and the state’s EPA-approved water quality standards do not encompass ephemeral streams.¹⁰⁴ Under the Proposed Rule, Kansas estimates that ephemeral stream miles would increase 460 percent - from 30,620 stream miles to 134,488 stream miles. Both the state and stakeholders would have to comply with CWA requirements for these ephemeral streams.¹⁰⁵

Similar increases would occur in other states. In fact, comparing the WOTUS reported by States in reports available on EPA’s website¹⁰⁶ to recent USGS maps released by EPA shows a 131 percent increase in federal waters.¹⁰⁷

All States must set water quality standards for federally designated WOTUS or be subject to third party law suits; consequently, any increase in federal jurisdiction will require

¹⁰² See K.S.A. 65-161a.

¹⁰³ Kansas “finds it wholly unnecessary and wasteful of limited state programs resources to set water quality standards, issue wastewater permits, assess impairment, and develop TMDLs for surface drainage features that may have flowing or standing water no more than a few days each year.” See Comments of the Honorable Sam Browback, Governor of Kansas, EPA and Army Corps of Engineers Guidance Regarding the Identification of Waters Protected by the Clean Water Act, Docket ID No. EPA-HQ-OW-2011-0409 (July 14, 2011)

¹⁰⁴ Letter from Leo J. Alderman, EPA Director, Waters, Wetlands, and Pesticides Division, to Roderick L. Bremby, Secretary, Kansas Department of Health and Environment (Nov. 3, 2003).

¹⁰⁵ Presentation of Mike Tate and Tom Stiles, Kansas Department of Health and Environment, Waters of the U.S. (May 2, 2014).

¹⁰⁶ http://water.epa.gov/lawsregs/guidance/cwa/305b/upload/2000_06_28_305b_98report_appenda.pdf

¹⁰⁷ <http://science.house.gov/epa-maps-state-2013#overlay-context>

states to conduct expensive and time-consuming assessments to determine the applicable water quality standards. In some cases, if existing standards do not apply (e.g., existing “lakes” criteria inappropriate for industrial ponds), States will need to conduct expensive baseline data gathering to develop new water quality standards for these bodies. Mere EPA approval of not setting water quality standards has been shown to be insufficient to protect against litigation from third parties.¹⁰⁸

The Coastal Zone Management Act (CZMA) provides for the management of the nation’s coastal resources, including the Great Lakes. The CZMA is intended to balance competing land and water issues through state and territorial coastal management programs and was passed to encourage coastal states to develop and implement coastal zone management plans. Consistency determinations are required for issuance of CWA permits in coastal zones and include requirements that the activities being permitted under the CWA also demonstrate compliance with applicable endangered species acts, state air protection policies, and many others. The cost assessment for CWA permits in coastal states should be separately assessed to ensure that the costs of compliance with the CZMA are fully represented in the Agencies’ cost impact analysis. (p. 70-72)

Agency Response: See Summary Responses to Topics 11, 11.3.1 and 11.4 on costs.

11.2.137 3.1.3.3 *Litigation costs for both industry and states were excluded from the Agencies’ economic analysis.*

Definitions of key terms including but not limited to “uplands,” “floodplain,” “subsurface connection,” “neighboring,” “riparian area,” “other waters,” and “waste treatment,” are absent from the Proposed Rule. Ambiguity within the Proposed Rule is likely to lead to confusion in implementation and also to increased litigation in enforcement scenarios as well as in third party litigation against the federal government, state governments, and industry.

The Proposed Rule seeks to use the Court decisions to clarify WOTUS definitions, and the Agencies sponsored the preparation of the Connectivity Report to define the connectivity between traditional navigable waters (TNWs) and waterbodies and wetlands as a basis for determining significant nexus. The Connectivity Report inclines to the conclusion that connections exist between the majority of the waterbodies and wetlands in a watershed and the downgradient streams/rivers in that watershed. The Science Advisory Board, in their review of the Connectivity Report, have likewise suggested that the significance of those connections occurs along a gradient based on variations in the frequency, duration, magnitude, predictability, and consequences of those connections. Justice Kennedy’s significant nexus test requires the connection of a wetland to be sufficient to have a significant effect on the physical, chemical, and biological

¹⁰⁸ Missouri defines “Waters of the State” to mean “[a]ll rivers, streams, lakes and other bodies of surface and subsurface water lying within or forming a part of the boundaries of the state which are not entirely confined and located completely upon lands owned, leased, or otherwise

characteristics of a TNW. Although the Connectivity Report described connections between wetlands and TNWs, it does not include a definition of the point along the gradient of connectivity that separates significant from non-significant connections.

The Proposed Rule fails to define the physical, chemical, and biological characteristics described in the Kennedy concurrence that affirmatively demonstrate the significance of the connections categorized in the Connectivity Report for the determination of jurisdiction, or even to acknowledge that the “physical, chemical, or biological nexus” required by the Proposed Rule is a substantially and inexplicably lower threshold to meet (i.e., the substitution of “or” for “and” in the original Clean Water Act reference). Furthermore, the Proposed Rule was drafted prior to the finalization of the Connectivity Report, and does not use information in the Report to define what constitutes a “significant nexus.” In fact, the Proposed Rule only uses a circular reference to define the term “significant nexus” as a water, including wetlands, either alone or in combination with other similarly situated waters in the region, that significantly affects the chemical, physical, or biological integrity of waters more readily understood as navigable [emphasis added]. This is a consistent theme throughout the report as well. Without clear standards and definitions of significance, the definition of WOTUS provided in the Proposed Rule is incomplete, fails to clarify jurisdiction, and is expected to lead to litigation [see Section 5.4.8]. (p. 72-73)

Agency Response: EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.”

See Summary Responses to Topics 11, 11.3.1 and 11.4 on costs. See the preamble and Technical Support Document for further discussion of significant nexus and the science supporting the rule.

11.2.138 3.2 The Agencies’ benefit assessment is flawed in several respects and is inconsistent with EPA’s own Guidelines.

The Proposed Rule’s Economic Analysis estimates annual benefits ranging from \$301 million to \$398 million, resulting mainly from avoiding losses of wetlands and preventing oil spills.

With respect to avoiding losses of wetlands, the Proposed Rule will produce almost no benefit to the public in states that already protect “isolated waters” that are not currently WOTUS. Even in states that do not currently protect the features that would be designated WOTUS under the Proposed Rule, the benefits are tenuous at best. In fact, the benefits transferred by the Agencies in their Economic Analysis do not meet the Agency’s own Guidelines for such an approach and it is clear that the Agencies should have conducted an original wetlands valuation study for the different regions of the

country (as required by EPA’s Guidelines). Even if the 10 wetland valuation studies in the Agencies’ Economic Analysis met EPA’s Guidelines for benefit transfer, the Agencies’ estimate of benefit would be reduced by more than \$100 million (roughly 40 percent) by excluding just one of the studies, which is a clear outlier from the rest. In addition to the flaws in the estimate of wetlands benefits, the benefits estimate from avoiding oil spills under CWA 311 is speculative and probably substantially overstates the benefits of the Proposed Rule. (p. 73-74)

Agency Response: See Summary Responses to Topics 11, 11.3.2, and 11.4 on benefits. See the Economic Analysis for further discussion of the changes that the agencies made to the benefits assessment.

11.2.139 **4. Alternative geospatial mapping exercise indicates that the change in jurisdiction resulting from the Proposed Rule could be far greater than estimated by the Agencies.**

This section discusses three separate mapping exercises conducted by Arcadis and/or API members. Although the results of these exercises varied widely, all resulted in substantially greater jurisdictional area due to the Proposed Rule and would likely require increased permitting as a result of the Proposed Rule.

4.1 ARCADIS Geospatial Mapping Exercise

To indicate the types and significance of potential changes in jurisdiction, this section compares the linear feet of streams and acreage of wetlands that are federally jurisdictional under current Clean Water Act definitions with areas that would likely become jurisdictional under the Proposed Rule.

The analysis was conducted on three hypothetical test areas selected as representative for oil and gas activities in areas where non-jurisdictional features (e.g., isolated wetlands and discontinuous ephemeral streams) are prevalent. The analysis was based on examination of certain on-line databases and aerial imagery only and did not include any field investigations. Quantification of the linear feet and acreages of identified features was conducted using geographic information system software to estimate changes in jurisdictional extent. The selected areas were chosen intentionally to allow for visual representation of anticipated areas of expanded jurisdiction associated with the proposed rule. These areas are not intended to represent all situations across the country. Nevertheless, they clearly illustrate the Agencies’ gross underestimation of the increase in jurisdictional areas that would occur should the Proposed Rule be finalized.

Although these test areas may not fully representative of the change nationwide, lessons learned from this exercise include:

- No decreases in jurisdictional area were observed anywhere.
- The increase is highly non-uniform. Some areas will see very high increases in jurisdictional area.

- The Agencies' assumption of no significant increase in tributary and adjacent waters jurisdiction is seriously flawed. In all three cases, the 2.7 percent increase in jurisdiction estimated by the Agencies was significantly lower than that estimated through the subject mapping exercise.
- The increase in jurisdiction for tributaries is highly sensitive to drainage discontinuity, i.e., man-made or natural breaks of any length, which constitute a difference between the Proposed Rule and current practice. Discontinuous drainage cannot be determined except by field work; consequently, it is unclear as to the added value of the Proposed Rule in providing clarity relative to the 2008 Guidance.
- A more rigorous evaluation of potential increase in jurisdiction, such as through geospatial mapping, as opposed to the approach used by the Agencies (i.e., survey of areas where permits were catalogued in the ORM2 database), is a useful approach. The Agencies should rework the rule and complete a comparable geospatial analysis over a fully representative sample of lands to provide a more accurate estimate of the impact of the Proposed Rule before continuing with the rulemaking process.

4.1.1 Methodology

Publicly available national geospatial data managed and analyzed in geographic information system (GIS) was used to identify distributions of waters and wetlands, as well as to assess potential jurisdictional classifications under both current practices and the Proposed Rule. The analysis was conducted by experienced wetland delineators with experience across different areas of the U.S., who worked in conjunction with professional GIS technicians, to provide an assessment of jurisdictional areas under current practice and under the Proposed Rule that reflects the best professional judgment of practitioners with extensive experience in dealing with Clean Water Act jurisdictional aspects across the United States. Knowledge of current oil and natural gas activities developed from environmental professionals with several decades of experience in the oil and gas industry, as well as available database information, facilitated initial selection of test sites. Wetland professionals then reviewed the database information and aerial photography to identify current and proposed jurisdictional WOTUS for quantitative comparisons. Aerial imagery evaluation focused primarily on physical features including the likelihood of bed, bank, and ordinary high water mark (OHWM) presence as well as interruptions in physical connectivity to a traditional navigable water.

4.1.1.1 Area Selection

Three two-mile by two-mile square areas were selected to evaluate potential changes in federally jurisdictional WOTUS. The test areas are located in New Mexico, Utah, and North Dakota (Figures 4-1 through 4-10). Each test area is presented in the attached figures and specific features of the sites are discussed in the appropriate sections.

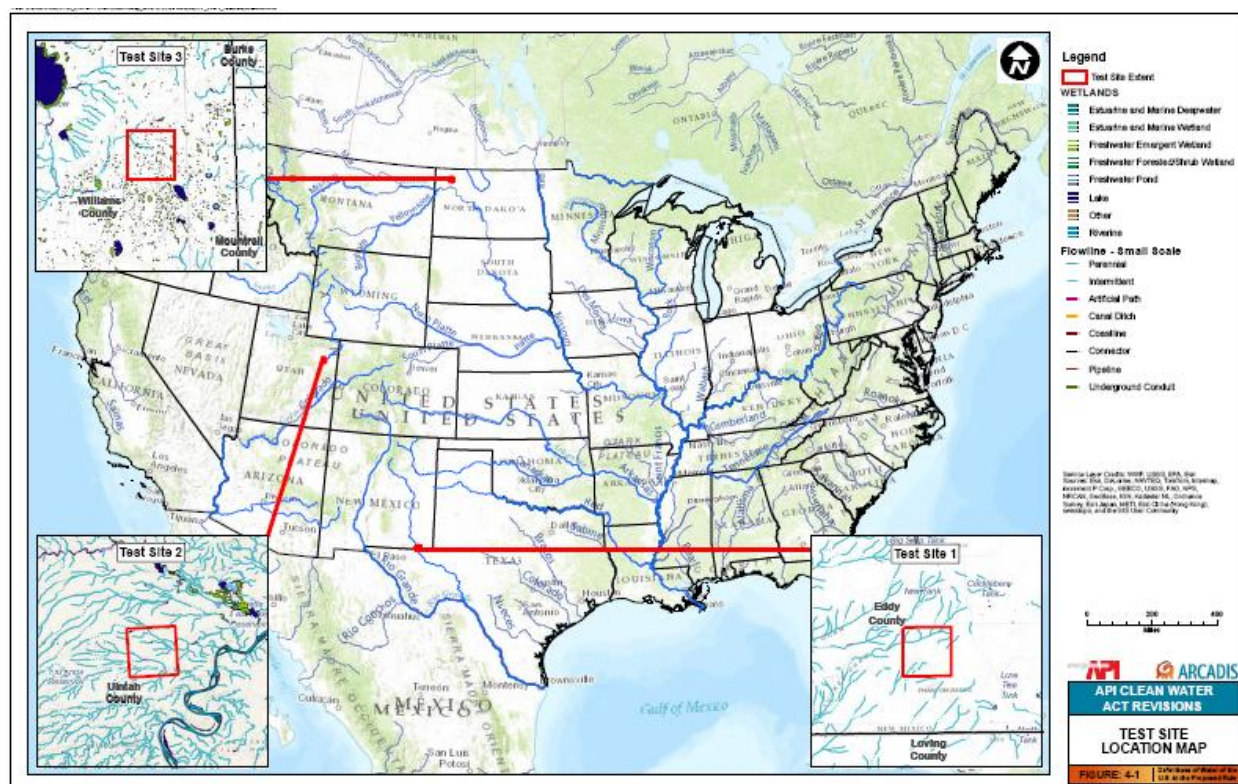


Figure 4-1 Test Site Location Map

4.1.1.2 Data Review

- The following data sets were reviewed for applicability and used to build a GIS database:
- Hydrological – United States Geological Survey (USGS) National Hydrography Database (NHD) high resolution Wetlands – United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI)
- Elevation and derived contours – (USGS) National Elevation Dataset
- Aerial Photographs – Environmental Systems Research Institute (ESRI) Online Services
- Features presented in these databases formed the initial basis for evaluation of jurisdiction under both current practice and the Proposed Rule.

Features presented in these databases formed the initial basis for evaluation of jurisdiction under both current practice and the Proposed Rule.

The following data sets include additional information required to assess “other waters” and connectivity through a significant nexus:

- Floodplain – Federal Emergency Management Agency

- It should be noted that FEMA floodplain maps are not available for all streams, particularly for ephemeral and intermittent streams. Therefore, waters and wetlands within the floodplain of streams not included in FEMA mapping may not have been identified, thereby underestimating the amount of these features that would be jurisdictional by rule under the Proposed Rule.
- Riparian – United States Fish and Wildlife Service (“USFWS”)
- Soils – United States Department of Agriculture Web Soil Survey

The datasets below could assist in improving site assessments of connectivity though are not clearly defined in the Proposed Rule or have incomplete coverage:

- Light Detection And Ranging (LiDAR) – Elevation data
- Physical, chemical, and/or biological data

4.1.1.3 Desktop Review and Delineation

Wetland professionals evaluated features from the above-listed databases to assess potential for federal jurisdiction under both current practices and the Proposed Rule. Features were reviewed through assessment of aerial photography and elevation data using best professional judgment. In some cases, feature extent was reduced (e.g., tributary lines from the National Hydrography Database (NHD) were removed if the identified features were judged unlikely to have beds, banks, and OHWMs after aerial imagery examination) and in other cases features were added or expanded (e.g., open waters or wetlands not identified in the NHD and/or the National Wetlands Inventory). Wetlands professionals also used the database information, elevation information, and aerial imagery to evaluate whether identified features possessed a continuous surface connection to downgradient TNWs. Open water or wetlands without a continuous surface water flow connection (either through streams with bed, bank, and OHWM or through upland or wetland swales) were classified as isolated. Streams without a continuous bed, bank, and OHWM connection to a downgradient TNW were classified as discontinuous/isolated.

4.1.1.4 Jurisdictional Evaluations

The existing GIS database was developed, processed, and supplemented by wetland professional review of current high resolution aerial and elevation data. The resulting GIS data set identified waters and wetland features that would be evaluated for potential WOTUS jurisdiction under both current Agency practice and the Proposed Rule. These results were then processed into quantitative summaries to establish the percent change in jurisdictional WOTUS under the Proposed Rule. The process was repeated for each of the three areas.

Criteria for jurisdictional waters and wetlands under current CWA practice included:

- All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide (i.e., a traditional navigable water [TNW]).
- All interstate waters, including interstate wetlands.
- The territorial seas.
- All impoundments of a TNW, interstate water, the territorial seas.
- Wetlands adjacent to TNWs, interstate waters, the territorial sea, and impoundments of a TNW, interstate water, the territorial seas or a tributary
- Non-navigable tributaries (i.e., possessing bed, bank, and ordinary high water mark [OHWM]) to TNWs that are relatively permanent where tributaries typically flow year-round or have continuous flow at least seasonally (i.e., three months)
- Wetlands that directly abut such tributaries

In addition to the features listed above, the criteria for waters and wetlands under current CWA practice also included those waters and wetlands over which the Agencies typically assert jurisdiction using either explicit significant nexus evaluations or de facto assumptions of significant nexus:

- o For the purposes of this evaluation, waters and wetlands that were included in this category were:
- Ephemeral (i.e., flowing less than seasonally) tributaries to TNWs that have continuous bed, bank, and OHWM connections to TNWs.
- Waters and wetlands that have a continuous confined surface hydrologic connection (e.g., wetland or upland ditches/swales) to a tributary to one of the above defined features.

Criteria for jurisdictional waters and wetlands under the Proposed Rule included:

- All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide (i.e., a TNW).
- All interstate waters, including interstate wetlands.
- The territorial seas.
- All impoundments of a TNW, interstate water, the territorial seas or a tributary.
- All tributaries (i.e., features with a bed, bank, and ordinary high water mark [OHWM]) of a TNW, interstate water, the territorial seas or impoundment.
- o For the purposes of this evaluation, and in keeping with the Proposed Rule's tributary definition, this includes wetlands that abut tributaries.

- All waters, including wetlands, adjacent to a traditional navigable water, interstate water, the territorial seas, impoundment or tributary.
 - o For the purposes of this evaluation, adjacency was defined as those waters or wetlands within the 100 year floodplain of a tributary to a TNW. While it is unknown if this will be the final definition in the Proposed Rule, the discussions held by the Scientific Advisory Board imply that this will be the flood frequency selected.
- 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.
 - o For the purposes of this evaluation, this includes waters and wetlands that have a continuous confined surface hydrologic connection (e.g., wetland or upland ditches/swales) to a tributary to one of the above defined features.
 - o For the purposes of this evaluation, this includes physically isolated waters and wetlands (i.e., no continuous surface flow connection) that are in a single contiguous land form and hydrologically connected (i.e., similarly situated) in a single point of entry watershed for a TNW (i.e., in the same region).

The above criteria did not consider site-specific significant nexus evaluations through which the Agencies may assert jurisdiction over isolated waters or wetlands or discontinuous ephemeral streams. However, the criteria do consider the typical approach to significant nexus determinations for isolated/discontinuous features taken by the Agencies under current practices, based on the experience of the wetland professionals involved in this analysis.

4.1.1.5 Data Uncertainty

Professional experience regarding the Agencies' typical use of significant nexus for CWA jurisdiction was used to identify certain features as jurisdictional (e.g., continuously connected ephemeral tributaries and wetlands not directly abutting tributaries to TNWs) or non-jurisdictional (e.g., ephemeral tributaries without continuous connections to TNWs and physically isolated wetlands).

In short, the WOTUS jurisdictional estimates herein are only as accurate as can be obtained from desktop evaluations and therefore contain an inherent margin of error. However, these methods are expected to provide a reasonable estimation of WOTUS under both current practices and the Proposed Rule.

4.1.2 Results

The results for each test area are summarized below and accompanied by three figures each (Figures 4-2 through 4-10). In each case, applying the Proposed Rule increased jurisdictional areas. The New Mexico site demonstrated a relatively substantial increase in tributary jurisdiction by approximately 204 percent, whereas the Utah site illustrated a more modest increase of around 8 percent. The North Dakota site showed an increase in jurisdictional tributaries and featured an increase in jurisdiction over isolated wetlands by 559 percent. The findings from each test area are described below in greater detail.

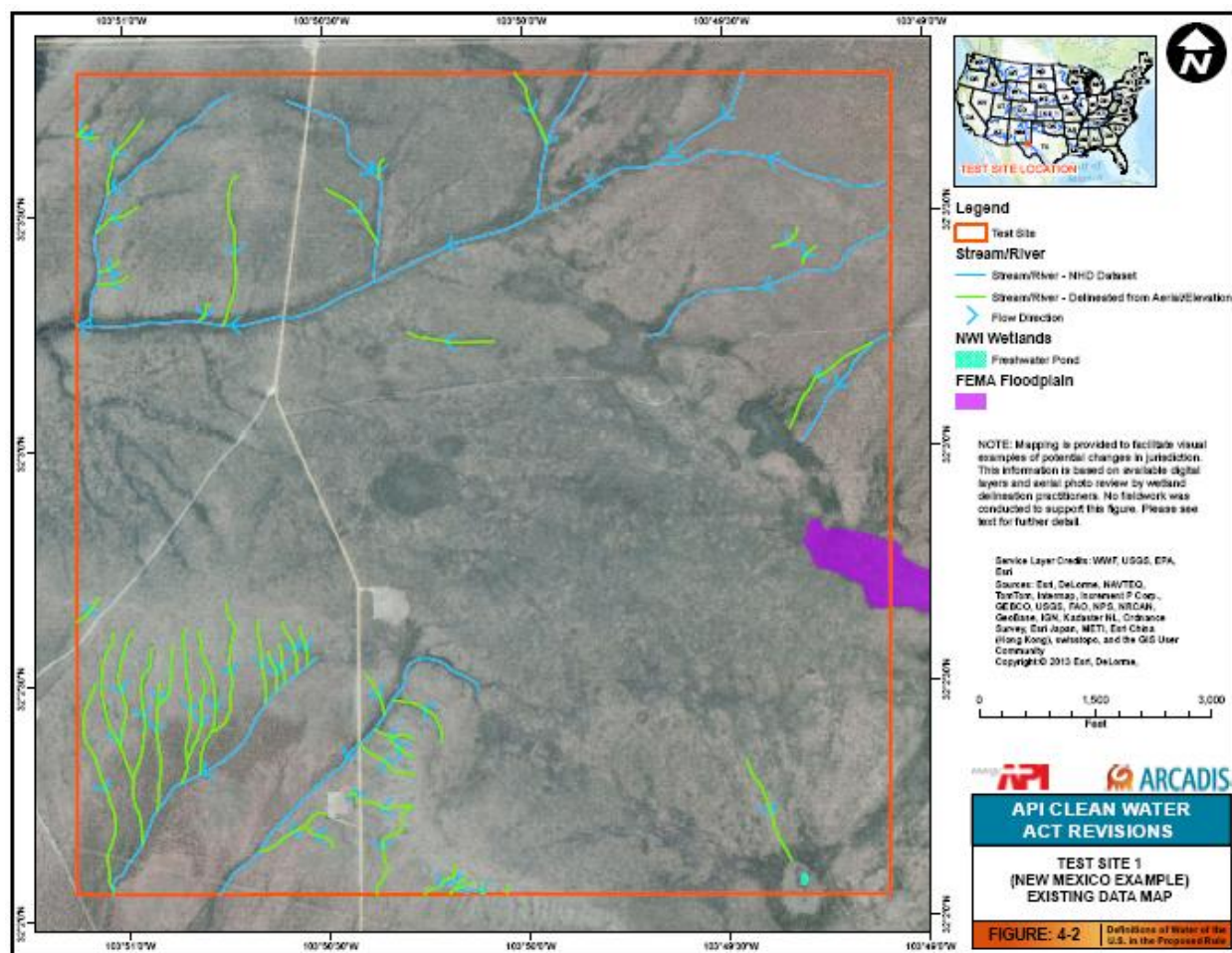


Figure 4-2 Test Site 1 (New Mexico Example) Existing Data Map

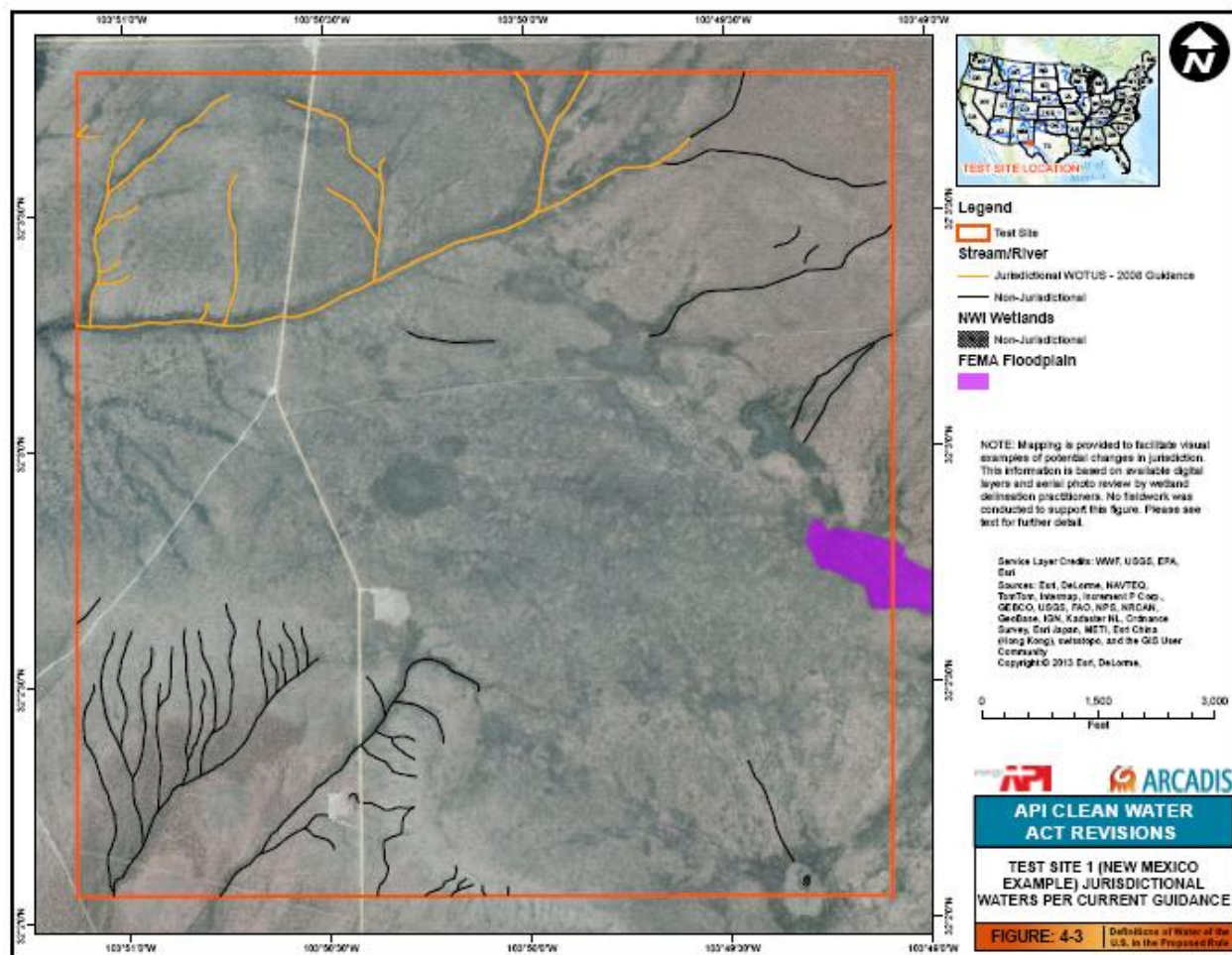


Figure 4-3 Test Site 1 (New Mexico Example) Jurisdictional Waters Per Current Guidance

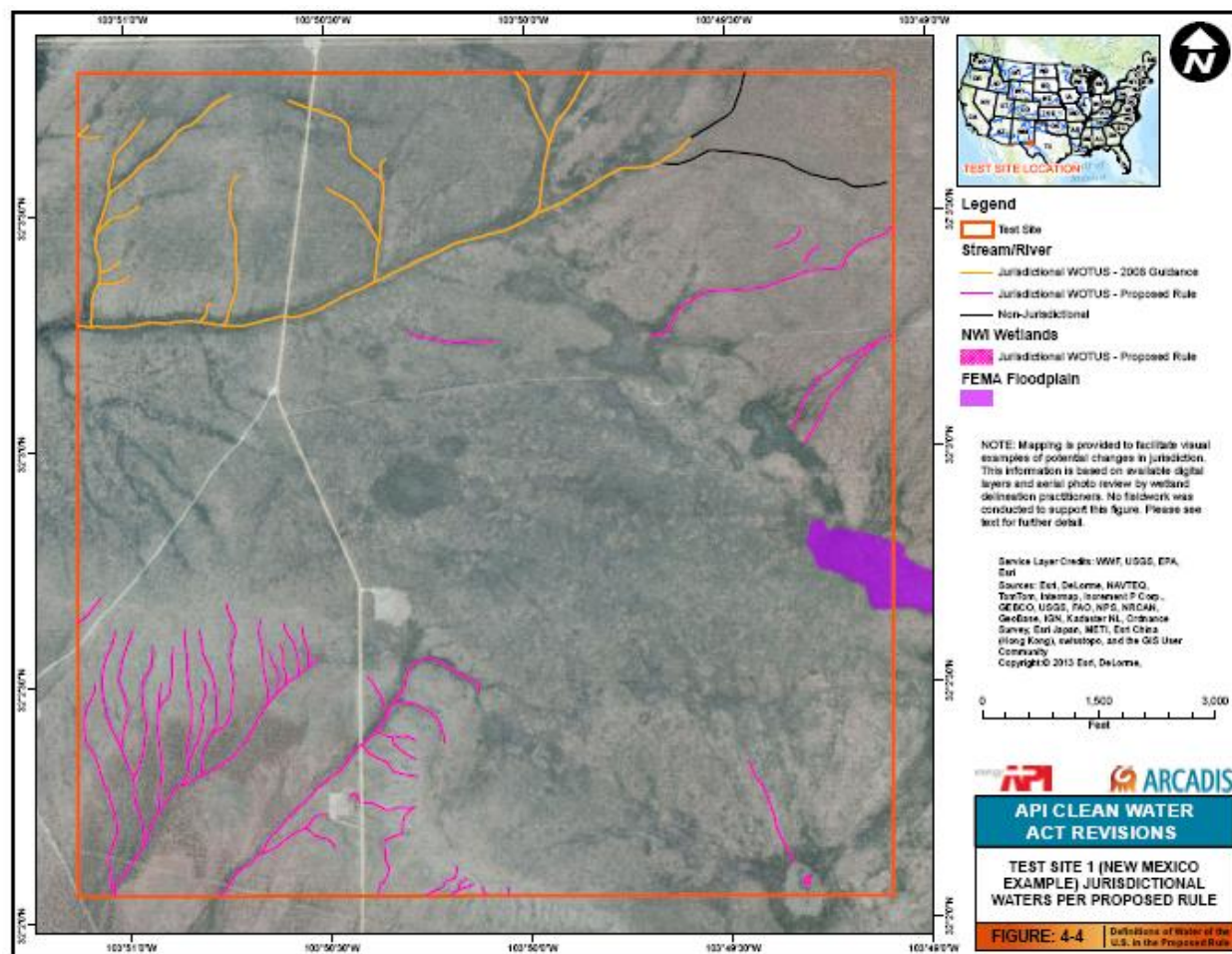


Figure 4-4 Test Site 1 (New Mexico Example) Jurisdictional Waters Per Proposed Rule

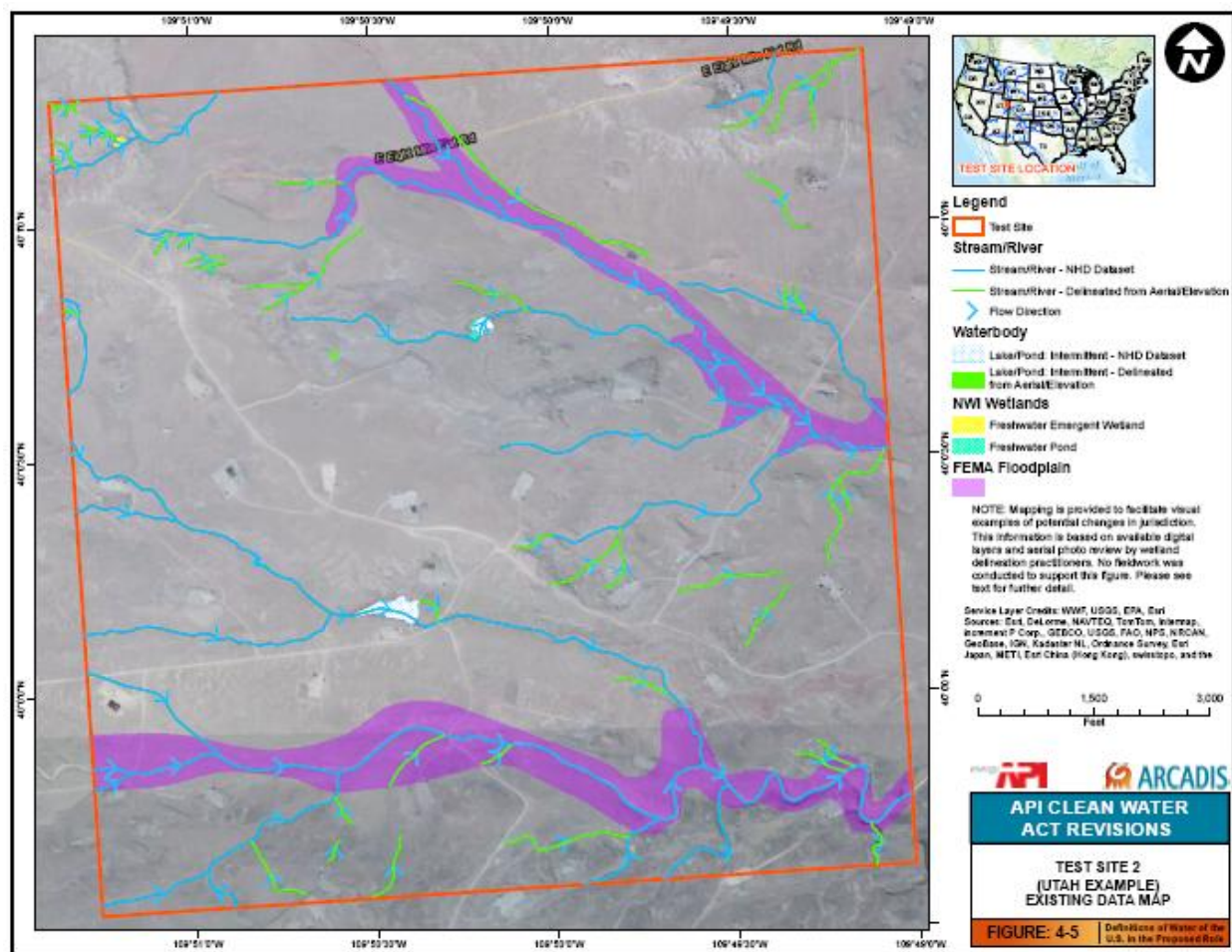


Figure 4-5 Test Site 2 (Utah Example) Existing Data Map

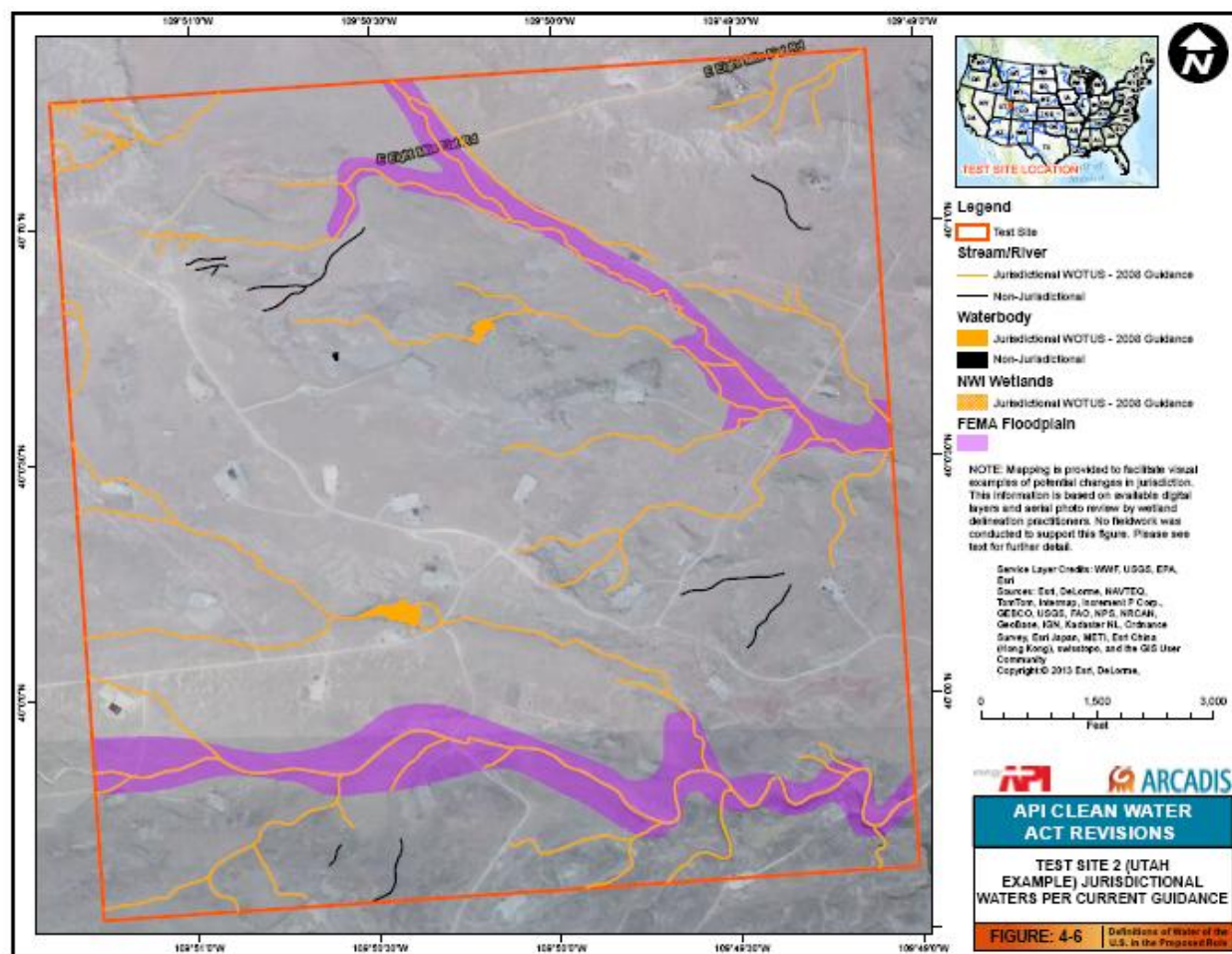


Figure 4-6 Test Site 2 (Utah Example) Jurisdictional Waters Per Current Guidance

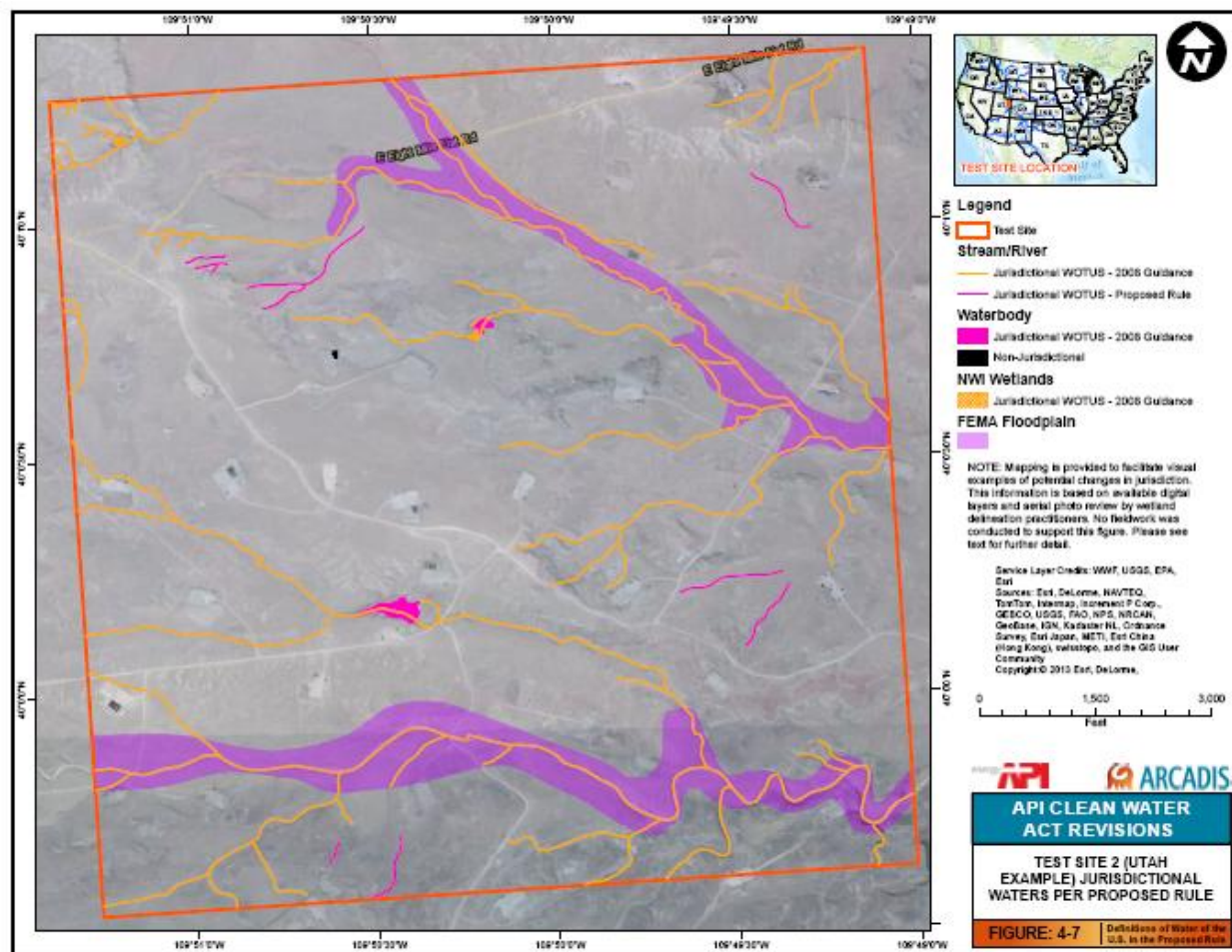


Figure 4-7 Test Site 2 (Utah Example) Jurisdictional Waters Per Proposed Rule

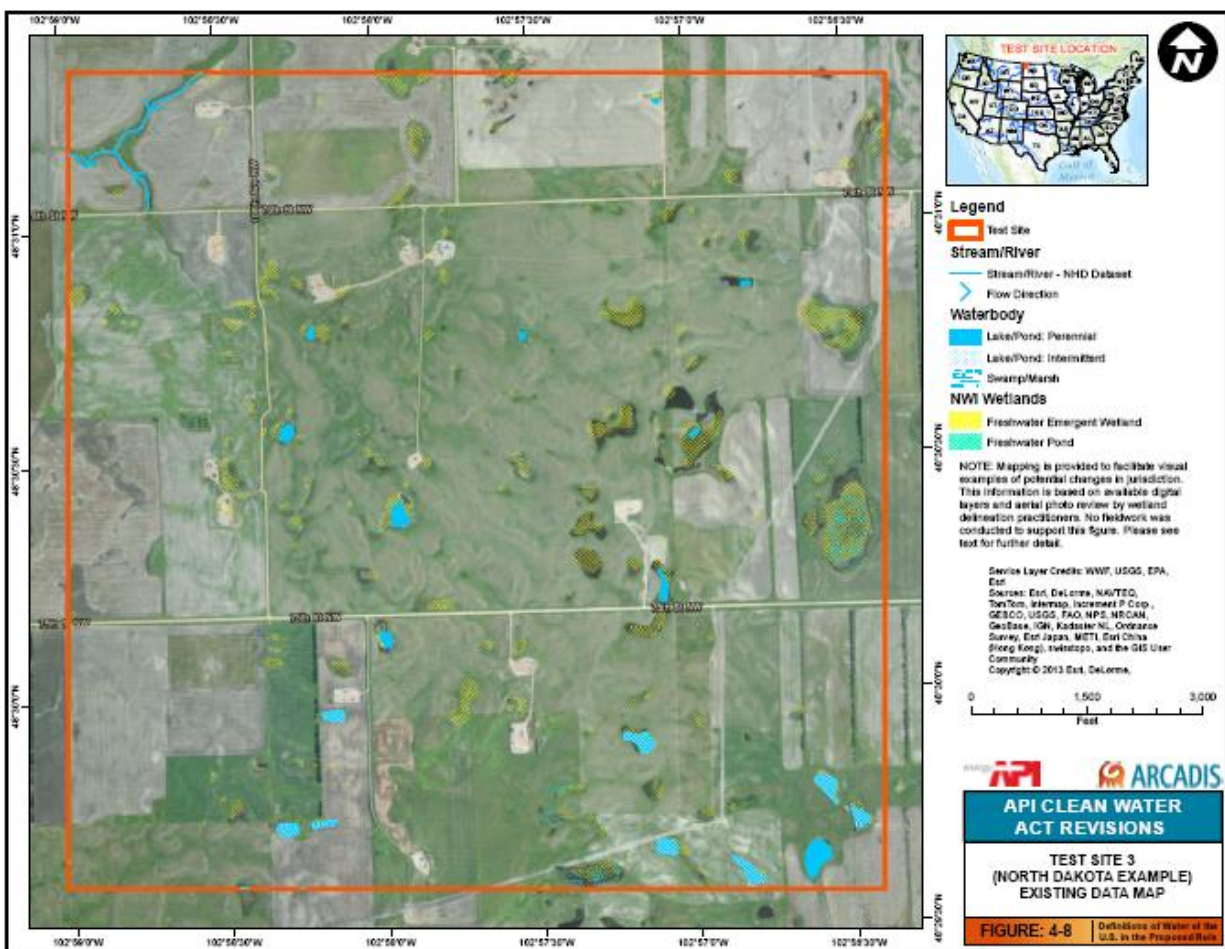


Figure 4-8 Test Site 3 (North Dakota Example) Existing Data Map

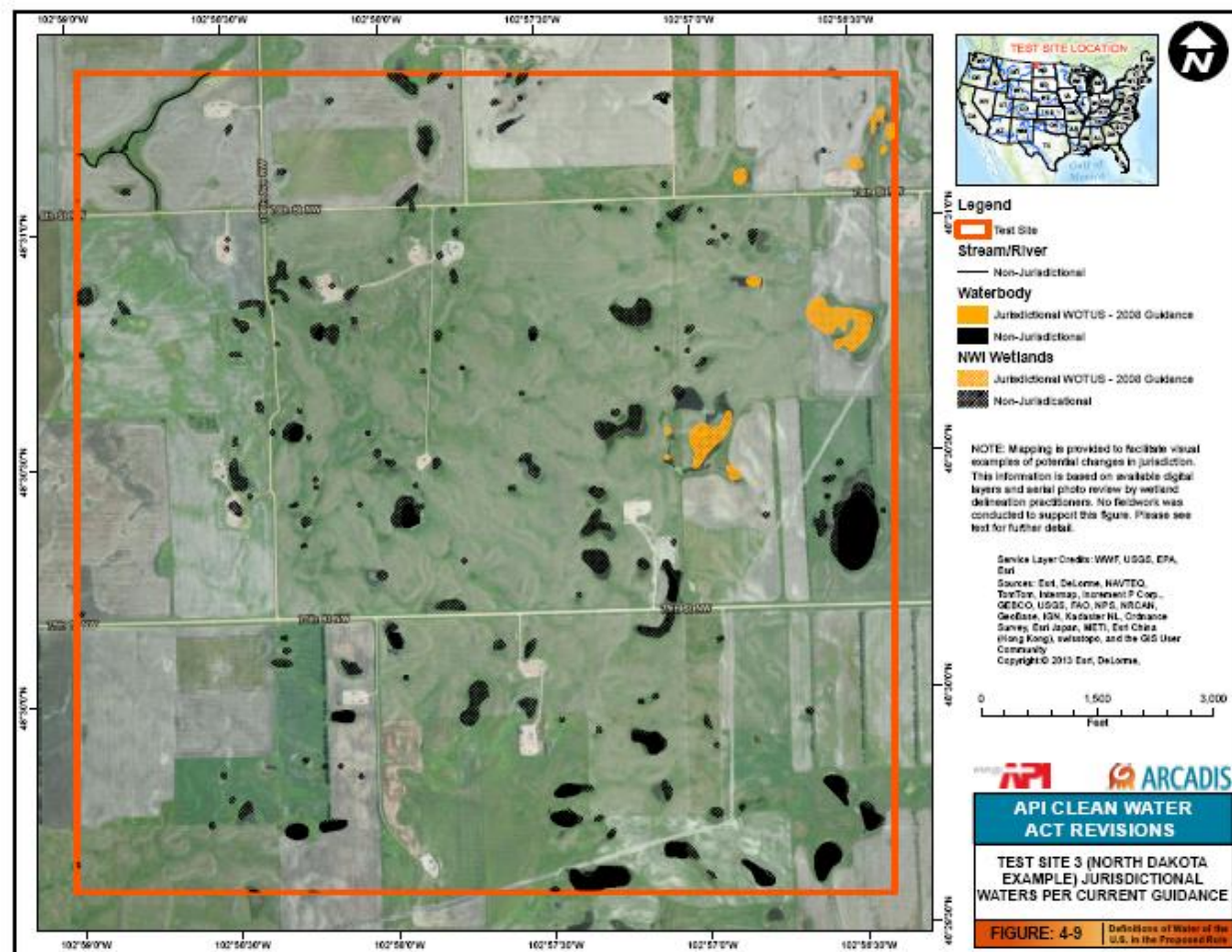


Figure 4-9 Test Site 3 (North Dakota Example) Jurisdictional Waters Per Current Guidance

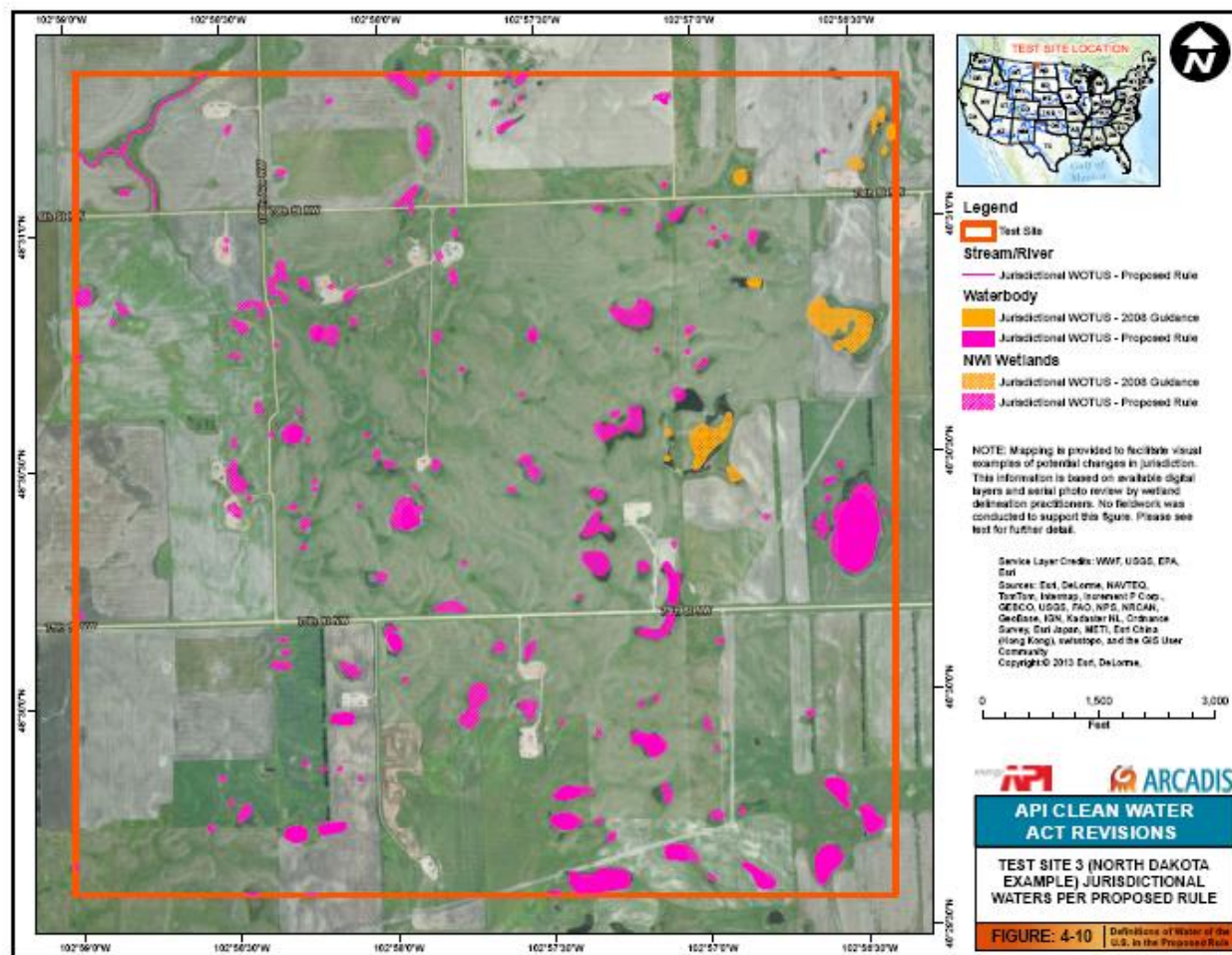


Figure 4-10 Test Site 3 (North Dakota Example) Jurisdictional Waters Per Proposed Rule

4.1.2.1 Test Area 1 New Mexico

With a landscape characteristic of dry regions, results in New Mexico found an increase of approximately 204 percent to the linear feet of jurisdictional features under the Proposed Rule due to the inclusion of discontinuous ephemeral streams. Test area 1 is located in the Permian Basin approximately 21 miles southeast of Loving, New Mexico. The area is located approximately 6.5 miles northeast of the Pecos River, which is the closest traditional navigable water (TNW). The area has numerous ephemeral drainages and isolated wetlands are commonly encountered. In the southern portion of the site, some of the ephemeral drainages are discontinuous. It is unclear if the ephemeral drainages in the northern portion of the area have a continuous bed, bank, and ordinary high water mark (OHWM) connection to the Pecos River – aerial imagery indicates a possible loss of bed, bank, and OHWM connection River adjacent to where the drainage is crossed by State Line Road.

WOTUS – Current Practice/2008 Guidance	Linear Feet	National Hydrography Dataset (NHD) Acres	National Wetland Inventory (NWI) Acres
Non-Jurisdictional	55,047	0.00	0.25
Jurisdictional	24,945	0.00	0.00
TOTAL JURISDICTIONAL:	24,945	0.00	0.00
WOTUS – Proposed Rule Imposed	Linear Feet	NHD Acres	NWI Acres
Non-Jurisdictional	4,224	0.00	0.00
Jurisdictional – 2008	24,945	0.00	0.00
Added Jurisdictional - Proposed Rule	50,823	0.00	0.25
TOTAL JURISDICTIONAL:	75,769	0.00	0.25
PERCENT INCREASE:	204%	0.00%	0.00%

Table 4-1 Test Area 1 New Mexico

Streams and wetlands in the southern portion of the New Mexico test area are isolated from a TNW, as are tributaries in the northeast. Therefore, these features are classified as non-jurisdictional under current practice. Streams in the northeast portion of the area are either discontinuous or likely do not have OHWM, and are classified as nonjurisdictional under current practice. Tributaries on the north and northwest of the New Mexico test area potentially have a continuous bed, bank, and OHWM connection drain to the Pecos River, and are classified as jurisdictional under current practice. All features on the area would be jurisdictional under the Proposed Rule, except the drainages in the northeast portion of the area that are unlikely to have OHWM, because they would meet the tributary definition or are fed directly by features that would be defined as tributaries.

The northern drainage may lose bed, bank, and OHWM connectivity approximately two miles away from the Pecos River near State Line Road. If this drainage is discontinuous and would not be jurisdictional under current practice, then the percent increase in jurisdictional streams under the Proposed Rule would increase significantly from 204 percent as all features on the site would shift from non-jurisdictional to jurisdictional.

4.1.2.2 Test Area 2: Utah

Examination of conditions in Utah reveals similar additions to jurisdictional waters as New Mexico per the identification and delineation of ephemeral isolated tributaries, though to a lesser degree. While this area had a smaller increase than the New Mexico area, the increase is more than double the 2.7 percent increase identified by the Agencies. Test Area 2 is located in the Uinta Basin, approximately 34 miles southwest of Vernal Utah. The area is located approximately one mile northwest of the Green River, which is the closest TNW. The test area has numerous ephemeral drainages and 2 isolated wetland areas. Moreover, it is located in the arid west where ephemeral drainages and isolated wetlands are common features. Some of the smaller ephemeral drainages are discontinuous. It is unclear if the other ephemeral drainages have a continuous bed, bank,

and OHWM connection to the Green River – aerial imagery indicates possible loss of a bed, bank, and OHWM connection approximately 100 meters north of the Green River Flood Plain.

WOTUS – 2008 Guidance	Linear Feet	NHD Acres	NWI Acres
Non-Jurisdictional	8,505	0.16	0.00
Jurisdictional	106,612	3.79	1.34
TOTAL JURISDICTIONAL:	106,612	3.79	1.34
WOTUS – Proposed Rule Imposed	Linear Feet	NHD Acres	NWI Acres
Non-Jurisdictional	0.00	0.16	0.00
Jurisdictional – 2008	106,612	3.79	1.34
Added Jurisdictional - Proposed Rule	8,505	0.00	0.00
TOTAL JURISDICTIONAL:	115,118	3.79	1.34
PERCENT INCREASE:	8%	0.00%	0.00%

Table 4-2 Test Area 2 Utah

Only the isolated stream and wetland features within the Utah test area would be classified as non-jurisdictional under current guidance as the remaining drainages demonstrate continuous bed, bank, and OHWM connection with the nearby Green River; this accounts for the relatively modest increase percentage in jurisdictional areas. After the Proposed Rule, all isolated features would be classified as jurisdictional with the exception of the small ponded feature which fails to demonstrate any connectivity.

The northern drainage may lose bed, bank, and OHWM connectivity approximately 100 meters upgradient of the Green River floodplain. If this drainage is discontinuous and would therefore not be jurisdictional under current practice, then the percent increase in jurisdictional streams under the Proposed Rule would increase from 8 percent to approximately 135 percent.

4.1.2.3 Test Area 3: North Dakota

The increased jurisdictional features in North Dakota differed from previous test area with a 559 percent increase associated with isolated water bodies and wetland features as well as an increase in linear tributary features. Test Area 3 is located in the Williston Basin, approximately 5 miles southwest of McGregor, North Dakota. The area is located approximately 22 miles north of the Missouri River, which is the closest TNW.

The area has numerous isolated drainages, waters, and wetlands – the majority of these do not have surface water connections to a TNW. A few of the features in the Northeast portion of the area have continuous confined surface hydrologic connection (e.g., wetland or upland ditches/swales) connecting to the White Earth River (a tributary of the Missouri River). The area is located in the Northwestern Glaciated Plains ecoregion – a region named by the Agencies for consideration of de facto significant nexus jurisdiction of all “other waters” within an ecoregion.

WOTUS – 2008 Guidance	Linear Feet	NHD Acres	NWI Acres
Non-Jurisdictional	3,306.57	34.27	82.44
Jurisdictional	0.00	0.44	14.76
TOTAL JURISDICTIONAL:	0.00	0.44	14.76
WOTUS – Proposed Rule Imposed	Linear Feet	NHD Acres	NWI Acres
Non-Jurisdictional	0.00	0.00	0.00
Jurisdictional – 2008	0.00	0.44	14.76
Added Jurisdictional - Proposed Rule	3,306.57	34.27	82.44
TOTAL JURISDICTIONAL:	3,306.57	34.71	97.19
PERCENT INCREASE:	0.00%*	99%	559%
* A percent increase from zero cannot be calculated mathematically; however, assuming even a small baseline of .01 acres, this could be reported as a 3300% increase.			

Table 4-3 Test Area 3 North Dakota

Wetland features in the northeastern portion of the North Dakota test area, north of 76th St NW, appear to have a continuous confined surface hydrologic connection, as captured through upland or wetland swales, to the White Earth River which eventually connects to the Missouri River. Therefore, these features may be considered jurisdictional WOTUS under current practice. The remaining streams, swales, and wetlands on the North Dakota test area are either themselves isolated or flow into isolated features that are not named as nor connected to a TNW. Therefore, these features would be non-jurisdictional under current practice. All wetland and NHD features on the North Dakota test area would be jurisdictional under the Proposed Rule, using the assumption that the Agencies will extend significant nexus to all waters and wetland features in the Northwestern Glaciated Plains ecoregion watersheds.

4.1.2.4 Conclusions

Quantitative analysis of the application of the Proposed Rule conducted at the three test areas found increases ranging from 8 percent to over 200 percent for linear tributary features and increases including 559 percent for isolated wetland features and an additional 3300 linear feet of tributaries. The three test areas clearly demonstrate that the Agencies' estimate of a 2.7 percent increase in jurisdiction is likely a gross underestimate. Each area demonstrated a substantial increase in jurisdictional status when considering area-specific significant nexus evaluations over isolated waters or wetlands or discontinuous ephemeral streams. These increases range from a minimum of approximately 8 percent to as much as approximately 550 percent or higher. While these test cases are not intended to be directly extrapolated to represent the amount of increase in jurisdictional waters that would occur nationwide under the Proposed Rule, they serve to highlight that even with fairly conservative assumptions regarding jurisdiction under current practice, the increase in jurisdictional features under the Proposed Rule is likely

significantly higher than the 2.7 percent estimated by the Agencies, especially in regions important to oil and gas development. (p. 85-107)

Agency Response: See Summary Responses to Topic 11.2 and Topic 14.1 on site-specific examples.

11.2.140 **4.3 A desktop study by another API member company in the mid-Continent demonstrated considerably increased infrastructure impacts under the Proposed Rule.**

Another API member company independently conducted a desktop study to evaluate potential WOTUS under the Proposed Rule using infrastructure intersections with 1) the high resolution National Hydrography Dataset (“NHD”, 1:24,000 scale) representing what most District Corps offices currently use and 2) high-resolution Digital Elevation Models or Lidar (5m resolution) that identifies a greater number of ephemeral streams relative to the high-resolution NHD.

The first study concerned an area in the Mid-Continent with 379 miles of pipelines and 63 well pads. Under the 2008 Guidance, pipelines intersected with mapped streams from the NHD data set at 418 locations (applicable NWP applied). Under the Proposed Rule, pipelines would intersect Lidar-mapped features at 2,043 locations – nearly a 400 percent increase, and 5 times as much as under the 2008 Guidance; however, approximately 35 percent of the Lidar mapped features fell within cultivated fields and likely would not be jurisdictional under the new rule leaving 1,327 locations. Of those, 43 well pad site locations were within cultivated fields and likely non-jurisdictional. No mapped streams appeared to have been located within well pad site locations. In short, under the Proposed Rule as written, over 1284 sites would be jurisdictional – over three times as many as under the 2008 Guidance. A second study in the Delaware Basin in the Southwest U.S. consisted of mapping three individual study areas consisting of 113 miles of pipelines and 222 well pad sites. Under the 2008 Guidance, pipelines intersected NHD dataset mapped streams at five locations that would likely be jurisdictional and fall within applicable NWPs.

The Proposed Rule would feature a considerable increase:

- Pipelines would intersect a high-resolution DEM mapped features at 312 locations;
- Based on aerial photographs relying on vegetation indicators, etc., 226 of the high resolution mapped crossings did not appear to meet the definition of a tributary and would likely not be jurisdictional under the new rule leaving 86 locations;
- High-resolution features were depicted to encroach within or cross 79 well pad sites; however, based on aerial photographs, 54 of the features did not appear to meet the definition of a tributary and would likely not be jurisdictional under the new rule;

- No mapped streams appears to have been located within well pad locations; and
- No National Wetland Inventory wetlands were crossed by any pipelines or within the boundaries of pad sites.
- In each of these two studies, the high-resolution imagery picked up very subtle changes in topography including vegetation patterns, topographic gradients and indications of channelization. Upon closer examination of the corresponding aerial photos and topographic maps looking both upstream and downstream of the channel crossings, the highly trained wetlands consultant eliminated many of the high-resolution mapped features if they did not exhibit any indications of being a tributary.
- These two desktop studies indicate that, even under relatively conservative estimates, the Proposed Rule and its overly broad criteria for ephemeral streams would result in infrastructure intersecting with an increasing number of potential WOTUS, and likely requiring increased permits. (p. 121-122)

Agency Response: See Summary Responses to Topic 11.2 and Topic 14 on site-specific examples

11.2.141 5. The Proposed Rule will cost the oil and natural gas industry at least several hundred million dollars annually and the costs could easily approach billions depending upon how the rule is implemented.

The Proposed Rule will have a significant impact on the oil and natural gas industry.

5.1 Every sector of the oil and natural gas industry will be affected by this Proposed Rule.

Every sector of the oil and natural gas industry will be affected by the Proposed Rule, and the increased costs and schedule delays associated with the new regulatory requirements would impact both new capital projects and ongoing operations and maintenance projects for existing facilities. These impacts would not be limited to the oil and gas industry as they would extend across the U.S. national economy.

5.1.1 The Upstream sector may bear the most significant costs due to sheer volume of permitting accompanying each oil or natural gas well site, and the increasing amount of onshore development.

It is anticipated that the upstream sector of the oil and natural gas industry would experience the most significant effects. The upstream sector includes the exploration and production of crude oil and natural gas. In contrast to stationary facilities such as refineries, which may have been sited decades earlier near major waterways and have had many years to conduct detailed environmental studies around them, upstream work is often conducted in remote headwater areas or arid regions, and on shorter timelines. The work generally entails the drilling of exploratory wells, as well as subsequently drilling and operating the wells that bring the crude oil and/or natural gas to the surface.

Upstream activities include the design and construction of exploratory and production areas – including access roads, well pads, pipelines, and temporary storage areas. In addition to direct impacts such as cost increases and schedule delays associated with project permitting, indirect impacts include more difficult access and production design over time as production areas develop. While the avoidance of jurisdictional areas initially may be practical, the increased density of development through time coupled with the increased extent of jurisdictional waters will result in increasingly difficult scenarios for avoidance of WOTUS. Alternative surface right acquisitions or other cooperative land use agreements may be required to avoid impacts to jurisdictional areas.

The direct cost impact is expected to be hundreds of millions of dollars and the indirect costs associated with lost production, lost jobs, and lost land/lease value, from permitting delays and litigation are expected to reach billions of dollars affecting major elements of the U.S. economy. (p. 121-123)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.3, 11.3.1, and 11.4 on costs.

11.2.142 **5.1.2 The Proposed Rule will also increase costs for midstream and downstream infrastructure and facilities.**

Portions of the midstream sector will also be significantly affected by the Proposed Rule. Midstream activities involve transportation, storage, and wholesale marketing of crude oil. In particular, pipeline construction for distribution would be impacted by the increased jurisdictional area under the Proposed Rule, resulting in permit delays and/or possible nullification of the utility of nationwide permits for pipeline construction. Individual permit costs for pipelines would be extraordinarily high. Midstream facilities may also be significantly impacted economically if man-made ditches and surface impoundments used at their plant sites are determined to be WOTUS. Future plans for expansion, maintenance, or site remediation may be restricted due to application of jurisdiction over artificial impoundments, ditches, and canals.

The downstream sector involves the refining of crude oil and the processing of natural gas, as well as marketing and distribution of finished products such as gasoline and diesel. These facilities would be affected by the need for increased SPCC plans and associated facility changes to address containment structure construction and maintenance, as well as uncertainty concerning the extent and constraints of the Proposed Rule's exemptions for ponds and lagoons. If the Agencies classify manmade ditches and impoundments used at refineries and chemical plants as WOTUS (which is currently unclear because of ambiguities in the defined exclusions), then such facilities could incur significant capital and operating costs and/or lose the utility of units such as ponds and lagoons owing to the necessity of meeting ambient water quality standards within them.

The continued exemption of waste treatment and wastewater facilities is critical to minimizing the impact of the Proposed Rule to both downstream facilities and oil and gas sector as a whole. (p. 124)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.3, 11.3.1, and 11.4 on costs.

11.2.143 **5.2 The costs of the Proposed Rule to the oil and natural gas industry will be magnified due to recently increased growth in production and infrastructure.**

The Proposed Rule underestimates economic impacts to the oil and natural gas industry by relying on permitting data from a time predating significant growth in U.S. onshore energy production and associated infrastructure as well as data collected during the recession.

5.2.1 Current U.S. onshore production data indicates far greater impacts to the oil and natural gas industry than estimated by the Agencies due to the recent dramatic growth in domestic onshore development.

The time period from fiscal year 2009 to 2010 selected by the Agencies for analysis leads to dramatic underestimates of the impact of the Proposed Rule on the oil and natural gas industry. From 2008 to 2012, unconventional resource development allowed the U.S. to add nearly 1.2 million barrels per day in crude oil production capacity.¹⁰⁹ Similarly, since 2008, the U.S. has added over 50,000 barrels of oil equivalent (boe) per day of natural gas liquids (NGL) production.¹¹⁰ By 2012, the U.S. was the world's second largest oil producer and the largest producer of natural gas, producing a total of 24.1 trillion cubic feet of dry natural gas.¹¹¹ The U.S. is projected to overtake Saudi Arabia as the world's largest oil producer around 2020.¹¹² The cost impact should be re-estimated to rely on more representative values that reflect current production. (p. 125)

Agency Response: The agencies have updated the jurisdictional determinations and permit data years used in the economic analysis. See Summary Response to Topic 11.2 and the Economic Analysis.

¹⁰⁹ Energy Information Administration (EIA) – Monthly Energy Review available at https://www.eia.gov/totalenergy/data/monthly/pdf/sec3_3.pdf

¹¹⁰ EIA - Monthly Energy Review available at https://www.eia.gov/totalenergy/data/monthly/pdf/sec3_3.pdf

¹¹¹ EIA - Monthly Energy Review available at https://www.eia.gov/totalenergy/data/monthly/pdf/sec3_3.pdf

¹¹² International Energy Agency (IEA), November 2013.

11.2.144 5.2.2 Infrastructure investments accompanying the additional growth in domestic energy production will also require additional permits that were not considered by the Agencies' economic estimates.

To manage this growth, between 2010 and 2013, Information Handling Services, Incorporated (IHS) estimates that the capital spending in oil and natural gas midstream and downstream infrastructure has increased by 60 percent, from \$56.3 billion in 2010 to \$89.6 billion in 2013.¹¹³ As IHS noted, "Many of the major oil and gas infrastructure investments made for the past 30 years have been premised under the assumption of decreasing domestic production, increasing energy imports, and the need to move imported energy from coastal receiving ports to inland demand centers. A large portion of the projects developed during this sustained infrastructure investment from coastal receiving ports to inland demand centers. A large portion of the projects being developed during this sustained infrastructure investment period will shift the U.S. toward being energy trade balanced and add key infrastructure segments that will enable growing energy production in the Midcontinent region to reach demand centers on the US Gulf Coast and Eastern Seaboard."¹¹⁴

IHS estimates that \$85 – 90 billion of direct capital will be allocated toward oil and natural gas infrastructure in 2014, and that by 2025, cumulative spending could range from \$890 billion in the base case to \$1.15 trillion in the high production case.¹¹⁵ It should be noted that the base case does not assume restrictive development policies that enhance uncertainty. Permitting according to the Proposed Rule on Waters of the U.S. could jeopardize these developments by creating the delays and uncertainties that discourage investors. (p. 125-126)

Agency Response: The agencies believe the rule will expedite the permit review process in the long-term by clarifying jurisdictional matters that have been time-consuming and cumbersome for field staff and the regulated community for certain waters in light of the 2001 and 2006 Supreme Court cases. The Corps' Nationwide Permit program, which authorizes Clean Water Act Section 404 discharges that would have no more than minimal adverse impacts to aquatic resources, is available for activities that qualify.

11.2.145 5.4.2 Permitting will become more time-consuming and expensive due to both increased jurisdictional features and their lack of clarity.

As the number of jurisdictional features increase, so increases the probability that any given project will impact one or another jurisdictional feature, thus increasing its nominal 'impact' as defined under the Proposed Rule and thus the need for additional permits

¹¹³ IHS, "Oil and Natural Gas Transportation & Storage Infrastructure: Status, Trends, & Economic Benefits," 2013.

¹¹⁴ IHS, "Oil and Natural Gas Transportation & Storage Infrastructure: Status, Trends, & Economic Benefits," 2013, p. 3.

¹¹⁵ IHS, "Oil and Natural Gas Transportation & Storage Infrastructure: Status, Trends, & Economic Benefits," 2013.

(particularly Section 404 permits for well sites). Nationwide Permits (including NWP 12 for linear transportation projects like roads and well pads) will continue to offer efficiencies over individual permits. However, as shown in the Section 4, the Proposed Rule will likely require operators to obtain many more permits than before. Projects that earlier qualified for a general permit may now require an individual permit; those that did not require a permit at all may now have to apply for prior construction notice under a general permit program. This gradual shifting in permit structure means an overall increase in time spent seeking permits, as well as costs for desktop and field work for site reviews, preparation of documentation, compensatory mitigation and other costs, as detailed in this document. The impacts are likely to be greater—and less predictable—for upstream exploration and production activities in remote areas far from traditional navigable waters.

This is true not only of federal dredge-and-fill (CWA §404) permits. Since a greater proportion of conveyances and wetlands are drawn into the Proposed Rule, the scope and number of, National Pollutant Discharge Elimination System (CWA §402) and other requirements and restrictions under water quality standards and total maximum daily load programs (CWA §303) could also increase significantly. (p. 133)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4.

11.2.146 5.4.3 Mitigation requirements will increase due to increased jurisdictional features.

An increase in jurisdictional wetlands will also require an increase in compensatory mitigation for wetland impacts pursuant to a general permit or individual permit. Particularly for resource-dependent facilities such as upstream oil and gas operations that must be located over the target oil zone, the opportunity to avoid WOTUS is limited. The increased area of WOTUS will further restrict design and access opportunities and mitigation will be required where impacts are unavoidable. These costs are described in Section 3.1.2.2. (p. 133)

Agency Response: See Summary Responses to Topics 11.3 and 11.3.1 on 404 mitigation costs.

11.2.147 5.4.5 Impoundment costs will increase.

The Proposed Rule would include all impoundments of a traditional navigable water, interstate water, the territorial seas or a tributary as WOTUS. The addition of tributaries upstream of irrigation diversion, dams, reservoirs and other impoundments as WOTUS will create additional jurisdictional areas that previously did not exist, particularly in western states where water is redistributed from its source watershed across vast upland areas to support farming and other activities. These newly created WOTUS are expected

to occur in oil and gas producing areas such as California’s central valley where significant oil and gas production occurs in close proximity to intense agricultural production. (p. 134)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The final rule includes several changes to provide the additional clarity requested. The changes include identifying the specific functions to be assessed 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. See Summary Responses to Topics 11.2, 11.3, 11.3.1, and 11.4 on costs.

11.2.148 5.4.6 Expanded remediation considerations are also likely to yield increased expenditures.

A significantly expanded WOTUS definition would result in a greater number of features requiring more stringent remediation and restoration. If remediation is required in an area supporting a jurisdictional water that previously would not have been considered jurisdictional, the regulatory requirements would increase significantly, though the change in the regulatory status of the feature would not be expected to change the cleanup goals. As such, the increase in regulatory oversight would increase the cost and time required to complete the remediation without providing any significant additional benefit to the environment. (p. 134)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The final rule includes several changes to provide the additional clarity requested. The changes include identifying the specific functions to be assessed 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. See Summary Responses to Topics 11.2, 11.3, 11.3.1, and 11.4 on costs.

11.2.149 5.5 Permitting Cost Breakdown

As discussed in Section 4, additional costs for any sort of new construction – be it roads, wells, pads, pipelines, tanks, facilities, crossings, discharges, intakes, flood control, etc. – are expected to be significantly higher than the estimates in the Economic Analysis for the Proposed Rule.

The original Economic Analysis for the Proposed Rule is largely constrained to Section 404 permitting and mitigation costs; consequently, it fails to recognize the myriad of related costs necessary to support that permitting. For example, biological surveys, Endangered Species Act (ESA) Section 7 documentation preparation, cultural resource studies, Section 106 review, and state permitting fees for Section 401 Water Quality Certification add significant cost to Section 404 permitting.

Similarly, the habitat restoration costs appear to have excluded a number of required elements associated with high quality mitigation including the cost and time required to 1) identify and assess potential mitigation sites, 2) prepare site specific restoration plans, and 3) conduct long-term maintenance, monitoring, and reporting. The Agencies' identified costs appear to be primarily based on installation costs with minimal maintenance, monitoring and reporting. Maintenance, monitoring, and reporting costs are all significant. In fact, a lack of maintenance is widely recognized as the primary cause of failed mitigation restoration. (p. 137)

Agency Response: The agencies have taken into consideration costs associated with other CWA programs. See Summary Response for Topic 11.4.

11.2.150 7. Conclusions

The Proposed Rule should be reworked substantially to achieve the reported justification for the rulemaking. While seeking to clarify definitions of WOTUS, the Agencies have used vague unmeasured terms, excluded criteria for assessing conditions driving jurisdiction, and broadened the extent of jurisdiction over water bodies and wetlands beyond the limits of jurisdiction defined in the CWA as currently practiced. The basis and methodology of the Agencies analyses are flawed and incomplete. This extension of jurisdiction will have significant direct and indirect financial and developmental impacts on the regulated community costing billions of dollars, jeopardizing significant elements of the national economy and costing jobs and slowing attainment of national energy independence.

Developing a comprehensive economic impact analysis of the Proposed Rule is virtually impossible until the Agencies define and justify with supporting literature the measurable, quantifiable criteria that they are planning to use to determine jurisdiction. Once identified, these criteria need to be clearly presented in the Proposed Rule. Once defined, the economic impact can be quantified, using some of the methods demonstrated in this document.

Moreover, the Agencies' approach in quantifying the potential increase in jurisdictional waters in the 2014 Economic Analysis significantly underestimates the potential increase in jurisdictional waters by relying solely on data records contained in a single government database, assuming the Proposed Rule would not impact the number of permit filings, and using data from 2009 to 2010 (which are not relevant to current stronger economic conditions). API case studies evaluated in preparation of this comment letter found a range of increased jurisdiction from 8 percent to greater than 559 percent in three active oil production areas following the Proposed Rule (See Section 4). Although these case studies should not be extrapolated to definitively represent the entire nation, the discrepancy between these independent estimates and the Agencies' estimates are significant enough to call into question the 2.7 percent value cited by the Agencies – particularly in light of the assumptions applied and procedural weaknesses discussed above. In order to develop a more representative nationwide cost estimate, the Agencies

should conduct a comparable nationwide assessment employing the approach used for these case studies.

With respect to permitting costs, the Agencies' Economic Analysis noted the four types of CWA permitting costs: 1) permit application costs; 2) compensatory mitigation costs; 3) permitting time costs; and 4) impact avoidance and minimization costs. It estimated only the first two of these.

Errors in the Agencies methodology resulted in the underestimation of the following: 1) the number of additional permits required under the Proposed Rule; 2) the increase in administrative costs for permit processing; 3) the average cost for permit application preparation; 4) the average cost for mitigation; and 5) the costs of other regulatory programs affected by the definition of WOTUS. In fact, the actual increase in costs resulting from permit application fees, compensatory mitigation, SPCC, and NPDES alone would be approximately three times greater than the Agencies' proposed \$133.7 - \$231 million.

The Agencies' Economic Analysis also overestimated the public benefits of the Proposed Rule. The Proposed Rule will produce almost no public benefit in states that already protect "isolated waters" that are not currently WOTUS. Even in states that do not currently protect the waters that would be covered under the Proposed Rule, the benefits transferred in the Economic Analysis are largely speculative as they do not meet EPA's own Guidelines for benefit transfer. The Agencies therefore should have conducted an original wetlands valuation study for the different regions of the country, as required by EPA's Guidelines.

Even if the ten wetland valuation studies utilized met EPA's Guidelines for benefit transfer, the Agencies' estimate of benefit would be reduced by more than \$100 million (roughly 40 percent) by excluding just one of the studies, which is a clear outlier from the rest. Similarly, the benefits estimate from avoiding oil spills under CWA 311 is highly speculative, completely lacking in proper support from realistic data, and substantially overstates the benefits of the Proposed Rule.

The potential increase in jurisdictional waters under the Proposed Rule was also independently evaluated analyzing actual jurisdictional determinations at various locations in the U.S. ARCADIS evaluated the potential increase in jurisdictional waters using 3 test areas in the U.S. and utilizing geographical information system (GIS) mapping (see Section 4). The scenarios demonstrated a range of jurisdictional increases from 8 percent to over 550 percent. All of these studies show increased jurisdiction significantly larger than the 2.7 percent nationwide increase reported in the Agencies' report.

The stakes for the Proposed Rule are incredibly high. Even using the Agencies' likely low estimate of a 2.7 percent increase in permitting, the Proposed Rule will likely cost industry, the states, local governments and home owners billions of dollars. Assuming that 2.7 percent of onshore wells are not drilled due to onerous permitting requirements,

in the first year alone the U.S. will lose \$8 billion in GDP, including 67,200 jobs, \$34.5 billion in labor income, and \$1.3 billion in government revenue. Production of oil could be expected to decrease by 229,000 barrels/day and natural gas production would decrease by 1.37 billion cubic feet per day.

The Proposed Rule should be suspended and reworked until the identified deficiencies in the ambiguous language of the rule and the methodologies employed to assess the impacts of the rule are thoroughly redeveloped to concisely and accurately represent the regulatory and cost impacts on the regulated community. Quantitative, measureable criteria must be provided such that the regulated public can effectively delineate WOTUS when planning and designing upcoming projects. This benefits both the environment as well as the regulatory agencies by facilitating proactive avoidance of impacts to WOTUS. When their criteria have been developed for all areas of the U.S., then a comprehensive economic analysis must be conducted. The analysis must start with a defensible study of the anticipated increase in jurisdictional waters nationwide. This should be based on analysis of actual surface features rather than extrapolated from historic jurisdictional determinations in the ORM2 database. The increase is expected to be significantly higher than 2.7 percent.

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

- 11.2.151 Once a more accurate value for the increase in WOTUS has been developed, then a comprehensive economic analysis is appropriate to allow the public and the decision makers to fully understand the significant economic impacts the Proposed Rule would have on the U.S. economy. (p. 141-143)

Agency Response: The agencies prepared an economic analysis for informational purposes, and the final decisions on the scope of “waters of the United States” in this rulemaking are not based on consideration of the information or analysis in the economic analysis. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 10 and 11.

Permian Basin Petroleum Association (Doc. #15378)

- 11.2.152 PBPA is concerned that the proposed rulemaking has significant negative economic consequences for the oil and gas industry – the predominantly affected activity sector in the arid west in terms of numbers of potential regulated facilities and associated compliance costs. The improper classification of erosional gullies (not jurisdictional) in the arid west as ephemeral streams has substantial costs for compliance and potential

US EPA ARCHIVE DOCUMENT

permitting delays that would not provide a commensurate return in actual environmental protection. The additional costs and delays due to extensive permitting are simply unnecessary and overly burdensome. Additionally, David Sunding, Ph.D., an economist on the faculty of the University of California-Berkeley, has prepared and published a paper dated May 15, 2014, entitled “Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States” for The Waters Advocacy Coalition. The Waters Advocacy Coalition represents a broad array of industries whose business activities are affected by the Clean Water Act, and ultimately, this proposal. The Executive Summary of this paper states in part “EPA is proposing an expansion of the definition of the term “waters of the United States” to include categories of waters that were previously never regulated as waters of the United States, such as all waters in floodplains, riparian areas, and certain ditches. The inclusion of these waters will broaden the scope of the CWA and will increase the costs associated with each program. Unfortunately, the EPA analysis relies on a flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of the definitional changes. This is compounded by the exclusion of several important types of costs and the use of a flawed benefits transfer methodology, which EPA uses to estimate the benefits of expanding jurisdiction. The errors, omissions, and lack of transparency in EPA’s study are so severe as to render it virtually meaningless. The agency should withdraw the economic analysis and prepare an adequate study of this major change in the implementation of the CWA.” PBPA fully agrees with the conclusions of Dr. Sunding’s study. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4.

Texas Pipeline Association (Doc. #15404)

11.2.153 Not only would such a "catch-all" provision open the door for all manner of insignificant water or land features to qualify for CWA protection, it would also inject substantial confusion and potential for delay, as it would create the possibility for lengthy and detailed analyses, performed on a case-by-case basis, of whether a particular water or land feature had the potential to affect the chemical, physical, or biological integrity of a traditional navigable water located at some other location. We believe that this would be inappropriate and would impose undue burdens and unnecessary delays upon those wishing to engage in construction or development projects.

In comments filed on this docket, the Association of Electric Companies of Texas ("AECT") provides a detailed explanation of how the expanded definition of "waters of the United States" proposed in this rule would exceed the legal authority of the EPA and the Corps of Engineers, would impose substantial new costs on industry, and would

create unnecessary ambiguity, uncertainty, and confusion as to what is and is not a water or land feature covered by CWA permitting requirements. TPA endorses and adopts the comments submitted by AECT on these issues. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. See preamble and Technical Support Document for the legal basis for this rule.

Illinois Coal Association (Doc. #15517)

11.2.154 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. For the ICA and its members, the revised definition of tributaries is particularly troubling. The majority of eastern coal mine sites, including many currently owned and operated by the Associations' member companies, have been in active use for decades, during which time operators have relied on drainage ditches and culvert conveyances to manage stormwater flow and maintain compliance with the CWA section 402 and 404 authorizations. These features are common across surface coal mining sites and, in many cases, would likely have once been part of a natural drainage or tributary. Because the locus of activities at surface mine sites is constantly in flux, mine operations frequently come into contact with these types of features and completion of routine operations and regular expansions will often necessitate some alteration or impact. This has posed few regulatory challenges for the Association's member companies as most of these features have historically been considered outside the realm of CWA jurisdiction. Suddenly bringing these historically exempt and non-jurisdictional features under the lens of CWA sections 402 and 404 would now translate into a significant added regulatory burden and cost for ICA members without any corresponding justification. (p. 10)

Agency Response: The rule does not affect or modify in any way the many existing statutory exemptions under CWA Sections 404, 402, and 502. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Pennsylvania Grade Crude Oil Coalition (Doc. #15773)

11.2.155 The conventional exploration and development activities engaged in by PGCC members carry a small footprint. Well site locations generally involve a small fraction of an acre and under current regulations the permitting and notification requirements for the vast majority of conventional operations are minimal. However, the expanded scope of jurisdictional waters under the Proposed Rule will dramatically increase those requirements. That expanded scope will necessitate both complex general permitting. As noted, the additional costs associated with the permitting requirements will have a significant negative impact upon conventional operations.

In addition to additional costs the additional delay associated with obtaining an individual permit can presently be as much as a year or more. With the demand for individual permitting for many industries expected to increase due to the Proposed Rule, delays for permit approvals are likely to increase by an additional six months or more. Such lengthy delays have critical consequences for oil and gas development. For example, leases may expire before a permit is obtained, resulting in the loss of land position, the loss of signing bonuses and lease payments, and the need to re-sign the lessor (or find another tract of land) at potentially higher rates. Further, the inability to meet a rig schedule could result in the possible loss of a rig and/or the significant costs associated with shutting down and starting up the rig. (p. 7)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. The agencies believe the rule will expedite the permit review process in the long-term by clarifying jurisdictional matters that have been time-consuming and cumbersome for field staff and the regulated community for certain waters in light of the 2001 and 2006 Supreme Court cases. The Corps' Nationwide Permit program, which authorizes Clean Water Act Section 404 discharges that would have no more than minimal adverse impacts to aquatic resources, is available for activities that qualify.

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

11.2.156 (...) Through the definitions of “tributaries”, “adjacent waters” and “other waters”, the proposed rule would expand jurisdiction over features that are not currently jurisdictional. We are concerned that this expansion in jurisdiction will result in delays and increased costs for project planning and permitting for a range of infrastructure projects including natural gas transmission and distribution, electric transmission and distribution, as well as traditional and renewable electricity generation development. (p. 2)

Agency Response: The agencies have used the feedback we received from public outreach efforts as the source of early guidance and recommendations for refining the proposed rule. Specifically, stakeholder input received during public outreach events in combination with the written comments received during the public comment period have reshaped each of the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.”

The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

- 11.2.157 While the agencies intend to provide clarity, in practice the proposal would increase uncertainty regarding jurisdiction. We are concerned that this uncertainty will result in inconsistent application in the field. This uncertainty is a risk to the timing, cost and eventual development of our new infrastructure projects (e.g., natural gas transmission lines and renewable generation). The proposal also could result in uncertainty regarding requirements for existing facilities such as the point of compliance with discharge requirements for existing electricity generating stations and our electric and natural gas transmission and distribution facilities. (p. 2)

Agency Response: The final rule includes several changes to provide the additional clarity requested. The changes include identifying the specific functions to be assessed 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. Along with a narrowing of jurisdiction, the final rule also significantly reduces the uncertainty and number of case-specific determinations that will be required. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Vulcan Materials Company (Doc. #16566)

- 11.2.158 Vulcan respectfully believes that the economic analysis associated with the rule is inadequate given the degree to which the rule will expand CWA jurisdiction. (p. 3)

Agency Response: The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3,

11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Oregon Cattleman's Association (Doc. #5273)

11.2.159 By expanding the scope of jurisdictional "waters of the United States," the Agencies are effectively increasing the number of acres that development projects carried out by landowners will impact. This, in turn, will dramatically increase the "per acre" cost to landowners when applying for permits, making their day-to-day operations more expensive. As a matter of public policy, the Agencies should not exercise their authority in a way that imposes such a great burden on private landowners and the agricultural industry. (p. 7)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. This final rule interprets the CWA to cover those waters that require protection in order to restore and maintain the chemical, physical, or biological integrity of traditional navigable waters, interstate waters, and the territorial seas. This interpretation is based not only on legal precedent and the best available peer-reviewed science, but also on the agencies' technical expertise and extensive experience in implementing the CWA over the past four decades. The rule will clarify and simplify implementation of the CWA consistent with its purposes through clearer definitions and increased use of bright-line rules. The agencies emphasize that, while the CWA establishes permitting requirements for covered waters to ensure protection of water quality, these requirements are only triggered when a person discharges a pollutant to the covered water.

North Dakota Soybean Growers Association (Doc. #14121)

11.2.160 The North Dakota Soybean Growers Association simply does not believe a comprehensive and accurate economic analysis has been compiled to assess the true costs of the proposed exponential jurisdictional expansion for small entities, individuals, and local political subdivisions by the agencies. There will be enormous costs for permits; mitigation devices; time delays; agency reviews; and determinations to small entities, such as townships and counties, for road work and water---bridging activities, including the cleaning and repair of ditches, culvert repair or replacement, and a wide variety of other work that facilitates and relieves local drainage or water---inundation issues. The same requirements will impact rural cities and developments. Farmers and ranchers, along with other property owners, in every jurisdiction, will experience increasing revenue requirements in the form of property, or other, taxes and fee levies. The agencies cannot substantially multiply their jurisdictional authority without significantly increasing regulatory enforcement and oversight costs; that authority is not the agencies' history and cannot be allowed as their future. (p. 6)

Agency Response: This final rule interprets the CWA to cover those waters that require protection in order to restore and maintain the chemical, physical, or

biological integrity of traditional navigable waters, interstate waters, and the territorial seas. This interpretation is based not only on legal precedent and the best available peer-reviewed science, but also on the agencies’ technical expertise and extensive experience in implementing the CWA over the past four decades. The rule will clarify and simplify implementation of the CWA consistent with its purposes through clearer definitions and increased use of bright-line rules. The agencies emphasize that, while the CWA establishes permitting requirements for covered waters to ensure protection of water quality, these requirements are only triggered when a person discharges a pollutant to the covered water. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topic 11 on how the agencies have addressed concerns related to the economic analysis.

- 11.2.161 We fail to find a full discussion about the impacts of new jurisdictional terminology (“neighboring”) and revised definitions (“adjacent,” “tributary,” “riparian areas,” and “floodplain”) on the number of current or future permit applications. For example, the economic-impact assessment uses data from the Corps’ ORM2 (Operations and Maintenance Business information link - USACE) 2009-10 database as the basis for future impact analysis; are the databases for jurisdictional waters compatible? Are they compatible with the EPA’s draft rule categories? Is the analysis smoke and mirrors? (p. 11)

Agency Response: See the Summary Response in Topic 11.2 regarding the ORM2 database. See also the Preamble to the Rule and Topics 2, 3, 4 regarding specific definitions.

Dairy Cares (Doc. #16471)

- 11.2.162 The dairy industry and its operations are currently subject to detailed water quality requirements, and are required to comply with water quality standards, through NPDES permits and waste discharge requirements issued by various California Regional Water Quality Control Boards, the State Water Resources Control Board, and EPA. Implementation of these state and federal programs is costly and has profoundly affected dairies’ water resources and land management practices. Additional regulatory burdens on dairy facilities, which could result from an expansion of the definition of WOTUS under the CWA, will not further improve the goal of protecting water quality, but will only increase costs unnecessarily.

Unfortunately, the Proposed Rule’s attempt to clarify the definition of WOTUS introduces new uncertainty into how and under what circumstances CWA jurisdiction will be asserted to numerous “waters” throughout the nation. With regard to dairy farms, there is tremendous concern that the new definitions in the Proposed Rule could result in improper findings that dairy facilities, or components of dairy facilities, are now

considered to be WOTUS subject to CWA jurisdiction. Such a result would significantly impact the economic viability of California's dairies. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as "waters of the United States."

Ohio Farm Bureau Federation (Doc. #16609)

11.2.163 By the agency's own admission, it has been stated on numerous occasions that the proposed Federal regulation will only expand the scope of jurisdiction by approximately 3 percent. We estimate the Ohio stream miles subject to jurisdiction would increase from the current status of approximately 59,000 miles of digital mapped streams to an estimated 92,000 miles, an increase of approximately 33,000 miles or an increase of 56%. This scope difference alone would vastly increase the costs of the proposed regulation, the duplication of authorities and create confusion for farmers in these geographic areas. (p. 2)

Agency Response: The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Iowa Soybean Association (Doc. #17175)

11.2.164 3. We believe EPAs economic analysis does not represent the actual impact of the rule in each state. EPAs assessment states the rule will increase jurisdiction by 3.2 percent, but apparently that is only a measure of the percentage of requested analyses that would be ruled jurisdictional under the new rule. We believe farmers need to see a graphic analysis of which waters the agency would consider jurisdictional, because we believe the stream miles and acres affected would far exceed a 3.2 percent increase. The economic analysis does not include permitting costs and delays nor the loss of ability to farm certain acres due to increased jurisdiction. We believe the economic analysis should include state by state impacts, including the number of stream miles, land area and location of new jurisdictional acres.

4. Since the rule will expand jurisdiction, we request that an administrative appeals process be developed at the state level to provide farmers the opportunity to question increased jurisdiction on their property and prevent costly legal battles. The process

might include establishing a body such as a State Water Jurisdictional Appeals Board -a science-based panel to provide unbiased recommendations to EPA. EPA would then consider the findings before rendering a final decision. Members of the Appeals Board could include State Water Quality Agencies, Land Grant University experts, and Conservation Districts -- all government units.. (USDA has an appeal process for Swampbuster decisions that EPA could look to as a template.) At present the only recourse for anyone who disagrees with a jurisdictional decision is to go to court; which is time consuming, costly, and engenders hard feelings. This appeal process could help alleviate concerns about regulatory overreach, and provide a constructive outlet to handle disputes. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. Changing other existing regulations is beyond the scope of this rulemaking process. See also Technical Support Document I.C.

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

11.2.165 For the regulated community, the greatest implication is that waters and wetlands that are currently classified as nonjurisdictional (either on-site, adjacent, or within the same watershed) could become jurisdictional, and therefore, subject to CWA requirements. Costs could be associated with the following:

- Jurisdictional determination - The proposed rule expands the definition of waters of the U.S. and would likely result in the need for updated and new delineations (wetland delineations and assessments of water bodies). Expense includes consultants for delineation, staff time for re-evaluating facilities status and needs for permits, costs for interacting with Corps (including attorney fees if a jurisdictional determination is challenged). While the purpose of the proposed rule was to provide greater clarification, the rule's "other waters" and significant nexus definitions broaden the interpretation of waters of the U.S., and in many ways, brings greater uncertainty, especially for non-tributary and non-adjacent waters and wetlands.
- Permitting - With changes in jurisdictional determinations, additional permitting may be required at facilities, including Section 311 oil spill prevention and response program; Section 401 state water quality certification process; Section 402 NPDES permit program; Section 404 permit program for the discharge of dredged or fill material into navigable waters. With an increase in jurisdictional waters, states will be required to update their 303(d) listings for streams, which could result in more listed waters, which will impact CWA permitting (i.e., NPDES and stormwater permitting).

- Monitoring and Compensatory mitigation - Increase permitting includes monitoring, reporting, and mitigation requirements, including additional water treatment or, as often the case, avoiding the jurisdictional area (i.e. cancel or move a construction project to avoid CWA issues). A recent project implemented by Simplot had a cost of approximately \$40,000 per acre of wetlands mitigated.
- Third-party involvement - With the broadened definitions, third parties could use the proposed rule to argue that certain waters or wetlands are jurisdictional and that certain activities should be regulated under the CWA. Potential suits against the federal agencies for not following the rule would result in project delays or cancellations.
- Stormwater permitting - A stormwater permit is only required if there is a potential to discharge stormwater to a waters of the U.S. With the expansion of what is considered "WOTUS", additional stormwater permits may be needed.
- SPCC requirements - The SPCC rule (40 CFR 112) applies to the owners and operators of non-transportation related onshore and offshore facilities that could reasonably be expected to discharge oil into navigable waters of the U.S. or adjoining shorelines in quantities that may be harmful. In general, a SPCC plan is required if a facility stores more than 1,320 gallons of oil and the facility has the potential to discharge to jurisdictional water. More facilities may be subject to the SPCC requirement and/or plans may need to be updated to reflect the location of jurisdictional water and reporting protocol. (p. 11-12)

Agency Response: JR Simplot Company raises several concerns on its different operations. The agencies have appropriately responded to each of these concerns in the record. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.166 4.A. Retail Fertilizer Operations

Retail fertilizer sites provide plant nutrient and crop protection chemicals to farmers; thousands of such sites are found in the U.S. Such sites also may have petroleum substances (either as fuel or as a part of crop protection formulations/application). Simplot alone has approximately 100 such facilities or warehouses. Most of these facilities are designed to control stormwater on site, but with an expansion of what is considered WOTUS, more facilities may be required to obtain stormwater permits and/or meet SPCC requirements. The potential range of costs on a per-facility basis is

summarized in Table 1. Cost estimates are approximate and represent a range of costs based on best professional judgment.

Table 1. Retail Fertilizer Operations

	Cost Range	Comment
Stormwater Individual Permit with USEPA and SWPPP	\$10,000 to 15,000 per facility	Facility not eligible under MSGP, and an individual permit is sought, this permit will be difficult to obtain due to lack of USEPA staffing.
New MSGP (state) NOI and SWPPP	\$5,000 to \$8,000 per facility	Situation where proposed rule results surface water becoming a waters of the U.S.
Updated MSGP NOI and SWPPP	\$3,000 to \$5,000 per facility	Update to reflect changes in jurisdictional waters stormwater discharged to and possible changes in monitoring requirements to reflect changes in 303 listing as a result of proposed rule.
SPCC Update SPCC plan	\$2,000 to \$4,000	Plan update to reflect changes in jurisdictional water classification and potential for oil impacts.

Table 1. Retail Fertilizer Operations

(p. 12)

Agency Response: See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. Topic 11.4 in particular covers Other non-404 CWA Programs.

11.2.167 4.B. Manufacturing and Food Processing Facilities

Similar to retail fertilizer operations, manufacturing and food processing facilities may have new regulatory requirements because of the expanded universe of what are "waters of the U.S." The potential range of costs on a per-facility basis is summarized in Table 2. Cost estimates are approximate and represent a range of costs based on best professional judgment.

Agency Response: See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.168 11.2.16 4.C. Farms and Ranches

For most farms and ranches, it will likely be difficult to identify a ditch that does not have the potential of entering a drain or canal that then flows to a TNW. Construction of a ditch can be exempt from needing a permit if NRCS's conservation practice 388 Irrigation Field Ditch is followed (this is one of the 56 conservation practices). The practice includes the development of engineered plans and specifications along with a written operation and maintenance (O&M) plan. Engineered farm ditches with an O&M manual are not standard practice for most farmers. Thus, while exemptions are possible, following the requirements of the NRCS practices would result in greater costs to the

farmer. Furthermore, the use of these practices introduces uncertainty. For example, if a farmer followed Code 388 but did not have an O&M plan, is the CWA exemption void?

In summary, with the proposed rule, Corps and USEPA argue they have clearer direction on classifying tributaries (which can be man-made features such as drains), adjacent waters, and "other waters" as well as defining ditches, and agricultural exemptions. However, the normal farming practice exemptions are tied to NRCS conservation practices (codes) that, in many cases, have engineering and O&M requirements that are not "typical" for farming operations. Furthermore, the list of NRCS practices presented in the interpretive rule is not all inclusive. With the proposed rule, farmers and ranchers will need to review day-to-day activities in detail to determine if activities are within waters of the U.S. or would have a discharge to a water of the U.S., and if such activities fall within the agricultural exemptions. The potential range of costs on a per-facility basis is summarized in Table 3. Cost estimates are approximate and represent a range of costs based on best professional judgment.

Table 3. Farming and Ranching Operations		
	Cost Range	Comment
Following NRCS Conservation Practice Standards to be Exempt from Permitting		
Plans and specifications, O&M plans, engineering support, review to assess compliance	\$800 to \$10,000 per site	With proposed rule and interpretive rule, to meet exemptions for "normal farming" the 56 NRCS conservation practices would need to be followed, for situations where waters
Section 404 Permitting for Construction/Farming Activities		
Nationwide Permit – delineation and application	\$5,000 to \$10,000 per event	With the proposed rule, Simplot will likely have to increase the use of Section 404 permitting for fill of waters of the U.S. for the Arena Valley area.
Individual Permit – delineation and application	\$10,000 to \$20,000	For larger projects, an individual permit may be required. This would also include the need for mitigation. Such project would be unlikely for Arena Valley.
Mitigation	\$20,000 to \$100,000	For larger projects, mitigation for filling in wetlands may be required. Mitigation may include purchasing credit at an established wetland bank or could include on-site mitigation. Such projects would be unlikely for Arena Valley.

Table 3. Farming and Ranching Operations

(p. 13-14)

Agency Response: There is no change in the treatment of NRCS determinations. There is no requirement for NRCS program participation within this rule. NRCS management of their program is outside the scope of this rule. The See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.169 4.0. Mining

For mine sites, perhaps the most important aspect (impact) of the proposed rule is the definition of "other waters," which is related to geographically isolated waters and wetlands, and interpretation of significant nexus (see Box 1). Furthermore, the Agencies have made a clear distinction in the proposed rule that significant nexus can include a

hydraulic connection between "other waters" and waters of the U.S. through a groundwater pathway. This interpretation could have significant impacts on mine site operations, including tailings pond, pit lakes, and stormwater ponds, in that these facilities could be deemed "other waters" through a significant nexus if it shown that the chemistry, biological, or hydrology of the man-made waters has an "affect" on downstream waters (Le., a pit lake that is connected through groundwater to surface water downstream; the pit lake in this case could be considered a water of the U.S. and subject to permitting under Section 404).

For mine sites, the following activities would be affected (anticipated increase activities) by the proposed rule:

- Jurisdictional determination - While the purpose of the proposed rule was to provide greater clarification, the rule's "other waters" and significant nexus definitions, broaden the interpretation of waters of the U.S. and in many ways, bring greater uncertainty especially for non-tributary and non-adjacent waters and wetlands. Additional efforts will be required when conducting delineations and the evaluation of waters of the U.S. In addition, challenges to Corps determinations may occur, especially as related to man-made features.
- Permitting - With changes in jurisdictional determinations, additional permitting may be required at mine sites relating to Section 311 oil spill prevention and response program; Section 401 state water quality certification process; Section 402 NPDES permit program; Section 404 permit program for the discharge of dredged or fill material into navigable waters.
- Monitoring and compensatory mitigation - Increase permitting include monitoring, reporting, and mitigation requirements, including additional water treatment or, as often the case, avoiding the jurisdictional area (i.e. cancel or move a construction project to avoid CWA issues).
- Third-party involvement - With the broadened definitions; third parties could use the proposed rule to argue that certain waters (including man-made features) or wetlands are jurisdictional and that certain activities should be permitted under the CWA. Potential suits against the federal agencies for not following the rule would result in project delays or cancelations.
- Stormwater - Mining activities are covered under a MSGP for industrial activities. Furthermore, during some types of construction activities, the mine will need to obtain a General Permit for Discharges from Construction Activities (note some forms of construction are covered under the MSGP for mine sites). With the proposed rule, the SWPPP and NOI would have to be revisited to identify status of receiving waters, as the application requires that the receiving water be defined as either water quality limited or not (303 listed).

- SPCC - Most mining facilities have an SPCC plan. The proposed rule is not expected to have a large impact on SPCC plan. However, the plan may be required to be updated to reflect the location of jurisdictional water and reporting protocol.
- Mining Activities - With the proposed rule, the Corps will likely argue they have clearer direction on classifying tributaries (which can be man-made features such as drains), adjacent waters, and "other waters." As such, mine sites will likely be required to conduct a greater number of delineations and seek additional Section 404 permits for mine activities, especially as it relates to "other waters" and significant nexus criteria. Important in this is the hydraulic connection between surface water and groundwater, as part of the significant nexus evaluation.

Potential range of costs on a per-activity basis is summarized in Table 4. Cost estimates are approximate and represent a range of costs based on best professional judgment.

Table 4. General Mining Activities

	Cost Range	Comment
Stormwater Updated MSGP NOI and SWPPP	\$6,000 to \$10,000 per facility	Update to reflect changes in jurisdictional waters stormwater discharged to and possible changes in monitoring requirements to reflect changes in 303(d) listing as a result of proposed rule.
SPCC Update SPCC plan	\$3,000 to \$5,000	Plan update to reflect changes in jurisdictional water classification and potential for oil impacts.
Section 404 Permitting for Mining Activities Nationwide Permit – delineation and application	\$5,000 to \$10,000 per event	With the proposed rule, mining operations will likely have to increase the use of Section 404 permitting for fill of jurisdictional waters and wetlands.

Table 4. General Mining Activities

Table 4. General Mining Activities

	Cost Range	Comment
Individual Permit – delineation and application	\$10,000 to \$20,000	For larger mining projects, an individual permit may be required. This would also include the need for mitigation.
Mitigation	\$20,000 to \$500,000	For larger mining projects, mitigation for filling in wetlands and waters may be required. Mitigation may include purchasing credit at an established wetland bank or could include on-site mitigation.
NEPA Process NEPA Alternative Evaluation with the definition of waters of the U.S. expanded	Up to millions based on alternative selection	Alternative selection could be influenced by an increase in jurisdictional waters and wetlands at a proposed site, and the requirement to meet 404(b)(1) regulations (i.e., avoid, minimize, mitigate).
NEPA Avoidance NEPA required based on Section 404 Permitting Nexus	Up to millions (\$3 to \$8M) if Environmental Impact Statement required.	For private land, if no fill in jurisdictional water or wetlands, then there is often no federal nexus to trigger NEPA. With proposed rule, definition of waters of U.S. is expanded and greater potential for need of Section 404 permit on private land and therefore potential for NEPA requirements.

Table 4. General Mining Activities

(p. 14-17)

Agency Response: See the Economic Analysis and see Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.170 5. Summary

The proposed rule places no discernable limit on the federal government's authority over water. The increased regulatory requirements that would result from this rule would make it very difficult for the business sectors described in our comments to be sustainable: timelines to obtain approvals for any permits would hinder needed business development and the costs would make maintaining global competitiveness very difficult. The costs of

implementing this rule have been greatly under estimated. For example, for just the three business sectors discussed in these comments (processing plants, mines, and ranches/farms), the cost of implementing the rule ranges from \$120,000,000 to \$334,000,000.¹ These costs for just three business sectors potentially exceed the costs the Agencies estimated for the entire regulated community. Finally, the exclusions and exemptions in the proposed rule don't provide much regulatory certainty. Thus, based on these reasons the proposed rule should be withdrawn by the agencies. (p. 17)

Agency Response: Other commenters have likewise submitted information that has informed the development of the Final Rule, as well as the accompanying Economic Analysis. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis, and 14.1 on site-specific examples.

Colorado Agricultural Aviation Association (#15033)

11.2.171 11.2.19 Many questions remain about the scientific and economic implications of the proposed rule: The Science Advisory Board (SAB) is currently reviewing EPA's Connectivity Report and the science on which the agencies based the proposed WOTUS expansion. The SAB has provided some preliminary observation, but has indicated it will not publish a final report until perhaps next year. Furthermore, the economic on which the agencies based the costs to small business - like aerial applicators - versus perceived benefits have been soundly criticized a based on outdated economic data, in many cases 20-year old data for which no cost-of-living adjustments were made. We believe the agencies should withdraw the proposed rule, complete the scientific evaluation and an appropriate evaluation of economic effect on small businesses and society, and then start over with state and all other affected stakeholders in an earnest manner to fashion a replacement rule. (p. 5-6)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. See Topic 13 on overlap with the Connectivity Study.

Klamath Water Users Association (Doc. #15063)

11.2.172 III. The agencies have not provided an adequate or comprehensive economic analysis and must undertake a more complete economic analysis prior to finalizing a rule. The agencies' Economic Analysis for the proposed "waters of the United States" rule fails to provide a reasonable assessment of the proposed rule's costs and benefits. The Economic Analysis suggests that the proposed rule will increase overall jurisdiction under the CWA only by about three percent. The agencies arrive at this percentage using a questionable methodology that only accounts for the Section 404 program, relies on

figures extrapolated from statistics from FY 2009-2010 (a period of extremely low construction activity during one of our nation's greatest recessions), and fails to account for the universe of waters and features for which landowners have not previously sought CWA permits. Even the agencies note that "there is uncertainty and limitations associated with the results," due to data and information gaps, as well as analytic challenges. The analysis does not quantify all possible costs and benefits, and values are meant to be illustrative, not definitive.¹¹⁶ Relying on this percentage throughout the Economic Analysis, the analysis hugely underestimates the impact of the proposed rule's new definition of "waters of the United States."

The agencies' calculations of incremental costs and benefits are also deficient. The cost analysis is focused on costs associated with the Section 404 program and largely ignores the cost impact of the changes to other CWA regulatory programs due to lack of data. Moreover, the benefit calculation is based on a problematic methodology that relies on studies that are largely irrelevant, do not provide accurate estimates of benefits, and were conducted 10-30 years ago.

As a result of the incompleteness and inaccuracies of the Economic Report, we believe it is necessary for the agencies to recalculate the economic analyses to more accurately project the impacts of the proposed rule and identify effects that the agencies failed to consider the first time. A rule of this magnitude deserves a much more accurate and defensible analyses and accounting of future costs and benefits. (p. 7-8)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Riverport Levee District (Doc. #15655)

11.2.173 e. The costs of implementing the proposed rule are extensive and will be mostly born by local entities.

In estimating the proposed cost of implementing the rule, the Agencies have failed to perform a full accounting of its impacts. The methods and data sets used for estimating the increased costs of Section 404 permitting are not reflective of what may be reasonably anticipated to occur in the future. Perhaps more importantly, the cost estimates fail to consider the true impact across all of the programs derived from the authority of the CWA. In past years the question of CWA jurisdiction as determined by the definition of "waters of the U.S." has most often arisen with respect to Section 404

¹¹⁶ Congressional Research Service (CRS), "EPA and the Army Corps' Proposed Rule to Define 'Waters of the United States'," September 10, 2014 p. 11

permitting actions. The proposed rule replaces the definition of "navigable waters" and "waters of the U.S." for all CWA programs, including: Sec. 404 - Dredge and Fill Permits, Sec. 402 - NPDES (stormwater) permitting, Sec. 311 - Spill Prevention Control and Countermeasure Plans (SPCC), and Sec. 303 - Water Quality Standards and Total Maximum Daily Loads (TMDL's.)

Of specific concern with respect to costs are those increases to stormwater permitting, including TMDLs. EPA has encouraged states to enhance water quality by implementing TMDLs through MS4 permits and other means, including for non-point source pollution. States presently have some authority to determine how to achieve this and can, and should, take into consideration the costs and benefits to their subdivisions of governments and businesses when deciding how to proceed. Under the proposed rule it is not clear that states will retain that authority, or if unfunded mandates for enhancing water quality will be imposed. By not clarifying in the proposed rule that CWA programs beyond Section 404 would not be impacted by the new definition, the Agencies have left open that possibility. Then, not addressing potential cost impacts to those programs consistent with how the Agencies have described them evolving, especially implementation of TMDLs, leaves the Agencies negligent and at best inaccurate in their estimation of the financial impact of the proposed rule on local entities and businesses.

Due to the concerns expressed herein, and for the reasons explained, we urge the proposed rule be withdrawn and only proposed again upon correction of its many deficiencies. On behalf of the Riverport Levee District, thank you for considering these comments. Please contact David Human at (314) 480-1710 if you have questions or wish to discuss our concerns. (p. 5)

Agency Response: The agencies' review of costs has considered all impacted CWA programs. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Ohio Farm Bureau Federation (Doc. #16609)

11.2.174 The Federal government's proposed approach, and the content of the proposed rule, will seriously impair ongoing advancements in water quality in the State of Ohio. Many Ohio farmers would be forced to gain Federal permits not only to conduct the everyday actions of planting and harvesting a crop but to install water quality infrastructure projects. These unrealistic, costly and time-consuming requirements would discourage agricultural producers from undertaking the very projects that would improve water quality throughout the State. This concerns us because at this critical time in Ohio there are numerous important actions ongoing by farmers in partnership with universities,

industry, conservation groups, state and local government to address our current water quality challenges. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Earth City Levee District (Doc. #18910)

11.2.175 **5. The costs of implementing the proposed rule are extensive and will be mostly born by local entities.**

In estimating the proposed cost of implementing the rule the Agencies have failed to perform a full accounting of its impacts. The methods and data sets used for estimating the increased costs of Section 404 permitting are not reflective of what may be reasonably anticipated to occur in the future. Perhaps more importantly, the cost estimates fail to consider the true impact across all of the programs derived from the authority of the CW A. In past years the question of CWA jurisdiction as determined by the definition of "waters of the U.S." has most often arisen with respect to Section 404 permitting actions. The proposed rule replaces the definition of "navigable waters" and "waters of the U.S." for all CWA programs, including: Sec. 404 - Dredge and Fill Permits, Sec. 402 - NPDES (stormwater) permitting, Sec. 311 - Spill Prevention Control and Countermeasure Plans (SPCC), and Sec. 303 –Water Quality Standards and Total Maximum Daily Loads (TMDL' s.) Of specific concern with respect to costs are those increases to stormwater permitting, including TMDLs. EPA has encouraged states to enhance water quality by implementing TMDLs through MS4 permits and other means, including for non-point source pollution. States presently have some authority to determine how to achieve this and can, and should, take into consideration the costs and benefits to their subdivisions of governments and businesses when deciding how to proceed. Under the proposed rule it is not clear that states will retain that authority, or if unfunded mandates for enhancing water quality will be imposed. By not clarifying in the proposed rule that CW A programs beyond Section 404 would not be impacted by the new definition, the Agencies have left open that possibility. Then not addressing potential cost impacts to those programs consistent with how the Agencies have described them evolving, especially implementation of TMDLs, leaves the Agencies negligent and at best inaccurate in their estimation of the financial impact of the proposed rule on local entities and businesses. (p. 5)

Agency Response: The agencies' review of costs has covered all impacted CWA programs. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on

CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Coon Run Levee and Drainage District (Doc. #8366)

11.2.176 Of importance is the agencies' cost-benefits analysis-Economic Analysis of Proposed Revised Definition of Waters of the U.S. (March 2013), acknowledges the data used and assumptions made to craft the analysis may be flawed. Proposed rule raises federalism concerns and could impose direct and indirect costs. Under Executive Order 13132 Federalism, federal agencies are required to work with state and local governments on proposed regulations that have substantial direct compliance costs.

The agencies' cost-benefits analysis contradicts the notion that there are no federalism concerns. The economic analysis acknowledges there may be additional Implementation costs for a number of CWA programs and cautions that the data used and the assumptions made to craft the analysis may be flawed. Since states, local governments such as drainage districts implement CWA programs; we believe the "waters of the U.S." definitional change will have a substantial direct effect on our district. (p. 2-3)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Ingram Barge Company (Doc. #14796)

11.2.177 The Agencies' cost-benefit analysis of the Proposed Rule¹¹⁷ severely underestimates its associated costs. The Agencies' reliance on requests for jurisdictional determinations in fiscal years 2009-2010 as a baseline for the Proposed Rule's economic impacts skews the effects downward. It is widely known that economic activity was severely constrained and construction activity was at a low point during that time due to the recession. The Agencies' chosen baseline does not reasonably represent a normal level of permitting activity for purposes of evaluating the Proposed Rule's economic impact, and is therefore flawed. (p. 4)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3,

¹¹⁷ Economic Analysis of Proposed Revised Definition of Waters of the United States (Mar. 2014).

11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Elmore County Highway Department, Wetumpka, Alabama (Doc. #14072)

11.2.178 Agency's cost-benefit analysis assumptions and methodologies are flawed

As previously mentioned, while the agencies have performed cost-benefit analysis of the definitional changes on CWA programs, they have acknowledged that the data used and the assumptions made to craft the analysis may be flawed. Additionally, the methodologies used to determine economic costs and benefits to the proposed rule are misleading. In its economic cost analysis for the proposed rule, the agencies have indicated that 2.7 percent of new waters will be considered jurisdictional under the Section 404 program. However, the data used to compute costs for Section 404 comes from submitted Section 404 permit applications for FY2009-20 IO. The economic analysis does not acknowledge or recognize that, under the proposal, additional waters, currently not jurisdictional (and thus, no permits have been submitted), will become jurisdictional. This reasoning is flawed and does not give a true accounting of potential costs or benefits. (p. 6)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

SD1 (Doc. #15140)

11.2.179 Analysis of Economic Impacts Appears to Be Flawed

The increased workload we envision the proposed rule would create for all elements of the CWA program would be accompanied with concurrent increases in costs and rate increases to our ratepayers. A review of EPA's Economic Analysis (Sunding 2014) identified significant concerns about EPA's conclusion that "the benefits justify the costs of this proposed action" (EPA estimated that the benefits of the rulemaking could range from \$300.7 to \$397.6 million whereas the costs were estimated to range from \$133.7 to \$231.0 million in 2010 dollars). The author was unable to recreate EPA's analysis due to a lack of transparency and supporting documents. The review concluded that the USACE's determination that an expanded definition of WOTUS would result in only a 2.7% increase in jurisdictional waters determination, is based on a faulty methodology. The author provided the following reasons for this conclusion: only a small (262) subset of projects were evaluated; the selected projects underrepresent the universe of jurisdictional areas; there was limited evaluation of impacted areas and mitigation sites; and the selection of FY2009/2010 as a baseline year underestimates costs as there was a significant contraction of the housing market due to the national financial crisis. (p. 4)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Arizona Public Service Company (Doc. #15162)

11.2.180 **B. Insufficient Consideration of Costs Results in Unusable Economic Impact Analysis**

To consider the economic impacts of this proposed rule, the Agencies evaluated data records from FY2009-2010 in the USACE's Operation and Maintenance Business Information Link, Regulatory Module (ORM2),¹¹⁸ a USACE database developed with EPA and the U.S. Forest Service to provide information on mitigation conservation banking and in-lieu fee programs and used to manage jurisdictional status decisions associated with various aquatic resource types.¹¹⁹ The database tracks performance metrics associated with "total individual projects" (404 permits), total general permits (NWP), and related mitigation activities to manage JDs.¹²⁰ As described in a report prepared for WAC, the ORM2 data used includes only those situations where a regulated entity seeks a 404 permit, approved JD, or wetland delineation.¹²¹ As noted in the proposed rule, the scope of the revised WOTUS definition is much wider than these three instances.¹²² In fact, the new terms proposed by the Agencies, as well as those terms recommended by SAB, are not included in the information tracked by the ORM2 database. For example, the proposed rule offers a first-time definition of "significant nexus"; therefore, it is impossible for the ORM2 database to reflect permits or related costs associated with the "significant nexus" concept as currently defined and discussed throughout the proposed rule.

The Agencies' economic analysis concludes is it reasonable to expect that more facilities will have to prepare and implement SPCC plans based on the broader assertion of CWA jurisdiction. Since the ORM2 database is based on 404 permits, the effort related to the development and implementation of SPCC plans is not included in the Agencies' analysis of cost. A fair estimate of economic impact of the proposed rule is clearly unknown. APS respectfully requests that the Agencies prepare a complete and fair economic impact

¹¹⁸ <http://geo.usace.army.mil/ribits/index.html>.

¹¹⁹ Id.

¹²⁰ Id.

¹²¹ David Sunding, PhD., Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States (May 15, 2014).

¹²² 79 Fed. Reg. at 22262.

analysis of any proposed revisions to the WOTUS definition, which can be evaluated and documented for the public's review and comment. (p. 6-7)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Department of Public Works, City of Harrisonville, Missouri (Doc. #4038.2)

11.2.181 We do not believe that either agency seriously intends that this new 'clarification' of EPA and USACOE view of 'Waters of the United States' intended to regulate routine activities as outlined above since the projected cost increases associated with this rule change to local entities was effectively non-existent. That analysis makes no operational sense either for cities or to the USACOE if we have to apply to the Corps for a vegetation removal permit every time we need to mow a dry section of right of way just because it carries rainwater after a storm and eventually drains into jurisdictional waters. We do not believe either the Corps or the EPA have appropriately factored the cost for anyone. (p. 2)

Agency Response: The agencies have worked to review all comments and have made changes, including clarifications, to the regulatory language regarding CWA jurisdiction. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. See also Ditches Compendium.

Utility Water Act Group (Doc. #15016)

11.2.182 **F. The Expansion of Jurisdiction That Would Result from the Proposed Rule Is Plain and Demonstrable.**

Given the sweeping language of the Proposed Rule, coupled with the Agencies' own confusion over how it would affect jurisdiction, see, e.g., supra pp. 9-11, a number of utilities have conducted their own evaluations of the effect that the broad definition of WOTUS under the Proposed Rule could have on future projects.

One utility conducted a siting evaluation for a new gas-fired electric generation facility that identified 31 wetlands or streams (ephemeral, intermittent, or perennial) within the potential project area. Under the current WOTUS regulations, the Corps determined that only two of the 31 features were jurisdictional. Fourteen of the 15 wetlands were classified as isolated, with no hydrologic connection or significant nexus to a relatively

permanent water or TNW. Fifteen of the 16 drainage ditches/drainage canals (i.e., ephemeral streams) were identified as nonjurisdictional because they are man-made drainages. If the Proposed Rule applied to this project area, all of the 31 areas would appear to meet the definition of jurisdictional waters based on the broad definition of tributary and adjacency. This is because, under the Proposed Rule, the Agencies' jurisdiction based on the proposed definition of "tributary," by rule, encompasses all ephemeral streams that are tributaries of TNWs regardless of whether a "significant nexus" is present. Additionally, under the Proposed Rule, the new definition for "neighboring" (applied to determine if a water is an "adjacent" water) includes all waters that have a shallow subsurface hydrologic connection or confined surface hydrologic connection to a jurisdictional water, which would include ephemeral streams. All of the isolated wetlands at the project site therefore would be adjacent waters.

What is an attractive project area for this new facility under the current WOTUS rule thus would probably no longer be a viable option for the facility under the proposed WOTUS definition due to the number of jurisdictional impacts, site layout constraints, costs of permitting, difficulty of obtaining a permit based on the Least Environmentally Damaging Practicable Alternative analysis, and mitigation costs. Under the current definition of WOTUS, the permit and mitigation cost is \$0 because, after conducting a JD, the project proponent determined that there would be no jurisdictional impacts.¹²³ However, under the Proposed Rule, the cost just to obtain a Corps permit is estimated to be approximately \$200,000 based on the utility company's experience with this particular Corps district. The mitigation costs under the Proposed Rule would be an estimated \$678,000 based on the acres of wetlands and linear feet of streams involved.

Another siting analysis, for a renewable energy facility, revealed similar significant impacts of the Proposed Rule on the areas that would be jurisdictional on a site because of the sweeping "neighboring" definition. At that site, which contains fourteen wetlands, the Corps had determined under existing regulations that seven of the 14 wetlands were jurisdictional. The Corps asserted jurisdiction over those seven "adjacent" wetlands because they were considered hydrologically connected to a relatively permanent water downstream of the site. The remaining wetlands were not considered to be jurisdictional because they were classified as isolated; according to the Corps, they had no hydrologic connection or significant nexus to a relatively permanent water or a TNW.

If the Proposed Rule were applied to the project site, all of the wetland areas would likely be deemed jurisdictional. The seven "isolated" wetlands could meet the definition of adjacent waters" because they could meet the definition of "neighboring." This is because they could be seen to have a shallow subsurface hydrologic connection or a confined surface hydrologic connection to a jurisdictional water (i.e., the nearby swamps that flow

¹²³ The cost for preparation and submission of the JD (finding no jurisdiction) cost the proponent approximately \$8,000.

directly into a reasonably permanent water downstream of the site). If all 14 wetland areas were jurisdictional, the site would not be a viable option for siting a facility due to the costs and uncertainties associated with preparation of the individual permit application, challenging site layout constraints, and mitigation costs.

Applying the current definition of WOTUS, the permit cost would be between \$30,000 and \$45,000, and the mitigation costs would be \$36,000. Applying the Proposed Rule's definition, the estimated permitting costs would be five times greater: between \$150,000 and \$200,000 (for Corps and associated state permitting), and the mitigation costs would be \$298,000. (p. 55-57)

Agency Response: The agencies have worked to review all comments and have made changes, including clarifications, to the regulatory language regarding CWA jurisdiction. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Association of Electronic Companies of Texas, Inc. (Doc. #16433)

11.2.183 The Proposed Rule would expand the EPA's and the CORPS' regulatory jurisdiction under the CWA and impose significant additional regulatory costs

Adoption of the Proposed Rule would significantly expand the universe of the land and water features that constitute a WOTUS that is subject to regulation under the CWA. Even the EPA and the Corps in their analysis of costs and benefits of the Proposed Rule state that:

The agencies project that this proposed action to change the definition of [WOTUS] *would increase assertion of CWA jurisdiction when compared to a baseline of current practices under the existing regulation, . . .* As a result of this proposed action, *costs to regulated entities will likely increase for permit application expenses, compensatory mitigation (if applicable), and installation of best management practices.*¹²⁴ (Emphasis added)

Enlarging the universe of land and water features that are characterized as WOTUS would increase the numbers of land and water features that are subject to the time-consuming and costly regulatory requirements that apply to land and water features requirements and the time it takes to make an approved jurisdictional determination,¹²⁵ that are WOTUS. Although the EPA and the Corps state that the Proposed Rule is

¹²⁴ See 79 Fed. Reg. 22220; Economic Analysis of Proposed Revised Definition of Waters of the United States, U.S. Environmental Protection Agency, primary author, U.S. Army Corps of Engineers, contributing author, at 32 (March 20 14).

¹²⁵ 79 Fed. Reg. 221 94.

expected to "reduce documentation the EPA's and the Corps' analysis of potential costs and benefits relating to the Section 404 and 401 of the CWA states that:

This [P]roposed [R]ule could result in new indirect costs on regulated entities such as the energy, agricultural, and transportation industries; land developers, municipalities, industrial operations These indirect costs may include application costs, associated environmental compliance costs, wetlands mitigation, stream mitigation, and project redesign and relocation expenses, , , . [T]he Corps may process more permit requests, conduct jurisdictional determinations (JDs) if needed, manage data, coordinate with federal and state resource agencies, and determine compensatory mitigation needs.¹²⁶

Based on the EPA's and the Corps' own analysis, the Proposed Rule will result in more permits being required and will increase indirect costs by \$231 million annually.¹²⁷

AECT asserts that many of the costs described by the EPA and the Corps as "indirect" costs are in reality direct costs for regulated entities such as AECT members. The costs that the EPA and the Corps describe as being associated with environmental compliance, wetlands mitigation, stream mitigation, and project redesign and relocation are anything but inconsequential. The U.S. Supreme Court in *Rapanos* recognized in 2006 that " [t]he average applicant for an individual permit [from the Corps] spends 788 days and \$271,596 in completing the process, and the average applicant for a nationwide permit spends 313 days and \$28,915 – not counting costs of mitigation or design changes."¹²⁸ In addition, since the EPA and the Corps have grossly underestimated and understated the extent to which the Proposed Rule would expand CWA regulation to land and water features that have not been previously subject to CWA jurisdiction, as explained below, EPA's and the Corps' estimated costs are also grossly underestimated and understated.

There is a clear conflict between the EPA's and the Corps' aforementioned conclusions based on their analysis of costs and benefits that the Proposed Rule will expand the regulatory reach of the CWA, and their conclusions in the preamble that "the scope of the regulatory jurisdiction of the CWA in this [P]roposed [R]ule is narrower than that under existing regulations."¹²⁹ Unless the EPA and the Corps reconcile those conflicting positions, AECT requests that the EPA and the Corps withdraw the Proposed Rule. (p. 2-3)

Agency Response: The agencies have worked to review all comments and have made changes, including clarifications, to the regulatory language regarding CWA jurisdiction. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of

¹²⁶ Economic Analysis of Proposed Revised Definition of Waters of the United States, at 5.

¹²⁷ Id at 33 (Exhibit 16. Estimated Annual Indirect Costs and Benefits (2010 dollars in millions).

¹²⁸ *Rapanos* 547 U.S. 715, at 721.

¹²⁹ 79 Fed. Reg. 22 t89 , 22192.

jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Florida H2O Coalition (Doc. #19325)

11.2.184 The expanded reach of the new rule would also suggest that the cost of compliance may be much higher than the Agencies originally predicted. Indeed, a recent fiscal impact study completed in Florida indicates this to be the case. This study, prepared by Applied Technology and Management, Inc. (ATMI), uses government-based data to estimate the cost that local governments can expect to bear in the event the proposed rule is adopted. Focusing on four of Florida's sixty-seven counties, ATMI first determined the amount of additional water bodies that would be subject to CWA requirements under the proposed rule, and then calculated the cost to meet water quality criteria in these expanded areas. The compliance costs for these four counties are shown in the following table:

County	Cost of Compliance
Manatee County	\$1,205,872,000
Pinellas County	\$1,254,148,000
Sarasota County	\$229,281,000
Seminole County	\$1,528,152,000
Total	\$4,217,453,000

The compliance costs for these four counties

These costs are based on the historic median for reducing two widespread nutrients, nitrogen and phosphorus. Please note that these costs reflect only the costs imposed for local governments, and do not reflect compliance costs for private landowners. A complete copy of the ATMI study has been enclosed for your review. By comparison, the Agencies' economic analysis' calculated a potential range for the national cost of compliance to be \$133,700,000 to \$231,000,000. Clearly, when compliance costs for six percent of Florida's counties exceed the entire national estimate by \$4,000,000,000, it is time for the Agencies to take a renewed and very hard look at its own economic analysis.

The overwhelming costs of compliance raise additional concerns. Contrary to enhancing the Florida's overall environmental quality, the expansion of CWA jurisdiction to marginal waters such as stormwater ditches and ponds will prevent financially constrained local governments from addressing other important environmental initiatives. Pinellas County, for example, is a member of a consortium with the sole mission of restoration and protection of Tampa Bay. As the report notes, should the proposed rule be adopted, "Pinellas County would have to divert funds from these critical waterbodies" to meet the numeric nutrient criteria in the newly-identified jurisdictional waters. Similar challenges would face a number of local governments that are dealing with the cost of sea-level rise and the restoration of critical natural waters, such as the Indian River Lagoon, the St. Lucie Estuary, or the renowned springs of North Florida. Instead of

funding these important efforts, limited resources would be forcibly directed toward municipal storm system upgrades. The Agencies should share our belief that environmental restoration, and not stormwater system expansion, is a more prudent use of taxpayer dollars. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Exxon Mobil Corporation (Doc. #15044)

11.2.185 In this connection, and as outlined in detail in the comments referenced above, the Agencies have grossly underestimated the costs to the U.S. economy to implement this Rule, in terms of increased regulatory burden and damage to economic activity. The impact of delays, ranging from six months to two years in the case of individual permits for some types of routine construction activity, was not included in the Agencies' analysis. Had such an analysis been included, the Proposed Rule would clearly fail the cost benefit test. Permit issues can translate into delayed or reduced production of energy resources, impacting energy security, jobs, and revenues to landowners and local, state and federal governments. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

ARIPPA (Doc. #16545)

11.2.186 6. EPA did not adequately identify and evaluate the economic impacts and subsequent uncertainties of the proposed rule

The following identifies areas that were not adequately evaluated as to their economic impacts and subsequent uncertainties:

- Economic impact to due increased area of waters of the US
- Economic impact from potential operational costs
- Cost implications related to potentially new land holdings
- Cost implications related to estimates of compensatory mitigation for lands impacted by jurisdictional boundary changes

- Cost implications related to the potential loss of current and future business activity in a newly created jurisdiction
- Costs due to additional environmental and regulatory screening, wetland and waters delineation studies and permit acquisition
- Costs due to permitting delays (from additional agency review)
- Costs due to additional wastewater treatment needs
- Costs due to changes in land management approaches (i.e.. pesticide application, water resource protection, infrastructure maintenance, fish and wildlife protection, historical (structure designations, safety structures, public access, etc.)
- Costs due to additional insurance requirements (p. 6)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Northern California Water Association (Doc. #17444)

11.2.187 I. The agencies have not provided an adequate or comprehensive economic analysis, and must undertake a more complete economic analysis prior to promulgating the rule.

The EPA's Economic Analysis for the proposed "waters of the United States" rule fails to provide a reasonable assessment of the proposed rule's costs and benefits. The Economic Analysis suggests that the proposed rule will increase overall jurisdiction under the CWA by only about 3 percent. But the EPA arrives at this percentage using a questionable methodology that only accounts for the Section 404 program, relies on figures extrapolated from statistics from FY 2009-2010 (a period of extremely low construction activity during one of our nation's greatest recessions), and fails to account for the universe of waters and features for which landowners have not previously sought CWA permits. Even the agencies note that "there is uncertainty and limitations associated with the results," due to data and information gaps, as well as analytic challenges. The analysis does not quantify all possible costs and benefits, and values are meant to be illustrative, not definitive.' Relying on this percentage throughout the Economic Analysis, the EPA systematically and hugely underestimates the impact of the proposed rule's new definition of "waters of the United States."

The EPA's calculations of incremental costs and benefits are also deficient. The EPA's cost analysis is focused on costs associated with the section 404 program and largely ignores the cost impact of the changes to other CWA regulatory programs due to lack of data. Moreover, the benefit calculation is based on a problematic methodology that relies

on studies that are largely irrelevant, do not provide accurate estimates of benefits, and were conducted 10-30 years ago.

As a result of the incompleteness and inaccuracies of the EPA's Economic Report, we believe it is necessary for to recalculate the economic analyses to more accurately project the impacts of the proposed rule, and identify effects that the EPA failed to consider the first time. A rule of this magnitude deserves a much more accurate and defensible analyses and accounting of future costs and benefits. (p. 3-4)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Pacific Legal Foundation (Doc. #14081)

11.2.188 Because of the extreme land use restrictions that apply to property that contains “waters of the United States,” and the enormous, even punitive, costs for a permit under the Clean Water Act—averaging more than \$270,000 for an individual permit¹³⁰ and \$28,000 for a nationwide permit—this new rule will grossly expand federal authority over everyday activities at a monumental cost to the national economy. According to the U.S. Supreme Court, sudden and expansive interpretations of long-standing laws are unreasonable and should be met with skepticism. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. See also Technical Support Document, Section I.

Environmental Council of the States (Doc. #15543)

11.2.189 ECOS also requests that EPA and the Corps seek to secure federal funding for the states to cover the customary portion of costs associated with any new rule, and consider the availability of funding support in planning for new obligations. States have expressed concern that the economic analysis of the proposed rule is not accurate for all states. To the extent that states may have new regulatory obligations under any final rule, ECOS requests the inclusion of estimates of both state administrative costs and state direct

¹³⁰ See Rapanos, 547 U.S. at 721.

implementation costs in recognition of the significant and wide-range of activities necessary to implement any new requirements (ECOS Resolution 14-3). (p. 2)

Agency Response: The agencies recognize the funding comment made by ECOS on behalf of its States. The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Southeastern Legal Foundation (Doc. #16592)

11.2.190 **E. The Errors in the Economic Analysis are So Severe that Its Results are Meaningless and Do Not Fulfill Executive Orders 12866 and 13563.**

The Agencies recognize the Proposed Rule represents a "significant regulatory action," therefore Executive Orders 12866 and 13563 must be considered. The Agencies prepared an "Economic Analysis of Proposed Revised Definition of Waters of the United States" (the "Economic Analysis").¹³¹ The Economic Analysis concludes that the Proposed Rule will lead to an additional 3% of waters being subject to jurisdiction each year and an economic benefit of \$100 million annually. Dr. David Sunding of the Brattle Group, a non-partisan economic group, reviewed the Economic Analysis.¹³² Dr. Sunding's conclusion is that the errors in the Economic Analysis are so severe as to render it useless for determining the true costs of the Proposed Rule. "[T]he EPA analysis is entirely insufficient at predicting the costs associated with a 'waters of the United States' definition change."¹³³ Dr. Sunding states several problems with the Economic Analysis and SLF incorporates the well-reasoned Economic Review by reference into these comments. Despite that incorporation, SLF is highlighting some of the more egregious errors and assumptions made in the Economic Analysis:

- The Economic Analysis has an inherent sample selection bias because it was based on requests for jurisdictional determinations (JDs) for fiscal year 2009-2010, the most economically depressed time in our country in nearly a century. Construction activity was close to an all-time low which artificially lowers the number of acres generally at issue. This is not a baseline time period to use to represent potentially affected acreage.
- The Economic Analysis quantifies the 3% increase in jurisdictional area by reviewing only those situations in which a permittee applied for either a section

¹³¹ March 2014, U.S. EPA (primary author) and U.S. Army Corps of Engineers (contributing author).

¹³² See Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States, David Sunding, The Brattle Group, May 15, 2014 (the Economic Review).

¹³³ The Economic Review at 20.

404 jurisdictional determination or engaged in the section 404 permitting process. It fails to account for the many acres of land that never required a permit or JD but, if the Proposed Rule is promulgated, would require a permit.

- The Economic Analysis looks only at jurisdictional increases in the "other waters" category of the WOTUS definition in the Proposed Rule. It does not account for the increase in jurisdictional areas that will result from the newly defined "tributary" and "adjacent waters" categories.
- The Economic Analysis focuses on costs associated with section 404 of the CWA. The Proposed Rule, however, will also amend sections 301,303,311,401 and 402,¹³⁴ but the Economic Analysis either ignores the associated costs under these sections or relies on a methodology deeply flawed.
- The Economic Analysis necessarily and implicitly assumes that all wetlands affected by the Proposed Rule would be compromised but for the Proposed Rule. And, it assumes that all wetlands will be preserved or mitigated if the Proposed Rule is promulgated. This false assumption does not account for state programs that already protect non-federally jurisdictional wetlands.

As demonstrated by this list of errors, a more thorough and transparent economic analysis is required to properly assess the economic impacts of the Proposed Rule. Because of this, the Proposed Rule must be withdrawn. (p. 26-28)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Coalition of Alabama Waterways (Doc. #15101)

11.2.191 The Agencies' Economic Analysis Underestimates Costs

The agencies' cost-benefit analysis of the Proposed Rule⁴³ significantly underestimates its associated costs. The agencies rely on data concerning requests for jurisdictional determinations in fiscal years 2009–2010 to determine the Proposed Rule's economic impacts. However, economic activity was constrained and construction activity was at a low point during that time due to the recession. For example, per U.S. Census Bureau data on seasonally adjusted monthly total construction, the average monthly spending on

¹³⁴ Examples of impacts outside of the Section 404 world include: an increase in the number of facilities subject to the Spill Prevention, Control and Countermeasure Rule and the Facility Response Plan Rules under Section 311; an increase in the number of facilities subject to storm water permitting and implementing best management practices under Section 402; and, an increase in the number of State certifications of water required under Section 401.

construction for that two-year baseline period was lower than the monthly average of any previous year since 2002.¹³⁵ Additionally, current (September 2014 (preliminary)) construction spending and the monthly average for 2014 are much higher than the 2009–2010 average.

The choice to focus on 404 permitting activity during a recession may introduce another bias. Economic constraints during the recession likely led developers to avoid higher cost projects compared to others, and jurisdictional determinations result in delay and direct costs, in addition to costs associated with mitigation and avoidance. That suggests a likelihood that jurisdictional determinations at that time may have fallen at an even greater rate than the overall slowdown in construction activity.

The agencies' chosen baseline to measure economic effects does not reasonably represent a normal level of permitting activity for purposes of evaluating the Proposed Rule's economic impact. The economic analysis is therefore fundamentally flawed. (p. 12-13)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See the economic analysis and the Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Missouri and Associated Rivers Coalition (Doc. #15519)

11.2.192 **5. The costs of implementing the proposed rule are extensive and will be mostly born by local entities.**

In estimating the proposed cost of implementing the rule the Agencies have failed to perform a full accounting of its impacts. The methods and data sets used for estimating the increased costs of Section 404 permitting are not reflective of what may be reasonably anticipated to occur in the future. Perhaps more importantly, the cost estimates fail to consider the true impact across all of the programs derived from the authority of the CWA. In past years the question of CWA jurisdiction as determined by the definition of “waters of the U.S.” has most often arisen with respect to Section 404 permitting actions. The proposed rule replaces the definition of “navigable waters” and “waters of the U.S.” for all CWA programs, including: Sec. 404 - Dredge and Fill Permits, Sec. 402 - NPDES (stormwater) permitting, Sec. 311 - Spill Prevention Control and Countermeasure Plans (SPCC), and Sec. 303 - Water Quality Standards and Total Maximum Daily Loads (TMDL's.) Of specific concern with respect to costs are those

¹³⁵ U.S. Census Bureau, Construction Spending, Historical Data, Historical Value Put in Place: Monthly, Seasonally Adjusted (available at http://www.census.gov/construction/c30/historical_data.html, file (totsatime.xls) downloaded Nov. 6, 2014). All statements regarding construction spending amounts in this portion of the comments are derived from this same source.

increases to stormwater permitting, including TMDLs. EPA has encouraged states to enhance water quality by implementing TMDLs through MS4 permits and other means, including for non-point source pollution. States presently have some authority to determine how to achieve this and can, and should, take into consideration the costs and benefits to their subdivisions of governments and businesses when deciding how to proceed. Under the proposed rule it is not clear that states will retain that authority or if unfunded mandates for enhancing water quality will be imposed. By not clarifying in the proposed rule that CWA programs beyond Section 404 would not be impacted by the new definition, the Agencies have left open that possibility. Then not addressing potential cost impacts to those programs consistent with how the Agencies have described them evolving, especially implementation of TMDLs, leaves the Agencies negligent and at best inaccurate in their estimation of the financial impact of the proposed rule on local entities and businesses. (p. 5-6)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Upper Mississippi, Illinois, & Missouri Rivers Association (Doc. #19563)

11.2.193 The agencies also have greatly underestimated the costs that will be associated with their Proposed Rule. (p. 1)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.2.194 **The Agencies' Economic Analysis Underestimates Costs**

The agencies' cost-benefit analysis of the Proposed Rule¹³⁶ severely underestimates its associated costs. The agencies' reliance on requests for jurisdictional determinations in fiscal years 2009-2010 as a base line for the Proposed Rule's economic impacts skews the effects downward. It is widely known that economic activity was severely constrained and construction activity was at a low point during that time due to the recession. For example, per U.S. Census Bureau data on seasonally adjusted monthly total construction, the average monthly spending on construction for that two-year base line period was

¹³⁶ Economic Analysis of Proposed Revised Definition of Waters of the United States (Mar. 2014).

lower than any month since 2002.¹³⁷ Additionally, current (September 2012 (preliminary)) construction spending and the monthly average for 2014 thus far are much higher than the 2009-2010 average.¹³⁸

The choice to focus on 404 permitting activity during a recession may introduce another bias. Economic constraints during the recession likely led developers to avoid higher-cost projects compared to others, and jurisdictional determinations result in delay and direct costs, in addition to costs associated with mitigation and avoidance. That suggests a likelihood that jurisdictional determinations at that time may have fallen at an even greater rate than the overall slowdown in construction activity.

The agencies' chosen baseline to measure economic effects does not reasonably represent a normal level of permitting activity for purposes of evaluating the Proposed Rule's economic impact. The economic analysis is therefore fundamentally flawed. (p. 10-11)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

University of Florida (Doc. #16446)

11.2.195 The purpose of this study was to estimate the potential economic losses for the agriculture sector in Florida due to the proposed changes to the WOTUS jurisdictional rule change.

Estimation of the economic impacts on Florida agriculture from the proposed expansion of WOTUS jurisdiction involved four steps:

1. Estimation of the incremental proportion of agricultural lands in representative areas of the State that would become WOTUS under the new definition. This was carried out using GIS data and software by consulting engineers Breedlove, Dennis and Associates.
2. Extrapolation of the incremental change in WOTUS classification to all coastal low-land counties in the state, for agricultural land uses, based on information from the 2012 Census of Agriculture (USDA-NASS).
3. Estimation of the average annual revenue per acre for the agricultural land uses affected, and total industry revenue change.

¹³⁷ U.S. Census Bureau, Construction Spending: Annual Rate for Total Construction: U.. Total Seasonally Adjusted Total Construction [Millions of Dollars], Period: 2006 to 2014, Data Extracted on: May 14, 2014.

¹³⁸ U.S. Census Bureau, Construction Spending: Annual Rate for Total Construction: U.. Total Seasonally Adjusted Total Construction [Millions of Dollars], Period : Jan-2002 to Dec-2014, Data Extracted on: May 14, 2014.

4. Estimation of regional economic impacts using an Input-Output model for the state of Florida developed using the IMPLAN economic impact analysis and social accounting software and region data (IMPLAN Group, LLC).

The potential change in area classified as jurisdictional WOTUS was evaluated for representative areas of agricultural lands in south Florida by consulting engineers Breedlove, Dennis and Associates, under contract to Florida Department of Agriculture and Consumer Services, Office of Agricultural Water Policy (FDACS-OAWP). The study area consisted of four sites, including two watershed basins and two farm-scale areas, encompassing a total of 61,175 acres. The consultant used Geographic Information System (GIS) coverages for hydrography, wetlands, floodplains, land use, and soils, to determine the areas that would become newly classified as WOTUS. The consultant's full report is available within the comment submitted to the EPA docket by FDACS-OAWP on Oct. 31, 2014. A summary of the consultant's findings are provided in Table 1. Across all land uses, a total of 1,738 acres, or 2.8 percent of the study area were determined to come under new WOTUS jurisdiction. Among the different agricultural land uses evaluated, improved pastures, unimproved pastures, woodland pastures, and mixed rangeland would see an increase in WOTUS area of 1.1 percent, 2.2 percent, 1.4 percent, and 0.5 percent respectively, or a weighted average of 1.28 percent. Pasture and range lands in Florida are predominantly used for beef cattle production, so these changes would potentially affect cow-calf producers. Other agricultural land uses, such as sugarcane and row crops (vegetables) had smaller increases in WOTUS area (0.8%, 0.3%, respectively), so these land uses were not evaluated for economic impacts. In addition, citrus groves, tree nurseries, and fallow cropland had negligible increases in WOTUS area. Upland hardwood forests had a significant increase in WOTUS area (2.8%), but were also not evaluated, since it was assumed that infrequent timber harvests would still be exempted from jurisdiction.

	6411	Palmetto Prairies	208.4	2.2	1.1%
	4280	Cabbage Palm	174.7	0.8	0.5%
	6411	Mixed Wetland Hardwoods	150.9	16	10.6%
	1110	Freshwater Marshes - Sawgrass	114.9		0.0%
	6210	Cypress	27.4	13.7	50.0%
	6180	Cabbage Palm Wetland	5.7	5.7	99.3%
Urban	6411	Mixed Units, Fixed and Mobile Home Units	567.6	3.9	0.7%
	7470	Disturbed Lands	542.4	6.3	1.2%
	6411	Open Land	180.0	0.7	0.4%
	7400	Disturbed Land	116.0	0.2	0.2%
	1110	Fixed Single Family Units	110.2	0.5	0.5%
	6411	Rural Residential	86.6		0.0%
	6411	Solid Waste Disposal	78.7		0.0%
	1710	Educational Facilities	71.9		0.0%
	1400	Commercial and Services	67.3		0.0%
	1760	Correctional	54.2	3.5	6.5%
	1110	Institutional	34.9		0.0%
	1110	Medium Density Under Construction	19.5		0.0%
	6411	Other Light Industry	13.7		0.0%
	6411	Mobile Home Units	11.5		0.0%
	6411	Railroads and Railyards	10.5		0.0%
	6411	Multiple Dwelling Units, Low Rise	3.8		0.0%
Water	5120	Channelized Waterways, Canals	484.7	1.6	0.3%
	6411	Reservoirs	422.7	19.5	4.6%
	1110	Lakes	138.8		0.0%
	6411	Natural River, Stream, Waterway	17.1		0.0%
Grand Total			61,175.4	1738.0	2.8%

The areas in South Florida evaluated by Breedlove, Dennis and Associates are believed to be representative of the coastal lowland physiographic region of the state of Florida, as indicated in blue in Figure 1. A set of 43 coastal lowland counties in the state shown in Figure 2 was selected for extrapolation of the incremental WOTUS area percentages for pasture/rangeland to a statewide basis for economic impact analysis.

Figure 1. Map of Florida physiographic regions (used for selection of coastal lowland counties)

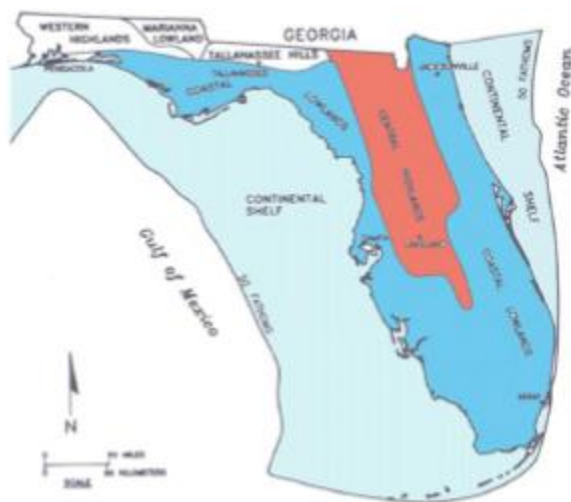


Figure 1. Map of Florida physiographic regions (used for selectin of coastal lowland counties)

Figure 2. Map of Florida counties included in impact analysis



Figure 2. Map of Florida counties included in impact analysis

It was assumed that the incremental WOTUS area in pasture and rangeland would be permanently removed from agricultural production. The estimated proportion of pasture/rangelands in the study areas that would be newly classified as WOTUS was then multiplied by the total area of pasture lands in the 43 selected lowland-coastal counties to estimate the total area affected in Florida. According to the 2012 Census of Agriculture (USDA-NASS), there was a total of 4.473 million acres of pastures in these selected

counties. Multiplying this by the 1.28 percent increase in WOTUS area for pasture/rangeland gives an estimated 57,206 acres in lost production (Table 2).

The annual revenues for cattle ranching and farming for Florida in 2012 were just over \$669 million (IMPLAN). Dividing this figure by total pastureland in the State used that year (5.119 million acres) gives an average revenue per acre of \$131. Multiplying the affected area (57,206 acres) by \$131 per acre equals \$7.494 million as the estimated annual revenue loss to beef cattle producers.

Table 2. Summary of changes in Florida pastureland and beef cattle production under expanded jurisdictional rule for Waters of the United States

Study area pasture/rangeland (acres)*	26,903
Study area pasture/rangeland incremental WOTUS area (acres)*	344.1
Percent increase in pasture/rangeland WOTUS area	1.28%
State pasture area in lowland counties (acres)**	4,472,628
Extrapolated state pasture/rangeland increase in WOTUS area (acres)	57,206
Annual state output value of beef cattle and calves***	\$669,200,000
Average annual market value per acre (\$)	\$131
Total value change for beef cattle production (\$/year)	-\$7,493,986

Sources: *Breedlove, Dennis & Associates (2014). **USDA-NASS, 2012 Census of Agriculture.

***IMPLAN Group LLC, IMPLAN data for Florida, 2012, and Hodges, Rahmani and Stevens, 2014.

Table 2. Summary of changes in Florida pastureland and beef cattle production under expanded jurisdiction rule for Waters of the United States

The regional economic impacts of lost beef cattle industry revenues in Florida were estimated using multipliers from an IMPLAN economic model of the State of Florida. Input-Output/Social Accounting Matrix (IOSAM) models constructed with the IMPLAN software are mathematical representations of a regional economy formulated in terms of transactions between industries, employees, households, and governments that can be used to estimate how changes in economic activity in specific industries will broadly impact the regional economy as a whole (Miller and Blair, 2009). Economic impacts are estimated from regional models using economic multipliers, including three types of multiplier effects: direct, indirect and induced. The direct effects multipliers represent the change in direct economic activity within the State, while indirect and induced effects multipliers represent the additional change in regional economic activity due to input supply chain purchases, household and government spending. The total impact is captured by the sum of direct, indirect and induced effects. The IMPLAN model in this case was constructed for the state of Florida using 2012 region data, with the trade flows option, and included all social accounts in the model. For the beef cattle farming and ranching industry in Florida (IMPLAN sector #11), the total output (revenue) multiplier is 3.168, and the total employment multiplier is 24.84 fulltime and part-time jobs per million dollars output.

The estimated economic impacts of lost revenues to the Florida beef cattle industry due to increased WOTUS area are summarized in Table 3. The annual industry output (revenue) impact is -\$24.06 million, the value added impact to state GDP is \$9.39 million, the labor income (wages, salaries, benefits, proprietor income) impact is \$5.01 million, and the employment impact is -184 fulltime and part-time jobs.

Table 3. Summary of economic impacts of lost beef cattle production in Florida due to expanded jurisdictional rule for Waters of the United States on pastureland

Impact Type	Employment (Jobs)	Labor Income	Value Added	Industry Output
Direct Effect	-60.2	(\$583,660)	(\$1,311,161)	(\$7,493,986)
Indirect Effect	-57.6	(\$1,216,673)	(\$2,621,449)	(\$8,095,202)
Induced Effect	-66	(\$3,212,221)	(\$5,455,865)	(\$8,471,919)
Total Effect	-183.7	(\$5,012,554)	(\$9,388,474)	(\$24,061,107)

Values in 2014 dollars. Employment represents fulltime and part-time jobs.

Source: IMPLAN Group LLC, IMPLAN software and data for Florida, 2012.

Table 3. Summary of economic impacts of lost beef cattle production in Florida due to expanded jurisdictional rule for Waters of the United States on pastureland

The economic impacts of lost beef cattle industry output due to expanded WOTUS area in Florida are presented for major industry groups in Table 4. The largest impact occurs in the Agriculture, Forestry, Fisheries and Hunting sector, with total output impacts of -\$12.76 million, including the direct industry output change of -\$7.49 million, plus indirect impacts for diminished supply chain activity, and induced impacts for reduced employee household and government spending. Significant impacts would also be experienced due to indirect and induced effects in the Real Estate and Rentals sector (-\$1.75 million), Finance and Insurance (-\$1.62 million), Manufacturing (\$925,925), and Health and Social Services (\$961,022).

Table 4. Industry output impacts of lost beef cattle production in Florida due to expanded jurisdictional rule for Waters of the United States on pastureland, by major industry group

Industry Group (NAICS)	Direct	Indirect	Induced	Total
11 Agriculture, forestry, fishing & hunting	(\$7,493,986)	(\$5,237,836)	(\$30,679)	(\$12,762,501)
21 Mining	\$0	(\$18,182)	(\$19,318)	(\$37,499)
22 Utilities	\$0	(\$136,341)	(\$165,015)	(\$301,356)
23 Construction	\$0	(\$30,016)	(\$608,067)	(\$638,083)
31-33 Manufacturing	\$0	(\$554,306)	(\$371,619)	(\$925,925)
42 Wholesale trade	\$0	(\$292,175)	(\$419,716)	(\$711,891)
44-45 Retail trade	\$0	(\$6,325)	(\$654,232)	(\$660,557)
48-49 Transportation & warehousing	\$0	(\$217,430)	(\$199,991)	(\$417,420)
51 Information	\$0	(\$51,913)	(\$405,036)	(\$456,949)
52 Finance & insurance	\$0	(\$775,415)	(\$849,242)	(\$1,624,657)
53 Real estate & rental	\$0	(\$463,029)	(\$1,289,757)	(\$1,752,786)
54 Professional, scientific & technical services	\$0	(\$132,645)	(\$548,282)	(\$680,927)
55 Management of companies	\$0	(\$30,534)	(\$69,465)	(\$99,998)
56 Administrative & waste services	\$0	(\$64,349)	(\$248,310)	(\$312,659)
61 Educational services	\$0	(\$10,129)	(\$109,257)	(\$119,386)
62 Health & social services	\$0	(\$96)	(\$960,926)	(\$961,022)
71 Arts, entertainment & recreation	\$0	(\$6,074)	(\$114,647)	(\$120,721)
72 Accommodation & food services	\$0	(\$21,409)	(\$345,698)	(\$367,107)
81 Other services	\$0	(\$18,722)	(\$291,743)	(\$310,466)

Table 4. Industry output impacts of lost beef cattle production in Florida due to expanded jurisdictional rule for Waters of the United States on pastureland, by major industry group

These estimated annual losses in economic activity in the agricultural sector in the State of Florida would continue in perpetuity as long as the proposed expanded federal jurisdiction of WOTUS is in place. It is recognized that the expanded jurisdiction of WOTUS would potentially have incremental nonmonetary benefits for wetland protection and water quality improvement, however, insufficient information is available to evaluate these benefits. (p. 1-8)

Agency Response: EPA and the Corps recognize the detail provided in the comment. It is noted the final regulation has clarified of the scope of “waters of the U.S.” The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. See also Topic 14 on site-specific examples.

Florida Stormwater Association, Inc. (Doc. #7965.1)

11.2.196 **Fiscal Impacts**

Based on the language as contained in the proposed rule, attached please find a series of estimated fiscal impacts using a very small fraction of the waters likely to be added to the list of what is “jurisdictional” or WOTUS in just a few Florida counties.

Hillsborough County

Lateral C stormwater conveyance

“Lateral C” discharges directly into Delaney Creek and eventually Hillsborough Bay. Delaney Creek is currently a jurisdictional waterbody or Water of the United States (WOTUS). Lateral C is a 1.3 mile channelized conveyance maintained by the Hillsborough County Public Works Department to provide stormwater drainage/flood control for the Clair Mel City neighborhood.

It would become WOTUS under the proposed regulations.



Image of "Lateral C"

Fiscal Impact

Estimated Total Maximum Daily Load (TMDL) reductions were calculated according to established percent reduction protocols and EMC based load estimates as follows:

$$\frac{(\text{measured exceedance} - \text{target})}{\text{measured exceedance}} \times \text{EMC based load estimates}$$

Estimated Total Maximum Daily Load (TMDL) reductions were calculated according to established percent reduction protocols and EMC based load estimates

The measured exceedances used in the percent reduction calculation are annual average Total Nitrogen (TN) and Total Phosphorus (TP) concentrations for Lateral C from 2012-13. The target concentration was estimated based on the Numeric Nutrient Criteria as a biological target has not yet been established under the narrative criteria for ditches. Under these assumptions, reductions of 89.61 lbs/yr TN and 153.0 lbs/yr TP could be required for in stream conditions in Lateral C. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to bring Lateral C to in stream water quality standards is a combined total of approximately \$2,100,675 for the 1.3 mile long ditch.

Osceola County

Stewart Street Drainage Area

The Stewart Street drainage area is primarily older rural and low density residential communities on septic systems which were built prior to stormwater attenuation and treatment requirements. The Stewart Street conveyance system is a series of man-made (typical trapezoidal) and maintained ditches. The system is bisected and adjacent to several wetlands and terminates into a regional stormwater pond which directly discharges to Lake Tohopekaliga. These ditches are subject to inundation year round due to the high water table in the area and backflow from Lake Tohopekaliga during the “dry” season (November-April) when the lake elevation stages up in accordance with the U.S. Army Corps Regulation Schedule.



Stewart Street Drainage Area

Under the proposed rule changes, the man-made conveyance ditches would be considered WOTUS and water quality regulations could be applied “in stream” instead of being

considered as a loading contributor to the overall WBID. This application is problematic for several reasons, as noted below:

1. The nutrient concentration of conveyance system increases during the “dry” season due to stagnant inundation caused by backflow from the lake, blackwater in the wetlands and the high ground water table.
2. As a WOTUS, the County MS4 could be required to address the loads in stream which are primarily a result of non-stormwater sources. Since the water is stagnant and shallow, a pump or circulation system would be needed.
3. The retrofit pond was designed to treat the ditch water prior to discharge into Lake Tohopekaliga; however, the ditch system could be required to meet water quality standards in stream, which is prior to the treatment facility.
4. Maintenance of the ditches would be subject to Federal permitting requirements.

Fiscal Impacts

Since a specific biological target has not been identified based on the narrative nutrient criteria applicable to ditches, the target concentration was estimated based on the Numeric Nutrient Criteria. The in-stream reduction requirements based on the existing projections to achieve the current post treatment concentration within the system treatment system are 2,667 lbs/yr of Total Nitrogen (TN) and 381 lbs/yr of Total Phosphorus (TP). Since there are no vacant uplands that remain in this basin, the FDEP retrofit cost estimates of \$3,500/ lb. of TN and \$11,680/lb. of TP were used. The cost for compliance of this system is estimated at \$9,334,500 for TN and \$4,450,080 for TP.

The majority of Osceola County’s 70+ miles of MS4 open conveyance “ditch” systems are subject to similar issues.

If the WOTUS designation leads to in-stream water quality requirements related directly to the ditch system, the County’s \$2 million investment in the Stewart Street Regional Pond Retrofit would be devalued because the facility is located downstream in the system and will not reduce the loads along the entire length of the conveyance because it was designed to reduce loads to the downstream waterbody.

Palm Beach County

The following examples are from Palm Beach County, Florida. The proposed changes to WOTUS will have far-reaching implications for the County in terms of fiscal impacts, primarily due to the network of ditches, canals and interconnected floodplains. Two representative examples are provided, although it is likely that hundreds of similar examples exist throughout the County.

Village of Wellington – Palm Beach County

The Village of Wellington (outlined below in yellow) is an incorporated town in Palm Beach County that operates an MS4 system of approximately 34 square miles. The stormwater management system includes five outfalls into current jurisdictional waterbodies or “WOTUS,” 91 miles of man-made canals, 270 acres of lakes, 365 acres of wetlands/preserves, eight pump stations, five control structures, 165 miles of pipes, 2,173 catch basins and 37 miles of swales. Due to the creation of the award-winning Wellington Environmental Preserve (shown in the west of the map below), the existing canal network, and the installation of significant infrastructure to prevent flooding, much of Wellington is linked together as one floodplain.



Village of Wellington

Fiscal Impact

Under the current Total Maximum Daily Load of 13% for Total Phosphorus (TP) (EPA Proposed TMDL for the ACME North Sector), equates to approximately 400 pounds of TP. Under the TMDL, the receiving water is required to meet the load reduction, but the canal system is not required to meet the water quality standards in stream. Using FDEP’s retrofit estimate of \$11,680/lb TP, the cost to bring the canal network in Wellington’s Basin B to current water quality standards in stream is approximately \$4.6 million for TP. Costs for Wellington’s Basin A would be comparable, bringing total retrofit costs for the Village canal network to \$9 million.

PGA National – Palm Beach County

PGA National’s stormwater and canal system is managed by Northern Palm Beach County Improvement District. The canals located within PGA National are for flood control purposes and are not currently considered jurisdictional waterbodies/WOTUS. The proposed regulatory changes (conservatively applied) would bring a minimum of two additional canal segments into jurisdictional status (adding an 8,400 linear feet, shown below in yellow), although another interpretation, based the definition of “floodplains” could essentially link most of PGA National into a network of jurisdictional waterbodies.



PGA National – Palm Beach County

Fiscal Impact

Several adjacent waterbodies are listed for upcoming TMDL development for PGA National's Preserve, as defined under the new definition of WOTUS. Under a conservative estimate for a Total Maximum Daily Load, a 15% reduction for Total Nitrogen (TN) and a 40% reduction for Total Phosphorus (TP) could be required. These are slightly lower estimates than the EPA-adopted TMDL for Lake Ida/WBID 3262A in the same major watershed; it is likely that the TMDLs for this area will be much higher. This equates to reductions of approximately 975 pounds of TN and 132 pounds of TP. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to retrofit these canals to meet in stream water quality standards would be \$3.4 million for TN and \$1.5 million for TP.

Pasco County

Dade City Canal

Dade City Canal is a manmade conveyance located in the Upper Withlacoochee River Watershed. The canal was originally dredged for flood control and drains to the Upper Withlacoochee River Swamp (UWRS) prior to discharging into the Withlacoochee River. The Withlacoochee River is a jurisdictional waterbody or Water of the United States (WOTUS). Prior to 2007, flow in Dade City Canal was dominated by point source discharges from the Dade City WWTP and the Lykes Pasco Beverage facility. Both of these point sources have been removed and the canal is now typically characterized by zero to very low flows even when the Withlacoochee River stage is high. Dade City Canal is not now considered to be WOTUS but would be considered such under the proposed regulations.



Dade City Canal near its confluence with the UWRs (March 16, 2010)

Dade City Canal near its confluence with the UWRs (March 16, 2010)



Dade City Canal near its confluence with the UWRs (March 16, 2010)

Dade City Canal near its confluence with the UWRs (March 16, 2010)

Fiscal Impact

The total maximum daily load (TMDL) for the watershed was adopted in early 2007 and required a 70 percent reduction from point source, non-point source and MS4 loads for total nitrogen (TN) and total phosphorus (TP). If the Waste Load Allocation for the discontinued point source discharges is removed from the total existing loading, the remaining reductions required from the MS4 and other non-point sources in order to meet the TMDL are 40 percent for TN and 22 percent for TP. For the canal system, this equates to 3,758 pounds of TN and 274 pounds of TP. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to bring Dade City Canal into compliance with in stream water quality requirements is \$13,153,000 for TN and \$3,200,320 for TP.

Numerous segments of Pasco County’s MS4 system would also likely be considered WOTUS under the proposed regulations. For example, the stormwater facilities for the Gulf View Mall include ditch and stormwater retention ponds that have a direct discharge into Salt Spring Run. Salt Spring Run is located behind the Gulf View Mall just north of Port Richey on the west coast of Pasco County (see below). Under the proposed regulations, these discharges would likely be required to meet in stream water quality criteria prior to discharge into Salt Spring Run, and routine maintenance activities would be subject to federal permitting policy. Retrofit of this stormwater facility to meet in stream water quality criteria in this highly urbanized environment would likely be cost-prohibitive for the County and provide little overall environmental benefit.



Stormwater management facilities at Gulf View Mall adjacent to Salt Spring Run

Stormwater management facilities at Gulf View Mall adjacent to Salt Spring Run

Pinellas County

Pinellas Park Ditch #5 (Bonn Creek)

Pinellas Park Ditch #5 (aka “Bonn Creek”) discharges directly into a wetland that discharges into “Joe’s Creek.” Joe’s Creek is currently a jurisdictional waterbody or Water of the United States (WOTUS). The ditch is a conveyance managed as part of the Pinellas Park Water Management District, which was created in 1976 by the Florida Legislature to manage the primary stormwater drainage/flood control system for a portion of central Pinellas County.

Ditch #5 provides no environmental or human benefits, other than flood control. It is not now considered to be WOTUS but would be considered to be such per the proposed regulations of EPA and the ACOE.



Pinellas Park Ditch #5 (Bonn Creek)



Pinellas Park Ditch #5 (Bonn Creek)

Fiscal Impact

Based on the current Total Maximum Daily Load for the area, a 27% reduction is required for Total Nitrogen (TN) and a 64% reduction for Total Phosphorus (TP). When applied to the Pinellas Park Ditch #5, this equates to reductions of 3,795 pounds of TN and 1,547 pounds of TP. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to bring Ditch #5 to in stream water quality standards is \$13,282,500 for TN and \$18,068,960 for TP.

St. Johns County

Parker Canal

Parker Canal is a large constructed ditch that drains water east to west against natural land grade along Canal Road. Parker Canal discharges to Colson Branch, a tributary to the Lower St. Johns River (LSJR). The LSJR is currently a jurisdictional waterbody or

Water of the United States (WOTUS). Parker Canal is the primary drainage feature within the Elkton Drainage District (EDD) in St. Johns County, Florida. The EDD is an active, dependent drainage district established under Chapter 298, Florida Statutes in 1917. The County is the responsible entity for stormwater in the EDD.



Parker Canal

Fiscal Impact

Based on the current Total Maximum Daily Load for the Lower St. Johns River Main Stem, a 30% reduction is required for both Total Nitrogen (TN) and Total Phosphorus (TP). When applied to the Parker Canal, this equates to a minimum in stream reduction of 13,240 pounds of TN and 14,500 pounds of TP. Using FDEP's retrofit estimates of \$3,500/lb TN and \$11,680/lb TP, the cost to bring Parker Canal to current water quality standards is \$13,902,000 for TN and \$50,808,000 for TP.

Volusia County

B-21 Drainage Basin

There are number of roadside ditches and canals that flow into the B-21 Canal, which is a jurisdictional water located in Volusia County. For example, there are approximately 80,250 ft. of large roadside ditches on Tomoka Farms Road and approximately 31,650 ft. of canals draining into the B-21 Canal. The B-21 drainage basin is approximately 21,400 acres, comprised of approximately 3,000 acres of urban land use, 1,400 acres of agricultural, 10,000 acres of uplands and 9,000 acres of wetlands.



Tomoka Farms Roadside Ditch

B -21 canal

Tomoka Farms Roadside Ditch and B-21 canal

Fiscal Impacts

B-21 discharges to Spruce Creek which has a Total Maximum Daily Load (TMDL) for fecal coliform, Total Phosphorus (TP) and Biological Oxygen Demand (BOD). A TP reduction of 27% is required within the designated area, equating to 2,600 pounds of TP. Using FDEP's retrofit estimates of \$11,680/lb TP, the cost to bring the B-21 Canal to in stream water quality standards for TP (in the portion of the B-21 system that is maintained by Volusia County) is \$30,368,000. (p. 9-27)

Agency Response: The agencies recognize the detail provided in the comment. It is noted the final regulation clarifies the scope of “waters of the U.S.” The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis. See also Topic 14 on site-specific examples, and see Ditches Compendium.

American Legislative Exchange Council (Doc. #19468)

11.2.197 (...) WHEREAS, the proposing agencies' economic analysis for this rule did not consider impacts of the full range of CWA programs affected or of economic impacts to small businesses and the analysis relies on nearly 20-year old cost data that has not been adjusted for inflation and, in concluding that the proposed rule would increase the waters subject to permitting requirements by only 2.7 percent, the proposing agencies rely on a data base that is incomplete and not representative of those waters that are subject to jurisdiction under current regulation; and (...) (p. 4)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3,

11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

United States Senate (Doc. #1377)

11.2.198 (...) Lastly, it would appear that the economic impact of this rule is underestimated. Clearly if the rule were finalized as purposed, additional projects and actions would fall under CWA regulatory requirements that would not have otherwise. Concerns have been raised that mitigation costs cited in the economic study do not appear to reflect the current reality in Arizona or the immense costs that permitting under the CWA can entail. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

United States House of Representatives (Doc. #17464)

11.2.199 In early December of 2013, your agencies released a joint analysis stating that this rule would subject an additional three percent of U.S. waters and wetlands to CWA jurisdiction and that the rule would create an economic benefit of at least \$100 million annually. This calculation may not be an accurate representation of the economic impact. In this analysis, the EPA evaluated the FY 2009-2010 requests for jurisdictional determinations – a period of time that was the most economically depressed in nearly a century. This period saw extremely low construction activity and should not have been used as a baseline to estimate the incremental acreage impacted by this rule. In addition, the derivation of the three percent increase calculation did not take into account the landowners who — often at no fault of their own — do not seek a jurisdictional determination, but rather later learn from your agencies that their property is subject to the CWA. These factors alone, which are just two of many assumptions, raise questions as to the reliability of the conclusions of the economic analysis. (p. 1 - 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

Congress of the Unites States (Doc. #1434)

11.2.200 In early December of 2013, your agencies released a joint analysis stating that this rule would subject an additional three percent of U.S. waters and wetlands to CWA

jurisdiction and that the rule would create an economic benefit of at least \$100 million annually. This calculation is seriously flawed. In this analysis, the EPA evaluated the FY 2009-2010 requests for jurisdictional determinations — a period of time that was the most economically depressed in nearly a century. This period, for example, saw extremely low construction activity and should not have been used as a baseline to estimate the incremental acreage impacted by this rule. In addition, the derivation of the three percent increase calculation did not take into account the landowners who — often at no fault of their own — do not seek a jurisdictional determination, but rather later learn from your agencies that their property is subject to the CWA. These errors alone, which are just two of many in EPA's assumptions and methodology, call into question the veracity of any of the conclusions of the economic analysis. (p. 1-2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

House of Representatives (Doc. #12751)

11.2.201 In early December of 2013, your agencies released a joint analysis stating that this rule would subject an additional three percent of U.S. waters and wetlands to CWA jurisdiction and that the rule would create an economic benefit of at least \$100 million annually. This calculation is seriously flawed. In this analysis, the EPA evaluated the FY 2009-2010 requests for jurisdictional determinations, a period of time that was the most economically depressed in nearly a century. This period, for example, saw extremely low construction activity, and should not have been used as a baseline to estimate the incremental acreage impacted by this rule. In addition, the derivation of the three percent increase calculation did not take into account the landowners who, often at no fault of their own, do not seek a jurisdictional determination, but rather later learn from your agencies that their property is subject to the CWA. These events alone, which are just two of many in the EPA's assumptions and methodology, call into question the veracity of any conclusions drawn from the economic analysis. (p. 2)

Agency Response: The rule is narrower in scope than existing regulations and historical practice. The accompanying economic analysis addresses changes in the assertion of jurisdiction that may occur relative to recent practice and the resulting impacts on CWA programs. See Summary Responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2 and 11.4 on how the agencies have addressed concerns related to the economic analysis.

11.3. SECTION 404**Agency Summary Response**

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Activities in waters of the United States regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and electricity transmission), and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from Section 404 regulation. Proposed activities are regulated through a permit review process. An *individual permit* is required where impacts are more than minimal.

Individual permit applications are reviewed by the U.S. Army Corps of Engineers, which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines. However, for most discharges that will have only minimal adverse effects, a *general permit* may be suitable. General permits are issued on a nationwide, regional, or State basis for particular categories of activities. The general permit process eliminates individual review and allows certain activities to proceed with little or no delay, provided that the general or specific conditions for the general permit are met. The great majority of discharges are authorized under a general permit.

The Summary Response to Topic 11.2 (Scope of Change of Jurisdiction) addresses comments on, as well as changes the agencies made to, the way the Economic Analysis estimates the percentage of negative jurisdictional determinations (JDs) that would become positive JDs under the rule when compared to the baseline of current practice. An increase in assertion of CWA jurisdiction could produce costs of implementation of the Section 404 program as well as increased benefits. Regulated entities may face costs resulting from this rule through permit application costs, and associated compliance costs such as wetlands mitigation or stream mitigation, and project re-design and relocation expenses. There may also be program management costs and efficiencies associated with administering the Section 404 program.

This rule may result in an increase in Section 404 permits with associated costs. Ecological benefits will accrue from those permitted losses being offset through compensatory mitigation. The Economic Analysis provides more detail on these benefits, based upon a benefits transfer analysis using studies measuring willingness to pay for preservation of wetlands similar to the type likely to be protected by this rule. The Summary Responses to Topics 11.3.1 and 11.3.2 below respectively address comments on the costs and benefits to the Section 404 program.

Specific Comments

Southern Nevada Home Builders Association (Doc. #3251)

11.2.202 The 404 permitting process is very costly to developers and is time consuming, delaying development. Land which was previously able to be developed under the current rules will now either be undevelopable or substantially more difficult and costly to develop. (p. 3)

Agency Response: **The rule is narrower in scope than the existing regulations and historical practice. See Agencies' Summary Response under Topic 11.3.1 (Costs)**

The Mosaic Company (Doc. #14640)

11.2.203 **3.3 Lost Profits and Socioeconomic Costs**

The EPA's Study estimate of compliance costs does not quantify lost profits in the private sector, nor does it account for associated reductions in spending on goods and services produced by other industries. If the proposed rule restricts operational flexibility and interrupts industry operations, it may also result in lowering output, jobs and wages. The resulting costs are demonstrated by a situation at one of Mosaic's phosphate rock mining operations located in Florida, which may have been idled for about three years if not for the operational flexibility preserved through CWA jurisdiction in 2010. At the time, the existing mining operation was not expected to have sufficient permitted reserves to continue operation during the preparation of a Phosphate District Areawide Environmental Impact Study (AEIS) and the subsequent time needed to permit a new parcel. Reserves on an adjacent unpermitted parcel of land, however, could be permitted for mining because the wetlands were considered isolated and non-jurisdictional by the USACE, and the permitting through the state could be conducted while the AEIS was in progress. This preserved Mosaic's ability to continue to operate and produce its needed phosphate rock supply. The mine generates approximately 1.7 million tons of phosphate rock annually, at a value of approximately \$169 million comprised—among other things—of profits for Mosaic, along with wages associated with approximately 100 direct jobs that stimulate the economy through household spending.¹³⁹ In addition to direct economic benefits, the mine, its benefaction facility and Mosaic's fertilizer production operations support the purchase of goods and services from other industries, indirectly resulting in profits, wages and associated household spending for other individuals and businesses, as well as tax revenue to state and local governments. However, if the proposed rule were in effect at the time, CWA jurisdiction over the isolated wetlands on the adjacent parcel would have likely triggered a temporary mine shutdown, while waiting for the USACE Section 404 permit to issue, since at the time the USACE would not issue permits before the AEIS was completed. This potential outcome would occur

¹³⁹ Area-Wide Environmental Impact Statement on Phosphate Mining in the Central Florida Phosphate District, U.S. Army Corps of Engineers, April 2013, Appendix H.

even with no corresponding wetland loss, as the state of Florida independently claimed jurisdiction and required mitigation for the isolated wetland at issue.

While this situation is specific to Mosaic, it clearly demonstrates the types of costs that could be borne by unknown permittee and non-permittee enterprises when operational flexibility is restricted by expanded CWA jurisdiction. These direct, indirect and induced effects of changes in industry output have been quantified and well-documented using IMPLAN data and software in hundreds of studies of the economic costs of environmental policy changes. These studies could be reviewed for approaches to estimating and incorporating such costs based on estimated changes in economic output and income by the regulated community. (p. 49-50)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs)

Oregon Cattleman's Association (Doc. #5273)

11.2.204 Federal regulation under the CWA imposes substantial burdens on landowners who want to conduct activities that may affect areas determined to be "waters of the United States." Much of this burden is financial in nature.

For example, applicants seeking to deposit fill material into "waters of the United States" spend on average 788 days and \$271,596 to complete the required process for an individual permit. Additionally, these costs are directly correlated with the size of the project proposed. Applications for individual permits impose a baseline cost of \$43,687 plus an additional \$1 1,797 for each acre of "waters of the United States" impacted by the project. (p. 7)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs)

Pike and Scott County Farm Bureaus (Doc. #5519)

11.2.205 Many activities that could previously have been carried out under a nationwide and/or statewide general permits may no longer qualify, and regulated entities (and state counterparts) will be forced to obtain individual permits, which are far more costly, time consuming and administratively resource intensive. The costs alone of obtaining a Corps 404 permit are significant: averaging 788 days and \$271,596 for an individual permit and 313 days and \$28,915 for a nationwide permit, which is not counting the costs of mitigation or design changes. (p. 1)

Agency Response: The agencies believe the rule will expedite the permit review process in the long-term by clarifying jurisdictional matters that have been time-consuming and cumbersome for field staff and the regulated community for certain waters in light of the 2001 and 2006 Supreme Court cases. The Corps' Nationwide Permit program, which authorizes Clean Water Act Section 404 discharges that would have no more than minimal adverse impacts to aquatic resources, is available for activities that qualify. See Agencies' Summary Response under Topic 11.3.1 (Costs)

Consolidated Drainage District #1, Mississippi County, Missouri (Doc. #6254)

11.2.206 It also leaves individual farmers -in our jurisdiction mostly family farmers - in the highly difficult position of showing that their drainage ditches are not connected to some navigable body of water. Such a showing would require lengthy surveys and hydrological tests that, quite frankly, family farmers would not be able to afford. The economic and financial burdens would cut into the profitability of their land, making them less economically viable - and much more likely to claim a regulatory taking in the future. (p. 3)

The rule does not shift the burden of proof; the federal government must demonstrate that a water is a "water of the United States" under the CWA and its implementing regulations.

Agency Response: See Agencies' Summary Responses under Topic 6, Topic 7 and under Topic 11.3.1

Monarch-Chesterfield Levee District, St. Louis, Missouri (Doc. #14904)

11.2.207 **e. The costs of implementing the proposed rule are extensive and will be mostly born by local entities.**

In estimating the proposed cost of implementing the rule, the Agencies have failed to perform a full accounting of its impacts. The methods and data sets used for estimating the increased costs of Section 404 permitting are not reflective of what may be reasonably anticipated to occur in the future. Perhaps more importantly, the cost estimates fail to consider the true impact across all of the programs derived from the authority of the CWA. In past years the question of CWA jurisdiction as determined by the definition of "waters of the U.S." has most often arisen with respect to Section 404 permitting actions. The proposed rule replaces the definition of "navigable waters" and "waters of the U.S." for all CWA programs, including: Sec. 404 - Dredge and Fill Permits, Sec. 402 - NPDES (stormwater) permitting, Sec. 311 – Spill Prevention Control and Countermeasure Plans (SPCC), and Sec. 303 - Water Quality Standards and Total Maximum Daily Loads (TMDL's.)

Of specific concern with respect to costs are those increases to stormwater permitting, including TMDLs. EPA has encouraged states to enhance water quality by implementing TMDLs through MS4 permits and other means, including for non-point source pollution. States presently have some authority to determine how to achieve this and can, and should, take into consideration the costs and benefits to their subdivisions of governments and businesses when deciding how to proceed. Under the proposed rule it is not clear that states will retain that authority, or if unfunded mandates for enhancing water quality will be imposed. By not clarifying in the proposed rule that CWA programs beyond Section 404 would not be impacted by the new definition, the Agencies have left open that possibility. Then, not addressing potential cost impacts to those programs consistent with how the Agencies have described them evolving, especially implementation of TMDLs,

leaves the Agencies negligent and at best inaccurate in their estimation of the financial impact of the proposed rule on local entities and businesses. (p. 5-6)

Agency Response: See Agencies' Summary Responses under Topic 11.3.1, Topic 11.4, and Topic 7.

11.3.1. *Costs*

Agency Summary Response

In general, commenters to the proposed rule noted a number of cases where they believed that a particular subcomponent of permit costs was either overlooked completely or underestimated. Examples of this include increased on-site and off-site (alternate location) delineation costs, additional potential required studies under the 404 permitting process (e.g. biological surveys, ESA Section 7 documentation, and cultural resource studies), and under-estimation of restoration costs. The agencies recognize that there may be circumstances where specific individual permit applicants may be asked to do additional analyses or project redesign. The agencies acknowledge that these costs can be significant for affected permit applicants; however, these are very case-specific costs and lacking data to support a credible approach to estimating these costs, they are excluded from this analysis. The agencies for the final rule chose to characterize the considerable uncertainty surrounding our cost estimates by conducting “scenario analysis.” OMB Circular A-4 states that in some cases where the level of scientific uncertainty is so large that the analysis can only present discrete alternative scenarios without assessing the relative likelihood of each scenario quantitatively. In one scenario, the agencies combined a series of “high end” assumptions, including that twice as many jurisdictional determinations will be made for “other waters” as indicated in recent Corps data. The agencies believe that this “high end” assessment of total costs bounds the impact of uncertainty including the potentially under-costed and missed cost categories.

Commenters state that the EA for the Proposed Rule ignores any potential changes to the distribution of general permits (GPs) and individual permits (IPs). The note that the EA accounts for a full increase in IPs and GPs for the entire projected increase in jurisdiction, which is likely a conservative assumption as it is questionable that following this rule the agencies would receive a permit application for the same percentage of waters on an annual basis that are estimated to now be jurisdictional under this rule, and as such the agencies believe that this analysis adequately estimates the high-end of costs, including the possibility for permits switching between general permits and individual permits. In addition, in the EA for the Final Rule, the agencies conservatively assumed that the number of GPs and IPs issue per year would be the maximum number of permits issued in a year in each respective category in the ORM2 fiscal years 2009 through 2014. For general permits this figure is 60,020 from fiscal year 2013, and for individual permits this figure is 4,672 from fiscal year 2009. The fiscal year 2014 permit figures are considerably lower than fiscal year 2013, as well as lower than the six year average, and figures for IPs dropped by a larger percentage than for GPs. Given that costs are higher for

IPs than GPs, this suggests that using the yearly maximum as described above for this analysis is even more conservative than originally anticipated.

Commenters express concern over the potential heterogeneity in impacted acreage within the general permit and individual permit categories. The EAs for both the Proposed and Final Rules use an average impact per permit to calculate total impacted acreage. However, the agencies updated the per permit figures to evaluate ORM2 fiscal year 2013 records for the Final Rule (the Proposed Rule used fiscal year 2010 records), and the Corps undertook a data quality assurance effort to thoroughly vet the per permit acreage impact figures for the Final Rule. As a result, the size of the average impact per general permit increased from 0.28 to 0.43, while the corresponding per permit acreage for individual permits decreased from 12.81 to 5.94.

The agencies agree with commenters that the costs of permitting fall on both new capital projects, and operations and maintenance projects at existing locations.

Commenters argued that an appreciable fraction of agricultural land would become jurisdictional under the Rule. Removing this land from production would result in a substantial loss of agricultural production and ripple effects throughout the economy. The premise that agricultural land would necessarily come out of production because it could become jurisdictional is faulty. The Rule retains exemptions for certain agricultural uses and practices [see for instance, Topic 7.2 on Prior Converted Cropland] and clarifies excluded waters. Agricultural land would most likely be affected under the 404 program, but the agencies' analyses suggest that jurisdiction over only fairly modest areas nationwide would be asserted under the Rule. Moreover, the Rule is narrower in scope than existing regulations and historical practice. Any potential additional costs that would be incurred as a result of the Rule were likely already incurred under assertions of jurisdiction made in the late 1990s.

Commenters provided several case studies that took advantage of various site-mapping technologies to demonstrate that at specific sites for specific industries or municipalities the number of permits required and the type of permits required may increase under the proposed jurisdictional definition of WOTUS, when considered relative to recent practice. These case studies (as well as the changes to the proposed rule), though based on limited geospatial and industry specific data that is not nationally representative, encouraged the agencies to reassess the proposal's 2.7 percent increase in positive jurisdictional determinations. Some of these case studies had limited applicability to the Economic Analysis. For example, one cited study has assumptions that are inconsistent with the description of the rule, and cannot be compared to the accompanying economic analysis. In particular, the study overstates the impact of the proposed rule by assuming all man-made ditches and canals are currently non-jurisdictional waters but would become jurisdictional under the proposed rule. The study also assumes nutrient load reductions upstream have no effect on nutrient loads downstream, ignoring that areas draining to waters that are not waters of the U.S. may still need treatment under current practice, as water quality standards in downstream waters can't be achieved unless upstream sources are reduced. In addition, the study uses numeric water quality criteria in the water quality standards to determine fiscal impact, when in some cases less costly narrative criteria could apply.

Commenters also suggest that data on section 404 permit application costs from a 20 year old study have not been adjusted for inflation or any other changes. This is incorrect as the agencies have adjusted for inflation. In particular, the EA for the Final Rule adjusts data from D. Sunding and D. Zilberman. 2002. “The economics of environmental regulation by licensing: An assessment of recent changes in the wetland permitting process.” *Natural Resources Journal*. V. 42, Winter, to 2014\$ using the Consumer Price Index for all Urban Consumers (CPI-U).

Commenters indicated that some permit delays might result in opportunity costs and dissuade capital investment by both private and public entities. The agencies acknowledge the existence of opportunity costs associated with permitting time delays and discusses this qualitatively in the final rule EA. However, due to the variability in these costs, the unassessed potential for substitution, the lack of scalable data provided by commenters, and the difficulty in assessing these values at a national level in a meaningful way the agencies are unable to monetize these impacts. Commenters offered additional costs associated with delays, like increases in construction labor and materials costs, that may increase as a result of government agencies, at all levels, being burdened with additional permit applications. The agencies did not assess these costs for the same reasons as stated above. Additionally, the agencies’ assessment of the “high end” 4.65 percent increase in positive jurisdictional determination scenario indicates that the additional average burden on agencies will not increase to levels that would produce extended delays in the permitting process. This is particularly true as the final rule also significantly reduces the uncertainty and number of case-specific determinations that will be required, thereby reducing federal workload associated with jurisdictional determinations.

Commenters questioned whether National Environmental Policy Act (NEPA) or costs from other federal statutes were incorporated into overall costs. This rule does not affect any existing requirements that may apply under other federal statutes, and their applicability will be site-specific. Due to the variability in the applicability of such statutes, the lack of scalable data provided by commenters, and the difficulty in assessing these values at a national level in a meaningful way the agencies are unable to quantify these impacts. In any event, the agencies disagree with commenter’s assertion that the rule will result in significant expansion of jurisdiction leading to significantly greater obligations under other statutes that may apply on a case-by-case basis.

Commenters note that the EA for the Proposed Rule includes a lower estimate of compensatory mitigation, as well as a lower upper bound for state-level unit costs, when compared to EPA’s 2011 analysis of a proposed guidance.¹⁴⁰ Commenters further suggest this means the EA for the Proposed Rule likely underestimates the extent of mitigation in a normal year. These cost estimates are a result of the Corps examining published studies and survey results, making phone inquiries to Corps Districts and mitigation banks, and researching web sites. Corps experts used this information to develop a range of values for each state. The agencies have been able to

¹⁴⁰ EPA 2011. *Potential Indirect Economic Impacts and Benefits Associated with Guidance Clarifying the Scope of Clean Water Act Jurisdiction*.

incorporate new wetland and stream mitigation cost information as it has become available after the release of the Proposed Rule. For example, the nationwide average unit wetland costs have increased from a range of \$24,989 to \$49,207 per acre of wetlands mitigated in the EA for the Proposed Rule, to \$41,572 to \$111,985 per acre for the Final Rule (the state-level unit cost estimates will demonstrate even more variation). Similarly, fiscal year 2013 data from ORM2 and RIBITs allowed the agencies to estimate the total additional impacted acres of 2,490 in the EA for the Final Rule, which is an increase over the 2,042 acres in the Proposed Rule.

Several commenters argued and provided data for the idea that the increased need for permits, the increased costs, and the time delay in obtaining permits would result in larger scale indirect impacts including negative effects on regional development decisions and property values, decreased or delayed industry production, cost pass through to consumers, and decreased employment, GDP, and government revenues. The agencies did not assess these impacts and believes that, in the aggregate, they are small based on the agencies assessment of the size of the potential increase in permits that would result from the final rule (2.84 to 4.65 percent).

Some commenters on the proposed rule stated that a lack of clarity for terms like upland, riparian area, and significant nexus along with a lack of specific criteria would increase permitting risk and cost. The agencies believe that the final rule will reduce uncertainty and has made changes since the proposal to improve clarity further. The agencies have used the feedback we received from public outreach efforts as the source of early guidance and recommendations for refining the proposed rule. Specifically, stakeholder input received during public outreach events in combination with the written comments received during the public comment period have reshaped each of the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.”

Commenters, more specifically, noted that lack of clarity could result in increased litigation and administrative costs, for industry and state and federal governments related to contesting and settling a greater number of enforcement actions. The agencies do not believe that there will be a significant increase in enforcement issues and does not cost these types of impacts in EPA’s economic analyses.

Some commenters stated that the costly and lengthy section 404 permit process would make certain projects, now jurisdictional under the rule, cost-prohibitive. The agencies acknowledge that there will be projects that will impact waters that become jurisdictional as a result of the rule, and that some of these projects may no longer be undertaken as a result. The agencies also acknowledge that some land intensive industries will have the highest relative proportion of effected projects. However, the agencies’ analysis of the incremental change in jurisdictional waters suggests that the impacts to any one particular industry will be relatively small given the small percentage increase in overall jurisdictional determinations.

Some commenters stated that 404 permit processing time, or whether the nature of the newly jurisdictional areas will increase the incidence of project redesign, should have been addressed in the EA. The agencies acknowledge that permit processing time and the frequency of project

redesign may change as a result of the rule. However, the agencies have no reliable set of information to draw from to estimate how these might change. Additionally, the assessment of the “high end” 4.65 percent increase in positive jurisdictional determination scenario indicates that the effect on these two factors is not likely to be significant.

Some commenters provided their own industry specific cost analyses. The agencies’ cost analysis for the rule was not performed sector-by-sector. Nearly all sectors of the economy could potentially be affected by the rule directly through active land use or indirectly through the construction of new physical locations for their business activity. Attempting to make predictions for all the various activities that could be potentially be affected, including where, when and to what extent, is beyond the scope of what is reasonable for the rule’s economic analysis. In fact it would introduce additional uncertainty without improving the analysis. This is why the agencies consider the use of the estimated incremental change in affected waters and then apply that incremental increase to the current levels of affected activity to be reasonable. The agencies acknowledge that certain industries, such as the cement industry, may be disproportionately affected by the rule due to their land intensive nature, relative to other sectors of the economy. However, the agencies were unable to do sector specific analyses. In addition, the impacts in such analyses for land intensive industries would likely be disproportionately higher than for other less land intensive sectors of the economy. As a result, they would not provide an accurate way to measure the aggregate effect of the rule, given that their impacts would be greater than their relative contribution to the overall economic output.

Some commenters stated that the rule adds to the already high regulatory burden on industry and that this rule along with existing federal regulations will lead to further reductions in economic growth. The agencies expect that the economy-wide effects of the rule are likely to be negligible given that the jurisdictional change under the rule is estimated to only increase the amount of permitted activity by 2.84 to 4.65 percent annually, and many states already have requirements equal or more protective than the CWA’s jurisdiction under the rule.

A commenter states that the cost analysis should account for state and regional variations in credit prices. The Corps worked with regions and states to derive state level high and low cost estimates for mitigating an acre of wetlands. They also were able to develop high and low cost estimates and linear foot of stream mitigation for every region and for most individual states.

A commenter states that mitigation cost estimates should use both representative credit prices and permittee-responsible mitigation. The agencies did use state and regional level mitigation bank and in-lieu fee program cost information to develop mitigation costs for the analysis. Mitigation banks and in-lieu fee programs are widely established throughout the country. In some cases, permittees may not purchase credits from a mitigation bank but rather complete a permittee-responsible mitigation project. The costs of this permittee-responsible mitigation project may be lower than the purchase of credits, particularly in circumstances where a mitigation project is constructed on the same tract of land as the permitted impacts. In this circumstance new land would not have to be acquired, potentially lowering the costs of the project.

Some commenters consider the assumption used for the EA that newly jurisdictional acres will have the same geographic distribution as current jurisdictional acres is a highly speculative assumption and could have a significant impact on costs given variation in mitigation credit prices both across and within states. The agencies acknowledge the variability in mitigation credit prices and have revised the approach in the analysis to more accurately account for this variability across states. Commenters do not generally provide a basis for why the current geographic distribution and relative magnitude of current jurisdictional acres is not a good approximation for the relative magnitude and location of the incremental increase in jurisdictional acres due to the rule. In fact the agencies have every reason to believe that much of the newly jurisdictional acres will be in relatively close proximity to already jurisdictional waters, and affecting similar economic activities to the ones already now requiring permits. Given the connected nature of water features on the landscape the newly jurisdictional features are by definition in close proximity to already jurisdictional water features.

Some commenters suggested that the rule will result in an increased demand for mitigation credits, leading to higher credit prices. The agencies do not believe that the rule will have a significant effect on the availability of sites for mitigation or on average credit prices. Credit prices will be heavily influenced by local land prices. Local land prices are not likely to be sensitive to the rule given the relatively small expected change in the overall level of newly jurisdictional waters. The analysis does not account for states that have already extended jurisdiction in a similar way to the rule. As a result the agencies believe that it is likely overstating the incremental increase in mitigation that will be caused by the rule.

A commenter expressed concern regarding the costs of the rule to residential home builders. The agencies acknowledge that a portion of the projects affected by the incremental change in jurisdictional coverage will be new residential development projects. However, residential developers and home builders can often pass costs forward to new home purchasers or back to the initial owners of the undeveloped land. This doesn't diminish the costs, but rather defrays it across a larger number of entities. Residential development tends to include a large amount of undisturbed land and green space relative to other types of development projects. This allows for more opportunities to minimize and avoid impacts, through changes in site design. As such this may lead to lower costs per acre relative to other sectors affected by the rule.

A commenter expressed concern regarding the impact of the rule on the affordable housing sector. The agencies did not perform a housing affordability analysis for the rule, and do not believe one is necessary. The rule should have no impact on existing housing, and the vast majority of home sales every year are for existing housing. This is particularly the case for first time and low income home buyers. A portion of the development that occurs every year is redevelopment where the site has already been developed and the potential to affect newly jurisdictional waters is extremely unlikely. The agencies do acknowledge that the rule may affect some new residential development projects that under recent practice may not have required a permit or not needed as much of their site covered by a permit. The agencies also acknowledge that these costs are likely to be passed through to the homebuyers. Most home buyers do not purchase the most expensive house that they qualify for, so many could still buy the new homes

affected by the rule. Some new home buyers may need to adjust their purchasing decision to still be able to afford their first choice. For example, they could save to put down a larger down-payment to offset the need to borrow the additional amount to afford the higher priced home. Another consideration is that the new homes that are most affordable for low income families will likely have a lower compliance cost. This is because lot size typically declines with price for new single-family homes, thereby reducing the compliance cost burden per unit built.

Some commenters state that the EA should have contained an UMRA analysis examining impacts to state or local governments. See the Summary Response to Topic 13 for more information.

Specific Comments

New Mexico Department of Agriculture (Doc. #13024)

11.2.208 ESA does not take into consideration the costs on agricultural sectors that do not qualify for the Agricultural 404 (f)(1)(A) Exemption. An increase in jurisdiction would likely entail an increase in requirements for National Pollutant Discharge Elimination System (NPDES) permitting. Agriculture-related permits primarily affected by this potential permitting increase would be Concentrated Animal Feeding Operations (such as dairies) and Pesticide General Permits? Again, NMDA requests a thorough analysis on the costs this rule will have on various regulated industries. (p. 21)

Agency Response: See Agencies' Summary Response Under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.4 on other CWA programs.

Wyoming Association of Conservation Districts (Doc. #14068)

11.2.209 Further, as discussed below in the Rapanos decision, the cost of 404 permitting can be quite extensive adverse to claims made by EPA in this proposed rulemaking:

The burden of federal regulation on those who would deposit fill material in locations denominated "waters of the United States" is not trivial. In deciding whether to grant or deny a permit, the U.S. Army Corps of Engineers (Corps) exercises the discretion of an enlightened despot, relying on such factors as "economics," "aesthetics," "recreation," and "in general, the needs and welfare of the people," 33 CFR § 320.4(a) (2004).FN1 The average applicant for an individual permit spends 788 days and \$271,596 in completing the process, and the average applicant for a nationwide permit spends 313 days and \$28,915-not counting costs of mitigation or design changes. Sunding & Zilberman, The Economics of Environmental Regulation by Licensing: An Assessment of Recent Changes to the Wetland Permitting Process, 42 Natural Resources J. 59, 74-76 (2002). "[O]ver \$1.7 billion is spent each year by the private and public sectors obtaining wetlands permits." Id., at 81. These costs cannot be avoided, because the Clean Water Act "impose[s] criminal liability," as well as steep civil fines, "on a broad range of ordinary industrial and commercial activities." **2215 Hanousek v. United States, 528 U.S. 1102, 1103, 120 S.Ct. 860, 145 L.Ed.2d 710 (2000) (THOMAS, J., dissenting from

denial of certiorari). In this litigation, for example, for backfilling his own wet fields, Mr. Rapanos faced 63 months in prison and hundreds of thousands of dollars in criminal and civil fines. See *United States v. Rapanos*, 235 F.3d 256, 260 (C.A.6 2000).¹⁴¹

Basically the rule is intended to eliminate the determination process that would require the agency to demonstrate a clear showing of jurisdiction. The Association does not believe that convenience to the agency, what is easiest and least costly to EPA, should be driving what is jurisdictional and what is not. (p. 7-8)

Agency Response: See Summary Response under this topic (Section 404), as well as Topics 11 (Costs/Benefits), 11.2 (Scope of Change of Jurisdiction), and 11.4 (Other CWA Programs). See also the Technical Support Document, Section I.

State of Wyoming (Doc. #14584)

11.2.210 Under the proposed definitions of waters of the United States, specifically those related to tributaries and the "watershed," the Agencies would become responsible for significantly more Section 404 permitting. Additional resources will be required to complete requisite environmental analysis under the National Environmental Policy Act. The cost for those in business and the economic effects of delayed permitting would be staggering. (p. 6-7)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3 (Section 404).

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

11.2.211 Within the Section 404 program, the analysis estimates the increase in the compensatory mitigation costs using a range of state-specific unit costs of mitigation. According to Exhibit 31 in Appendix A of the analysis, the range of unit costs per linear foot of stream mitigation for Tennessee is \$50-\$125. 105 The Tennessee Stream Mitigation Program, the in-lieu fee stream mitigation program, currently charges \$240 per linear foot of stream for mitigation. Therefore, it appears the range of costs utilized for the analysis in this context may be outdated and inaccurate. The state agencies recommend EPA and the Corps revise the economic analysis to include accurate and updated cost information for mitigation costs. (p. 30)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs) and the Economic Analysis for the final rule.

Florida Department of Agriculture and Consumer Services (Doc. #10260)

11.2.212 After conducting the alternatives analysis and complying with avoidance/minimization criteria, the applicant may be required to provide compensatory

¹⁴¹ *Rapanos v. United States*, 547 U.S. 715, 720-22 (2006)

mitigation to “offset environmental losses resulting from unavoidable impacts to waters of the United States...” (Section 230.93(a), 40 CFR, Part 230). The 2008 Compensatory Mitigation Rule, as published in the Federal Register on April 10, 2008 (Vol. 73, No. 70), provides a preference hierarchy for proposed mitigation activities, with the use of mitigation bank credits established as the preferred mitigation alternative. The number of mitigation credits for proposed impacts can be determined using the Uniform Mitigation Assessment Method (UMAM).

The analyses completed for Watershed A and Watershed B in Sections 2.2.1 and 2.2.2 of this report projected an expansion of wetlands jurisdiction to include approximately 813.9 acres and 763.4 acres of potentially isolated wetlands, respectively. The cost of mitigation bank credits in Florida ranges from \$100,000 to \$180,000 per credit, depending on the region. Based on this assumed range of costs and application of the UMAM using a conservative functional loss delta of 0.5:

- In Watershed A, if 10% (81.39 acres) of the newly captured wetlands were to undergo permitting under Section 404 of the CWA for the placement of dredged or fill material, the estimated number of mitigation credits needed would be 40.695, and the associated cost would range from \$4,069,500 to \$7,325,100.
- In Watershed B, if 10% (76.34 acres) of the newly captured wetlands were to undergo the same permitting process, the estimated number of mitigation credits needed would be 38.17, and the associated cost would range from \$3,817,000 to \$6,870,600.

These potential mitigation costs would be in addition to expenses related to the alternatives analysis and minimization steps of the permitting process. (p. 50)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

Mesa County Board of County Commissioners (Doc. #12713)

11.2.213 Maintenance of Roadside Ditches and Tributaries: For Mesa County to maintain roadside ditches and tributaries under the proposed rule, Mesa County would be required to obtain a 404 permit from the USACE for maintenance. The proposed rule and the resulting increased permitting will increase time and cost for Mesa County to conduct routine public safety maintenance projects on ditches, and carry out routine water quality and detention flood control pond maintenance. (p. 4)

Agency Response: See Agencies’ Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3 (Section 404).

Resource Development Council for Alaska, Inc. (Doc. #14649)

11.2.214 According to the Waters Advocacy Coalition, private and public sectors spend \$1.7 billion a year to obtain Section 404 permits. The timeline to obtain a 404 permit

through the Corps takes an estimated 788 days, with an average cost of over \$271,000, excluding additional expenses such as mitigation. Expanding jurisdiction will cause delays and increase construction costs. Expanding federal authority over water and land use will increase the number of projects required to obtain a federal clean water act permit. The expanded federal permitting process will slow economic growth by increasing the cost of and delay necessary improvements to the public and private infrastructure that forms the foundation of our nation's economy, such as: highways, bridges, airports, schools, and drinking and waste water facilities. In addition to increased permitting costs, the cost of implementing expansion of the 404 section will unnecessarily increase the federal government budget. (p. 3)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3 (Section 404).

Golf Course Superintendent's Association of America, et al. (Doc. #14902)

11.2.215 Section 404 allows the Corps to issue permits for discharges of "dredge and fill" material into WOTUS. Golf course development and renovation/expansion processes will require additional time-consuming and expensive hydrologic evaluations/hydrologic studies, wetlands delineations, stream assessments, project design, etc. and more 404 permitting by the Corps and EPA and state equivalents. More permits may be needed for the design and construction of channelized areas, drainage, landscape features (wetlands), grassy bioswales, construction of bridges, culverts, etc.

Regarding the maintenance of golf courses, 404 permits are necessary for discharges that would result from moving soil, dredging ponds/wetlands, and fixing stream alignments or banks below the ordinary high water mark including rip rap for erosion protection. Expansion of the definition of WOTUS would require federal permits for activities including erosion control (rock and vegetation, grading and fill activities), planting trees and drainage maintenance.

If the proposed WOTUS definition is adopted, proposed golf course construction or renovation projects within jurisdictional areas now may require more individual, regional or nationwide Section 404 permits. The rule would give much greater authority for the federal government rather than the state to approve or deny these projects. 404 permits would be expanded to include ephemeral streams and other areas that are currently not under the jurisdiction of the CWA.

With the proposed changes to the rule, the time and costs involved in the development of a new or renovated golf course will expand greatly for a number of reasons. There will be a substantial increase in the administration time and cost to navigate a more complex and uncertain permit review and approval process. Design constraints will increase significantly as will mitigation requirements and costs necessitated by expanded jurisdiction of the CWA. Fewer projects would qualify for nationwide and general permits resulting in increased utilization of the individual permit process involving much more time and expense. With the jurisdiction of the CWA being greatly expanded to

cover such areas as man-made ditches, developing new golf course or other outdoor recreational facilities, as well as the renovation or updating of existing golf courses and other facilities, will be severely impacted in the future. (p. 9)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topics 11.3, 11.3.1 and 11.3.2 (Section 404, Costs, Benefits).

Coalition of Local Governments (Doc. #15516)

11.2.216 As was discussed supra Section V, the increased costs for having to obtain Section 404 permitting and the costs associated with permitting delays will significantly impact the agriculture, oil and gas, and renewable energy industries. It will have an adverse impact on the local governments in Wyoming as the Counties' economies heavily rely on these industries. The local governments will also see increased costs associated with routine road maintenance or upgrades due to the inclusion of roadside drainage ditches as waters of the United States.

The EPA and Corps have issued thousands of permits annually for activities that may impact the "waters of the United States," and with the Proposed Rule's new definition, the amount of permits required will only increase and lead to more delays. This will also cause an increase in costs for the federal agencies in "responding to additional requests for jurisdictional determinations; an overall increase in workload-related tasks such as permit actions, consultations, and compliance and enforcement actions; and additional time to conduct significant nexus analyses." Economic Analysis, at 18. They will further see an added cost from compliance oversight for the additional permits that may be issued under the new rules. *Id.* Despite the EPA and Corps coming to these conclusions in the Economic Analysis, the Proposed Rule states that there will be reduced confusion and transaction costs for the regulated community and the agencies. 79 Fed. Reg. at 22192, 22198. These administrative costs associated with the Proposed Rule cannot be dismissed because it would require an increase in the federal agencies' budget to maintain or enhance permitting efficiency. See Economic Analysis at 19. (p. 21-22)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topics 11.3, 11.3.1 and 11.3.2 (Section 404, Costs, Benefits).

Houma-Terrebonne Chamber of Commerce (Doc. #19624)

11.2.217 Additionally, the potential effect of the proposed rule directly conflicts with the Administration's stated commitment to expedite infrastructure projects. Due to Louisiana's topography, more section 404 (the 'dredge and fill' permit) permits will be required. Section 404 permits are federal "actions" that trigger additional companion statutory reviews by agencies, other than the state permitting agency, including (but not limited to) reviews under the Endangered Species Act, the National Historic Preservation Act, and the National Environmental Policy Act. Longer permit preparation and review

times, when combined with the higher costs associated with additional reviews, would place both large and small businesses alike in a financially disastrous situation, as they will lead to higher costs overall and greater risks that can ultimately jeopardize the viability of a project. (p. 1-2)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

Water Advocacy Coalition (Doc. #17921.15)

11.2.218 **IV. Errors with EPA’s Incremental Cost Calculations**

A. SECTION 404

EPA’s analysis calculates the costs of the proposed definitional change for several CWA regulatory programs, but emphasizes costs associated with section 404. Since many 404 permits are issued for development near wetlands and small streams, the systematic inclusion of these waters in the CWA is expected to increase costs to developers and administrative entities. Authors of EPA’s analysis recognize four categories of costs associated with section 404 compliance. These include: permit application costs; compensatory mitigation costs; permitting time costs; and impact avoidance and minimization costs. Due to information constraints, the report quantifies only the first two types of costs.

Section 404 permit application costs are calculated by taking the number of individual and general section 404 permits that were issued in FY 2009/2010 and determining how many more would be issued under the new rule (2.7%).¹⁴² These additional permits are multiplied by the average geographic impact per permit to determine how many additional acres would be impacted under the revised definition.¹⁴³ This incremental acreage of newly jurisdictional waters is multiplied by two different estimates of per-acre costs; a 1999 Corps review of permitting costs for “typical” projects up to three acres in size and a study by Sunding and Zilberman in 2000 that synthesized internal estimates of permitting costs from a sample of public and private developers. These calculations are summarized in Table 3.

¹⁴² Information about section 404 permits comes from the Corps’ ORM2 database.

¹⁴³ Average impact per added permit reflects an average of permanent impacts from projects in FY2010 and excludes temporary impacts, ecological restoration and conversion activities.

Table 3: Derivation of Permit Application Costs

Permit Type	Permits Issued FY2010	Added Permits (2.7% increase)	Average Impact Per Added Permit (Acres)	Total Added Impacts (Acres)	Costs from Corps' Analysis (2010\$)	Costs from Sunding and Zilberman Study (2010\$)	Additional Annual Cost (2010\$ millions)
Individual	2,766	75	12.81	960	\$31,400 / permit	\$57,180 / permit + \$15,441 / acre	\$2.4 - \$19.1
General	49,151	1,327	0.28	372	\$13,100 / permit	\$22,079 / permit + \$12,153 / acre	\$17.4 - \$33.8
Total	51,917	1,402		1,332			\$19.8 - \$52.9
Calculations	A	$B = A * 0.027$	C	$D = B * C$	E	$F_{1,2}$	Lower: $E * B$ Upper: $(F_1 * B) + (F_2 * D)$

Table 3. Derivation of Permit Application Costs

The distinction between individual and general permits is important for the purpose of evaluating the cost of a definitional change. Individual permits are required for activities that are expected to have significant impacts on a nearby water body. General permits are issued for projects that will have minimally adverse effects and fit within specific categories (i.e., bank stabilization projects, hydropower projects, etc.). The EPA analysis ignores any potential changes to the distribution of individual and general permits. The addition of jurisdictional waters could force a restructuring in the permitting system where projects that were previously eligible for general permits must apply for individual permits. These changes would have notable implications to the overall cost of the definitional change, but they are omitted from the analysis.

The EPA analysis also ignores the heterogeneity in impacted acreage within these two categories. Instead, they calculate an average for each type of permit that provides a single estimate of project size. This estimate is derived from FY 2009/2010 ORM2 data and suffers from the same sampling limitations discussed above. Since projects developed during this period were likely smaller (in addition to less numerous), this has the effect of compounding the underestimation of project costs. To illustrate the implications of this methodology, suppose the incremental increase estimates are “updated” by increasing the number of new permits by 24% and the average size of impacts by 10%.¹⁴⁴ The incremental acreage estimates would be 36% higher (1,812 acres), with associated costs ranging from \$24.5 million to \$68.0 million (a 24-28% increase from EPA estimates). While this methodology still suffers from important shortcomings, this exercise reveals how sensitive section 404 permitting costs are to issues of sampling bias.

¹⁴⁴ As discussed above, construction spending at the end of 2010 was 24% below spending at the end of 2008. A 10% increase in project size is a reasonable adjustment to account for the use of FY 2009/2010 data in cost estimations.

EPA's analysis of section 404 permit application costs suffers from several additional deficiencies. The data on permitting costs from the Sunding and Zilberman study are nearly 20 years old and are not adjusted for inflation or any other changes in the permit system. Thus, they likely underestimate the present cost of the permitting process. This underestimation is enhanced by the exclusion of other costs addressed in the Sunding and Zilberman study. Specifically, the EPA analysis ignores the costs of avoidance and delay, which are likely to dominate the out-of-pocket expenses for permit application and mitigation. The study suggests that general permits cost \$28,915 and take an average of 313 days to complete, and individual permits cost \$271,596 and take an average of 788 days to complete, not counting the costs of mitigation or design changes.¹⁴⁵ These delay estimates are likely to be larger if the influx of new permits is not offset by additional staff and infrastructure for processing. Delays and forced design changes stifle economic output and may prevent businesses from functioning at their full potential. Thus, the Sunding and Zilberman study is misused in the EPA analysis to generate upper bound estimates that markedly underestimate the cost of section 404 permitting.

The incremental costs of compensatory mitigation were calculated by taking the amount of wetland and stream mitigation that occurred in each state during FY 2010 and multiplying by EPA's expected 2.7% growth in the acreage of jurisdictional waters. This incremental mitigation requirement is multiplied by an average unit cost for mitigation (a weighted average across all states) to get an estimate of the annual costs of compensatory mitigation. These calculations are summarized in Table 4.

Table 4: Derivation of Compensatory Mitigation Costs

Water Body Type	Units of Mitigation	Unit Costs (\$2010)	Annual Cost (2010\$ millions)
Streams	49,075 feet	\$177 - \$265	\$8.7 - \$13.0
Wetlands	2,042 acres	\$24,989 - \$49,207	\$51.0 - \$100.5
Total			\$59.7 - \$113.5
Calculations	A	B	C = A*B

Table 4. Derivation of Compensatory Mitigation Costs

The EPA analysis derives estimates for the amount of mitigation using methods discussed in their 2011 economic analysis.¹⁴⁶ It assumes that all non-jurisdictional streams would become jurisdictional, requiring 49,075 feet (9.3 miles) of mitigation. The 2011 estimate of incremental wetland mitigation where all non-“other” waters are jurisdictional and 17% of “other” waters are jurisdictional (the same assumptions adopted in the current EPA analysis) is 2,517 acres. This value is more than 23% higher than the estimate

¹⁴⁵ Sunding and Zilberman, 2002. The Economics of Environmental Regulation by Licensing: An Assessment of Recent Changes to the Wetland Permitting Process, 42 Natural Resources Journal 59, pp 74-76.

¹⁴⁶ EPA 2011. Potential Indirect Economic Impacts and Benefits Associated with Guidance Clarifying the Scope of Clean Water Act Jurisdiction.

provided in Table 5. This discrepancy results from different estimations of baseline mitigation in the two analyses.¹⁴⁷ Despite this difference, EPA suggests the current estimate “is consistent with the level of mitigation the Corps has estimated for the past 10-15 years” and provides no justification of the discrepancy. For reasons discussed above, this is likely to underestimate the extent of mitigation in a “normal” year.

The unit costs of mitigation also do not match 2011 EPA estimates. The weighted average utilized in the current analysis relies on state-level unit costs that are systematically lower than previously published. Table 5 provides a sample of these discrepancies for the first 10 states (listed alphabetically). While the lower bound estimates are the same between the two analyses, the upper bound estimates are depressed in the 2014 analysis. There is no discussion of these differences. If the higher estimates are accurate, this creates a strong downward bias of mitigation cost estimates in the 2014 analysis. Even if the lower estimates are more accurate, the exclusion of proper documentation and explanation is troublesome and reduces the validity of the current analysis.

Table 5: Discrepancies Between EPA Estimates for Unit Costs of Mitigation

State	2011 Analysis				2013 Analysis			
	Unit Cost Stream- Low	Unit Cost Stream- High	Unit Cost Wetland- Low	Unit Cost Wetland- High	Unit Cost Stream- Low	Unit Cost Stream- High	Unit Cost Wetland- Low	Unit Cost Wetland- High
AK	\$170	\$316	\$500	\$30,000	\$170	\$243	\$500	\$15,250
AL	\$350	\$888	\$10,000	\$20,000	\$350	\$619	\$10,000	\$15,000
AR	\$170	\$316	\$2,000	\$5,000	\$170	\$243	\$2,000	\$3,500
AZ	\$170	\$316	\$9,000	\$23,000	\$170	\$243	\$9,000	\$16,000
CA	\$170	\$316	\$18,500	\$300,000	\$170	\$243	\$18,500	\$159,250
CO	\$170	\$316	\$32,000	\$100,000	\$170	\$243	\$32,000	\$66,000
CT	\$170	\$316	\$124,000	\$160,000	\$170	\$243	\$124,000	\$142,000
DE	\$170	\$316	\$40,000	\$40,000	\$170	\$243	\$40,000	\$40,000
FI	\$170	\$316	\$35,000	\$145,000	\$170	\$243	\$35,000	\$90,000
GA	\$106	\$293	\$12,000	\$122,000	\$106	\$200	\$12,000	\$67,000

Table 5. Discrepancies Between EPA Estimates for Unit Costs of Mitigation

EPA estimates administrative costs associated with a rule change to be between \$7.4 and \$11.2 million annually. This calculation is based on a 2.7% increase in the number of employee hours needed to make jurisdictional determinations, process permits, consult with various stakeholders, generate environmental impact statements, ensure program compliance, and enforce permit regulations. Additionally, EPA suggests that additional

¹⁴⁷ The 2014 analysis suggests there were approximately 32,500 acres of permittee-responsible mitigation documented in ORM2 records, 8,200 acres of bank mitigation documented in the Regional Internet Bank Information Tracking System (RIBITS) database, and 2,200 acres of in-lieu fee (ILF) mitigation in FY 2010 (Description to Exhibit 7). The 2011 analysis suggests there were approximately 44,000 acres of permittee-responsible mitigation, 7,000 acres of bank mitigation, and 2,000 acres of ILF mitigation in FY 2010 (EPA 2011, footnote 3).

permit applications may require increased consultation with other agencies (to comply with the Endangered Species Act and other statutes). This would increase costs to these agencies and drive up the price tag of a definitional change. These costs are omitted from this analysis. (p. 65-69)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs) and the Economic Analysis for the final rule.

El Dorado Holdings, Inc. (Doc. #14285)

11.2.219 The agencies understate the potential costs associated with the proposed rule, both by underestimating the number of additional permits that will be required and by underestimating Section 404 permitting and mitigation costs. A review of approved jurisdictional delineations completed in Arizona in 2013 and 2014 indicate that nearly all (12 of 13) of those delineations dealing with ephemeral washes possessing an OHWM found no significant nexus to a TNW. This suggests that the agencies' estimate that the proposed rule will only result in a 3% increase in regulated activity may be a significant underestimation of the impact the proposed rule would have if adopted. (p. 8)

Agency Response: 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. While some commenters expressed concern that a feature that flowed very infrequently could meet the proposed definition of "tributary," 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." See Agencies' Summary Response under Topic 11.3.1 (Costs) and see Tributaries Compendium.

Associated General Contractors of America (Doc. #14602)

11.2.220 Despite repeated assurances from the agencies that the proposal is merely a non-substantive definitional change, in reality the proposal would make it nearly impossible for AGC members to develop public or private land containing drainage ditches, stormwater control basins, ponds, or other isolated water features (that are arguably subject to the rule's expansive jurisdictional reach) without first obtaining a costly federal CWA permit. This would amount to an expansion of federal jurisdiction that would add new layers of federal requirements to construction activities nationwide.

Under Section 404's current framework, securing individual (as opposed to nationwide or programmatic) permit coverage typically takes at least a year and costs hundreds of thousands of dollars. Such direct and indirect costs include the need to hire expert technical consultants and often lawyers to prepare permits or plans; construction delays;

restrictions on land use; the cost of complying with permitting requirements, including mitigation, monitoring, and maintenance; insurance and bonding; and the risk of huge fines and penalties for noncompliance. The current 404 program also imposes certain avoidance, minimization, and mitigation requirements. In addition, the act of applying for permit coverage triggers mandatory consultation with multiple state and federal agencies under, for example, the National Environmental Policy Act, the Endangered Species Act, and the National Historic Preservation Act.

The agencies have not fully accounted for these and other real-world costs and burdens that the proposal would impose on state and local governments, businesses, and American consumers. It is a critical error in this rulemaking that EPA has not provided any meaningful analysis of the unavoidable impacts this proposal would have on CWA programs other than the Section 404 program. In fact, the economic analysis accompanying the proposal downplays non-404 impacts, concluding that only an artificially small increase in jurisdictional waters will occur.¹⁴⁸ Many questions remain about the definitions and ambiguous exclusions used in the proposal and the impacts to most CWA programs, leaving these to become known only after the proposed rule is finalized and implementation begins. (p. 3)

Agency Response: EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.”

See Agencies’ Summary Response under Topic 11.3.1 (Costs)

Lehigh Hanson, Inc. (Doc. #15781)

11.2.221 Lehigh Hanson strongly believes that this proposed rule if finalized as is will impose significant time delays and costs to many of our operations in the U.S. that we believe far exceeds the environmental benefits.

Costs for 404 permitting range widely based on the complexity and size of the site. Consulting and permit application expenses can range from \$50K to \$350K depending upon the specific project needs. We anticipate significantly increased uncertainty regarding wetland interpretation which, therefore, will increase the need for consulting

¹⁴⁸ See EPA’s September 2013 “Economic Analysis of Proposed Revised Definition of Waters of the United States” (EPA’s analysis relies on a flawed methodology for estimating the extent of newly-jurisdictional waters that systematically underestimates the incremental wetland acreage that will be impacted, excludes several important types of costs, and uses a flawed benefits transfer methodology.) Construction projects often avoid wetlands and waters during construction. During pipeline construction, in particular, companies will construct and add length to pipelines to avoid these regulated areas. EPA’s economic analysis does not capture any costs for avoidance, which occurs quite frequently.

expertise to support the permitting process. Permitting expenses would be expected to rise by 25% to 50% just for wetland projects. This estimate does not include intangibles that typically arise outside of the regulatory process in wetland mitigations, such as those brought by community or other special interests.

While it is difficult to prepare a definitive estimate of overall surface wetland impacts, we can provide a few select examples. In the development of a limestone deposit in the midwest, we were required to mitigate 1.84 acres of jurisdictional wetlands with a 4:1 replacement ratio. The cost to mitigate in a relatively favorable watershed was \$151K/acre. A comparable wetland area on the west coast cost \$392K/acre to mitigate in 2013. These examples are relatively small acreage mitigation projects with significant costs under the current regulations. With the significant expansion of jurisdictional delineation under the proposed rule we will need significantly larger offsetting parcels against a limited or dwindling supply of available credits. In many counties, offsets would not be available or would need to be purchased and constructed at considerable expense. We estimate a 33% increase in cost for the midwest example between 2012 and today. Unit rates on the west coast parcel would be 18% higher in 2014 than 2013.

An increase in the need for 404 permits could trigger a greater number of 106 Review Actions to solicit input about endangered species and cultural resources. Each 404 Permit requires a review of cultural resources with an approximate cost of \$6,000 and confirmation from the appropriate state agency. This typically adds at least 3 months to a permitting process if there are no adverse findings.

Findings under the Endangered Species Act (ESA) requiring approval from U:S Fish and Wildlife Service (USFWS) also will greatly affect costs and timing. For example, an ongoing study of habitat conservation regarding a wetland species in metro Chicago has suspended our ability to mine 38 million tons of previously permitted surface limestone reserves. Consulting costs have reached \$1.4M over a 3 year period. Regulatory agencies (USFWS, EPA, Corps, Illinois Environmental Protection Agency and Illinois Department of Natural Resources) cannot provide a definitive pathway for mitigation approval as wetland preservation is based upon a hydrological model which is so complex that consultants struggle to provide a clear cause and effect explanation for model variations. The lack of clarity of jurisdictional leadership and coordination will add tremendous expense and time to sites requiring 106 Reviews.

Finally, we believe that the proposed rule could actually have a net negative effect on environment and safety. In certain cases, primarily related to sand and gravel sites, reclamation could be substantially impacted. Many sand and gravel deposits mined by suction or ladder dredges are converted to ponds, lakes etc. at the end of the mine life. If these structures are considered jurisdictional, it could prevent the development of future uses for parks, flood control, water reservoirs, recreational or residential purposes. Most "waters" created through mining and reclamation could be subject to development restrictions to the detriment of local communities and the mine operator.

For the reasons stated above, Lehigh Hanson respectfully requests that the EPA and Corps consider these negative impacts to our operations. We recommend that the proposed rule be withdrawn and the agencies re-propose a rule which is clear, legally valid within the objectives of the Clean Water Act and court decisions, and does not impose an undue economic burden on our company and industry. (p. 5-6)

Agency Response: The rule is narrower in jurisdiction than existing regulations and historical practice. See Technical Support Document I.B. See Agencies' Summary Responses under Topic 11.3.1 (Costs) and Topic 14.1.

National Association of Home Builders (Doc. #19540)

11.2.222 The picture becomes more stark when considering the time and cost it takes to obtain a CWA Section 404 permit. A 2002 study found that it takes an average of 788 days and \$271,596 to obtain an individual permit and 313 days and \$28,915 for a “streamlined” nationwide permit. Over \$1.7 billion is spent each year by the private and public sectors obtaining wetlands permits.¹⁴⁹ Importantly, these ranges do not take into account the cost of mitigation, which can be exorbitant, ranging from an estimated \$24,989 to \$49,207 per acre nationwide.¹⁵⁰ Perhaps even more costly, however, can be the act of discharging dredge or fill material (knowingly or not) into a water of the United States without a Section 404 permit.¹⁵¹ When considering these excesses and risk of non-compliance, it becomes clear that there needs to be a necessary balance between protecting the nation’s water resources and allowing citizens to build and develop their land.

Construction projects rely on efficient, timely, and consistent permitting procedures and review processes under the CWA programs and others. Builders and developers are generally ill-equipped to make their own jurisdictional determinations and must hire outside consultants to secure necessary permits and approvals. This requires time and money. Delays often lead to greater risks and higher costs, which many developers would rather avoid given tight budgets and timeframes. Onerous permitting liabilities could delay or eventually kill a real estate deal, infrastructure upgrade, or construction of a new school or town hall. If the proposed rule is finalized in its current form, the ability to sell, build, expand, or retrofit structures and properties will suffer notable setbacks, including added cost and delays for development and investment.

Oftentimes, home builders will be at the mercy of the Agencies. Builders will have to request a jurisdictional determination from the Corps to ensure they are not disturbing

¹⁴⁹ Sunding and Zilberman Economics of Environmental Regulations at 81.

¹⁵⁰ EPA Economic Analysis at 12.

¹⁵¹ See, e.g., *Sackett v. U.S. EPA*, 566 U.S. ___, 132 S.Ct. 994 (2012) (property owner who planned to build a home and cleared land received a Compliance Order from EPA asserting that the property was jurisdictional wetlands in which the owner had placed illegal fill material. The property owner was ordered to restore the site to its original condition and pay up to \$75,000 per day for the illegal discharge of pollution).

land near an aggregated water. Consequently, an increase in the number of jurisdictional determination requests, across all industries, will result in greater permitting delays as the Agencies are flooded with paperwork.

In addition, many federal statutes tie their approval/consultation requirements to those of the CWA, i.e. if one has to obtain a CWA permit, he/she must also obtain other permits. If more areas are considered jurisdictional, more CWA permits will be required. More federal permitting actions will trigger additional statutory reviews – by agencies other than the permitting agency – under laws including the Endangered Species Act and National Historic Preservation Act (see Section VII. d.). Project proponents do not have a seat at the table during these additional reviews, nor are consulting agencies bound by a specific time limit. Lengthened permitting times will include an increased number of meetings, formal and informal hearings, and appeals. These federal consultations are just another layer of red tape that the federal government has placed on small businesses and it is doubtful the Agencies will be equipped to handle this inflow. (p. 138-139)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

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

11.2.223 (2) Result in increased costs of the CWA section 404 permitting process, including the costs of mitigation--

- A Virginia operator stated, "The rule will cause more areas to be identified as wetlands and streams and a corresponding increase in mitigation costs. In Virginia, we pay roughly \$500 a foot for stream mitigation and \$50,000 - \$60,000 for an acre of wetlands mitigation. As an example, a recent permit had 4.5 acres of wetlands impacts and 6000 feet of stream impact. If the new rule increased these values by 25% then mitigation cost would have increased \$800,000."
- An Indiana operator provided an example noting that, "in the development of a limestone deposit in Southern Indiana, we were required to mitigate 1.84 acres of jurisdictional wetlands with a 4:1 replacement ratio. The cost to mitigate in relatively favorable watershed was \$151k/acres. With the significant expansion of jurisdictional delineation, we will need significantly larger offsetting parcels against a limited or dwindling supply of available credits... We estimate a 33% increase in cost for the Southern Indiana example between 2012 and today..." (p. 42-43)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

The Mosaic Company (Doc. #14640)

11.2.224 **A. Section 404 Permitting Program**

With the expanded definition of "waters of the U.S.," there will be increased section 404 permitting requirements. Section 404 requires a permit for the discharge of dredge or fill material into "waters of the U.S." 33 U.S.C. 9 1344. Although features such as agricultural ditches and isolated wetlands have not been considered jurisdictional in the past, they would now likely be deemed "waters of the U.S." under the proposed rule. Any mining, maintenance, development, or reclamation activities in these areas involving dredge or fill would now require Mosaic to go through the costly and lengthy section 404 permit process. This would make operations more costly and could potentially make certain projects cost-prohibitive. See also Section 3.1 of the Economic Technical Report (Appendix A) for additional comments on implications of the proposed rule to the Section 404 permitting program. (p. 29)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

11.2.225 3 Costs

The EPA Study estimates that the total costs associated with the proposed rule could range between \$133.7 and \$231.0 million annually. Compliance with Section 404 under the proposed CWA jurisdiction accounts for over two-thirds of the total estimated costs in the EPA study. Consequently if the projected increase in jurisdictional acreage caused the by proposed rule change is too low, the resulting additional costs will be too low as well. In the following sections we describe our concerns with the EPA Study's approach to estimating Section 404 and 402 compliance costs, and highlight important aspects of costs that have been omitted, including socioeconomic costs, costs incurred by the private sector, costs incurred by taxpayers, and potential impacts on the prices and availability of mitigation credits. (p. 45)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

11.2.226 3.1 Section 404

Section 404 of the CWA requires project proponents to obtain permits for activities involving the dredge and fill of jurisdictional wetlands and waterbodies. In the first step of the permitting process, projects may require alteration or redesign to avoid and minimize impact to jurisdictional waters. Upon completion of this exercise, permit approval will be conditional upon compensatory mitigation for unavoidable jurisdictional impacts. Mitigation can be accomplished by purchasing credits from third-parties, through permittee developed mitigation plans, or in-lieu fee payments.¹⁵²

To yield a proper cost estimate for wetlands under the Section 404 program, four (4) factors must be considered: 1) financial and opportunity costs associated with delays in

¹⁵² The EPA's 2008 Compensatory Mitigation Rule encourages use of mitigation banks and in-lieu fee payments.

project implementation due to permit processing time or project redesigns required to avoid or minimize a project's impact on jurisdictional waters, 2) an assessment as to whether the incremental increase in permits due to the proposed rule are more likely to be Individual or General permits, 3) a projection of impacted acreage for each state or region is needed for reliable total cost estimates given regional variation in mitigation credit prices, and 4) compensatory mitigation cost estimates must use representative credit prices and costs associated with permittee-responsible mitigation. (p. 45)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs).

11.2.227 **3.1.1 EPA Omits Important Components of Section 404 Compliance Costs**

In its estimate of permit application and compensatory mitigation costs, the EPA Study omits financial and opportunity costs associated with project delays due to permit processing time, and reductions in project scale necessary to achieve avoidance and minimization requirements. A lack of a "defensible, ready basis for estimating these costs", is cited as the reason for excluding them, even while acknowledging they can be significant. (EPA Study, p. 14).

Depending on the nature of the development activity, delays in permit processing can have significant impacts on economic returns. For example, a single-family housing project delay could mean higher prices or interest rates to prospective buyers, which in turn can affect demand, the price the market will bear, and ultimately the return to the developer. Further, changes in the scale of an operation required to minimize or avoid impacts, while helping to reduce the cost of compensatory mitigation, could result in lost profit or income to the permittee, and potential socioeconomic costs in the form of lost jobs and expenditures on goods and services in related industries.

These indirect costs can be significant depending on the permittee's development project, length of the permit delay, and scale of project or operational redesign. Although seeming to recognize these facts, the EPA Study does not address if, or to what degree, the proposed rule will change the average Section 404 permit processing time, or whether the nature of the newly jurisdictional areas will increase the incidence of project redesign. (p. 45-46)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs).

11.2.228 **3.1.2 EPA Assumes the Distribution of Individual and General Permits will Remain Unchanged**

As demonstrated in Exhibit 5 of the EPA Study, the Study projects the incremental increase in Section 404 permits and impacted acreage separately for Individual Permits (IP) and General Permits (GP). The weighted average of the two permit types then form the baseline for the incremental acreage increase resulting from the proposed rule. The Study also assumes that the distribution of Section 404 permits between IP and GP will remain unchanged under the proposed rule. However, since projects must meet certain criteria to qualify for GPs and since the proposed rules will likely increase the total

wetland acres on any given project, it seems unlikely that the number of projects utilizing GPs will remain in the same proportion as in FY 2009/10 as the Study assumes.

While this difference in the assumption sounds benign, it introduces considerable uncertainty into the estimates of Section 404 compliance costs. The study by Sunding and Zilberman cited by EPA, estimates the cost of IP permit applications as significantly higher than GP permit applications (EPA Study, Exhibit 6). Further, the average impacted acreage differs significantly between IPs and GPs. IPs, which represent 5 percent of actual Section 404 permits issued in FY 2009/10, have an average of 12.81 acres of wetland impact per permit. This compares with 0.28 acres of wetland impact per permit for the average GP project. GPs comprised 95 percent of the Section 404 permits issued in FY 2009/10. As Table 3-1 illustrates, if the number of IP permits increases from 5% to 10% under the proposed rule, (using the same wetland impact acreage by permit type) the incremental impacted acreage would increase by 60 percent, from 1,332 to 2,149 acres. In this case, projects would be expected to undergo a proportional increase in total estimated costs for Section 404 compliance.

Permit Type	EPA # Permits Added with Proposed Rule	% Permits Added, FY 2010	Average Impact per Permit, FY 2010 (Acres)	EPA Total Added Impact (Acres)	Alternative % Permits Added	Alternative # Permits Added	Alternative Total Added Impact Acres
Individual	75	5%	12.81	960	10%	140	1,796
General	1,327	95%	0.28	372	90%	1,262	353
Total	1,402			1,332		1,402	2,149

Table 3-1. Implications of the Distribution of Section 404 Permit Types

(p. 46)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs).

11.2.229 **3.1.3 EPA's Cost Estimates Don't Adequately Account for Regional Variation in Mitigation Credit Prices**

While Exhibit 3-1 of the EPA Study purports to represent estimated incremental wetland (acres) and stream (linear feet) mitigation for each state, the estimates are not based on the landscape extent and location of isolated waters or industry characteristics of each state. Not knowing where impacts to these isolated waters are likely to occur, the EPA Study allocates the incremental increase in wetland and stream mitigation to individual states in proportion to the number of JDs by state in FY 2009/10, "assuming this serves as a proxy for permitting activity in each state" (EPA Study, p.23). Drawbacks to this approach include: 1) the global financial crisis had disproportionate impacts on development in certain states and 2) the landscape distribution of isolated waters may be altogether different than for current jurisdictionals reflected in the ORM2 database records for FY 2009/10. The actual incremental mitigation acreage in each state, however, is critical for reliably estimating the costs (and benefits) associated with the

proposed rule, because the cost of compensatory wetland mitigation varies so dramatically across regions and states; from \$500 per acre in Alaska to \$240,000 per acre in New Jersey.

In order to develop an accurate estimate of Section 404 associated costs, EPA would need a more accurate estimate of the number and acreage of jurisdictional areas under the proposed rule at the state level, rather than at the national level. (p. 46-47)

Agency Response: See Agencies’ Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3.1 (costs).

11.2.230 **3.1.4 EPA Uses Unrepresentative Mitigation Credit Prices**

The EPA Study uses a flat cost per mitigation credit regardless of where a project is located within the U.S., which is not likely to accurately represent actual costs. For example, it appears that wetland mitigation credit costs in North Carolina range from \$23,000 to \$42,000 per acre (EPA Study Exhibit 31) for non-riparian wetlands. If only isolated wetlands become jurisdictional under the proposed rule, this estimate may be accurate. However, many wetlands and waterbodies previously identified as isolated and non-jurisdictional will fall under the new definitions of “adjacent” and “neighboring”. Based on the price of mitigation credits from private banks, compensatory mitigation for riparian wetlands in North Carolina can range up to approximately \$70,000 (North Carolina Department of Environment and Natural Resources 2014). Adjusted for inflation to 2010 price levels, for comparability to the EPA Study, this reflects a 50 percent higher per acre wetland mitigation cost than provided in the EPA Study’s cost estimate. (p. 47)

Agency Response: See Agencies’ Summary Response under Topic 11.3.1 (Costs).

11.2.231 **3.1.5 EPA’s Estimate of Compensatory Mitigation Ignores Costs Associated with Permittee-Responsible Mitigation**

While the 2008 Guidance encourages use of mitigation banks and in-lieu fee payments, some share of projects may still require permittee-responsible mitigation. Indeed, EPA reports that 32,500 of the 43,000 acres of wetland mitigation during FY 2009/10 (80 percent) were permittee-responsible as opposed to third-party wetland mitigation.¹⁵³ Where mitigation credits are used, they must be purchased from banks located within the same watershed of the project. However, where the demand for credits exceeds the available supply,¹⁵⁴ if the permittee wishes to proceed with the project as scheduled,

¹⁵³ Because EPA again relies only on FY 2010 to develop this statistic, it is unclear whether the economic downturn resulted in a shift from third-party (bank) to permittee-responsible mitigation. As previously stated, this is something EPA can address by examining permitting data prior to the SWANNC and Rapanos decisions

¹⁵⁴ As the US economy improves, the incidence and scale of development projects will begin to increase in kind. With land values rising, the opportunity cost associated with land in mitigation banks will also increase. These forces, coupled with a greater share of development projects requiring mitigation due to the proposed CWA jurisdiction, may result in a short-run mitigation credit supply shortage, depending on the specific watershed.

permittee-responsible mitigation may be the only option. While the EPA Study may have focused on the cost of mitigation credits, it cannot ignore the potential for some proportion of permittee-responsible mitigation, particularly as the economy improves, land values rise, and credits are used up. Direct financial costs of permittee responsible plans may be more or less costly than mitigation bank credits depending on the region, sophistication of the permittee, site-specific characteristics, and lost opportunity costs. (p. 47)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs).

Continental Resources, Inc. (Doc. #14655)

11.2.232 To the extent that Continental must abandon its use of an NWP based on these quantitative and qualitative limits, the company must seek an individual permit. There are higher levels of effort required for compiling and submitting an individual Section 404 permit application. The agencies' Economic Analysis estimates that the mean cost of an individual permit application is ten times higher than the costs associated with an NWP, Economic Analysis at 16. These costs do not consider the anticipated project delays, in terms of time and money: it will take Continental longer to prepare an individual permit application (particularly in an uncertain regulatory environment), and it takes the Corps of Engineers much longer to process and approve individual permits. (p. 17)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs)

American Petroleum Institute (Doc. #15115)

11.2.233 Under the agencies' 2014 Proposed Rule, this activity would likely constitute a discharge of pollutants into a navigable water, for which the company would likely need to apply for a Section 404 permit. In some circumstances, a general permit may be available (at an average cost of \$28,915 and delay of 313 days).¹⁵⁵ In others, an individual permit may be necessary (at an average cost of \$271,596 and delay of 788 days).¹⁵⁶ Requiring permits for this activity does nothing to promote the objectives of the Clean Water Act, but does impose unreasonable costs, delays, and regulatory burdens on American economic activity. (p. 8)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topics 11.3, 11.3.1 and 11.3.2 (Section 404, Costs, Benefits) and Topic 14.

¹⁵⁵ Rapanos, 547 U.S. at 721.

¹⁵⁶ Id.

Countrymark Cooperative Holding Corporation, LLC, Countrymark Refining and Logistics, LLC (Doc. #16656)

11.2.234 In addition to the impact on CountryMark's oil and gas operations, the Proposed Rule would likely impact CountryMark's pipeline operations. Finished petroleum products are delivered to customers via pipeline and CountryMark also utilizes crude oil gathering pipelines. The delivery of finished petroleum products requires the building, operation, and maintenance of pipelines and the rights-of-ways in which they are located. The construction, operation, and maintenance of pipelines often require permits under section 404 of the CWA for crossing streams or wetland areas. If, however, entire floodplains are considered waters of the United States, a new pipeline may in its entirety require permits, with ensuing costly permitting and mitigation requirements. These costs could reduce or eliminate the economic viability of many projects. (p. 3)

Agency Response: See Agencies' Summary Response under Topic 11.2 (Change of Scope of Jurisdiction).

11.2.235 **A. The Proposed Rule's Expansion and Ambiguities Will Add Cost and Uncertainty, Without Justification**

If the new definition of "waters of the United States" is finalized as proposed, it is possible that any land disturbance activity would require a section 404 permit. And, it is likely that activities that currently are either exempt or covered by a Nationwide Permit will exceed the acreage limit and will require an individual permit.

According to a 2002 study by David Sunding, professor at UC Berkeley, the average applicant for an individual permit spends 788 days and \$271,596 in completing the process, a the average applicant for a nationwide permit spends 313 days and \$28,915-not counting costs of mitigation or design changes. Sunding & Zilberman, The Economics of Environmental Regulation by Licensing: An Assessment of Recent Changes to the Wetland Permitting Process, 42 Natural Resources J. 59, 74-76 (2002). Updated to 201 1 dollars a nationwide permit would cost \$35,954 and an individual permit would cost \$337,577.

The costs and delays that the Proposed Rule would impose are significant. In addition, it would seem highly likely that these additional costs and delays would force many small producers out of business. Many decisions of small producers are dynamic, shifting, and time sensitive. Adding months and years to the permitting process would inhibit and prohibit many projects, and the additional cost burdens would likely not be absorbable. (p. 9)

Agency Response: The final rule is narrower in scope than existing regulations and historical practice. See Agencies' Summary Response under Topic 11.3.1 (Costs).

Pennsylvania Grade Crude Oil Coalition (Doc. #15773)

11.2.236 **5. The Proposed Rule's consideration of certain ditches, impoundments and storm water ponds as jurisdictional waters would hinder future development and increase operational/construction costs, without adding environmental value.**

In addition to the conflicts with state law and regulation, the reclassification of certain ditches and impoundments as jurisdictional waters under the Proposed Rule, would severely limit and delay operations, maintenance and future development. Essentially, existing operations would be "fenced in" by jurisdictional waters. If ditches or impoundments are considered to be jurisdictional, they could not be modified, cleaned out, maintained, or otherwise changed without a Section 404 permit. As a result, under the Proposed Rule, either (1) operational processes or timelines would need to be modified to assess the presence of jurisdictional waters and conduct subsequent permitting, or (2) construction techniques would need to be modified to avoid the creation of jurisdictional waters. Construction modifications, such as the installation of underground piping around well pads (rather than gravel ditches) would require increased material and labor costs. It would also require increased engineering efforts. (p. 8-9)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3 (Section 404).

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

11.2.237 A study referenced in the Supreme Court Rapanos case indicated that an applicant will on average spend more than twice as long, 788 days as compared to 313 days, and nearly ten times as much money, \$271,596 compared to \$28,915, obtaining an individual permit compared to obtaining a NWP. Our experience confirms these approximate relative increases in time and cost. These increases in time and cost could be further increased considering the fact that more individual permit processes will stretch the Corps' existing resources. For some of our operations, these costs would be passed on to ratepayers under standard utility ratemaking. In summary, the proposed rule would add time, costs and otherwise substantially increase regulatory uncertainty associated with Section 404 permitting for a variety of our energy infrastructure projects. (p. 4)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

American Petroleum Institute (Doc. #15115)

11.2.238 3.1.2.1 The Agencies' analysis of CWA 404 permit applications underestimates the number of new permits required and the real cost of these permits.

In the PEA, the estimated 2.7 percent increase in jurisdiction is applied proportionately to the number of both individual and general permits issued in 2010 to estimate the additional number of permits arising from application of the Proposed Rule.

The Agencies attempted to evaluate the costs for each type of permit based on 1) phone interviews with various personnel; and 2) a survey from Sunding and Zilberman in 2000.¹⁵⁷ The series of phone interviews with permitting consulting firms and Corps district regulatory staff demonstrated an average increased cost for a general permit to be \$13,100 and an individual permit to be \$31,400 (both in 2010 dollars). In contrast, the Sunding and Zilberman study relied on a survey of permitting costs for 103 nationwide permit and individual permit applications. This survey showed an average cost for a general permit to be \$22,079 plus \$12,153 per impacted acre for an average total cost of \$25,482. Individual permits typically cost \$57,280 plus \$15,441 per impacted acre, leading to an average total cost of \$254,979. The Sunding and Zilberman numbers are also expressed in 2010 dollars (indexed from a 1999 Consumer Price Index for All Urban Consumers (CPI-U) of 166.6 to a 2010 CPI-U of 218.056).²⁴

From the phone interviews and the Sunding and Zilberman survey, the Agencies estimated a range of potential costs for each permit type, and applied those costs to the estimated increase in number of permits (determined using the total number of permits filed in 2010 in the ORM2 database and the estimated 2.7 percent increase). Exhibit 6 demonstrates the Agencies' estimates of the total increase in costs from the Proposed Rule as a range from \$19.8 MM to \$52.9 MM.

The Agencies' analysis also included the additional administrative costs associated with the newly increased permitting workload (determined by using man hours and associated USACE fully loaded salary rates). Applying the 2.7 percent incremental increase in 404 permits, the USACE determined their additional administrative costs to be \$7.4 to \$11.2 million per year.

The Sunding and Zilberman estimate for individual permits are cost calculations and \$75,000 - \$155,000 for individual permits (see sample cost breakdowns below). These estimated costs not only include the preparation and submission of the permit application but also the associated field activities and costs necessary to provide information to support the permit package (e.g., wetland delineation, biological assessment reports, floodplain determination in areas not mapped by FEMA, Section 7 consultations, cultural resource survey reports, etc.).

The Agencies' report considered CWA permitting expenses but made no provision for the cultural, historical, and archeological investigations that are also part of the permitting process. The CWA 404 permitting process includes USACE consultations with state historic preservation offices. A combination of these state and local agencies, with input from other stakeholders (e.g., any affected Native American tribes) will direct these investigations. The investigations are conducted over numerous phases; consequently,

¹⁵⁷ D. Sunding and D. Zilberman. 2000. Analysis of the Army Corps of Engineers' NWP 26 Replacement Permit Proposal. Prepared for the National Association of Counties and the Foundation for Environmental and Economic Progress. (January).

they are time-consuming and expensive. Based on the findings, an additional type of Archeological and Historical Compensatory Mitigation may be required. Like wetland or stream mitigation, this may involve additional studies of similar sites in the area or other project work that benefits local historic preservation efforts, museum displays, etc. If any of the above investigations are necessary, the resulting permitting costs would increase above the values in Table 3-1, therefore increasing the difference in costs between the Agencies' estimate and real world cost.

Table 3-1 below provides a comparison of cost estimates for the different permit types.

Table 3-1 Comparison of Costs for Permits

Permit Type	Unit Cost NWP Analysis ²⁸ (2010\$ per permit)	Unit Cost from Sunding and Zilberman ²⁹ (2010\$ per permit)
Individual	\$31,400	\$57,180 plus \$15,441 per acre
General	\$13,100	\$22,079 plus \$12,153 per acre

Table 3-1. Comparison of Costs for Permits

An updated total increase in costs cannot be calculated until a more accurate increase in jurisdiction is developed than the current Economic Analysis. Moreover, as one analysis in the document shows, the additional number of permits may increase faster than the increase in jurisdiction (counter to Agencies' assumptions) and the distribution of individual versus general permits is not expected to stay the same.

Since the increase in jurisdictional area is expected to be significantly larger than 2.7 percent (Section 4) and more permits of both kinds (individual and general) will be necessary, ARCADIS believes that the Agencies have grossly underestimated the additional 404 permitting costs. In addition, as shown in Section 5.5, complete analysis of direct permitting and compliance costs for a project requiring one acre of wetland restoration shows that costs may exceed \$405,000. (p. 61-63)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs).

11.2.239 3.1.2.2 *The Agencies' costs associated with CWA 404 compensatory mitigation underestimates the real cost of mitigation through unrealistically low implementation costs and limited acres.*

The Agencies state that "a portion of the costs to applicants will result from compensatory mitigation of wetlands and streams." Using information from published studies and survey results, phone inquiries to USACE Districts and mitigation banks, and relevant websites, the Agencies estimated per acre costs for wetland mitigation and per linear foot cost for stream mitigation. A team of USACE staff then determined the most applicable range of values per state, which the Agencies combined with their estimated increase in wetland acres and stream feet to develop the total annual estimated mitigation costs of \$59.7 million to \$113.5 million.

There are a number of deficiencies with the Agencies' approach. First, the unit costs shown in Appendix A of the PEA do not match the values used in the Agencies' 2011 analysis. The 2014 values for the lower bound costs are the same; however, the upper bound costs are at times approximately 50 percent below the costs shown in the 2011 report. This discrepancy should be addressed and explained in the 2014 report.

Second, there is a discrepancy in the additional number of wetland acres between the 2011 and 2014 documents. Approximately 20 percent fewer wetland acres are used in the mitigation cost estimates for 2011 (2,517) than 2014 (2,042). This difference cannot be effectively explained with different baseline mitigation acres (53,000 in the Agencies' 2011 document and 43,000 in the 2014 report) because both values are cited to the same data sources, fiscal years, and methods.¹⁵⁸ The Agencies' 2014 report even states that "it is consistent with the level of mitigation the Corps has estimated over the past 10-15 years." If the Agencies truly feel that there has been a consistent level of mitigation over the past 15 years, there must be an additional discussion of the 20 percent discrepancy between the two reports.

Third, the Agencies' estimated per acre costs for wetland mitigation (Appendix A: Supplemental Cost Analysis Information; Exhibit 31. State-Level Unit Costs for Wetland and Stream Mitigation; the Agencies, 2014) in the majority of states are significantly lower than real-world mitigation costs. The Agencies' analysis included an average per acre cost ranging from \$25,000 to \$49,000. Although variability occurs among regions and states, ARCADIS recommends a more realistic range of mitigation costs at \$100,000 to \$150,000 per acre, and in some areas of the United States can reach as much as \$300,000 per acre depending on demand for the habitat type, the availability of suitable mitigation land, the complexity of restoration, and the availability of approved mitigation bank credits. A realistic cost estimate must include all of the following:

- Site selection and preparation;
- Acquisition/propagation of plant materials;
- Irrigation design and installation;
- Conservation easement/deed restriction;
- Maintenance (3 years);

¹⁵⁸ The Agencies, 2011 (regarding the 53,000 acres) – based on approximately 44,000 acres of permittee responsible mitigation documented in the ORM2 database in FY 2010, approximately 7,000 acres of bank mitigation in the RIBITS database for FY2009, and 2000 of in lieu fee mitigation estimated from the ratio of ORM2 entries for banks (26%) and ILF (7%) in FY 2010. The Agencies, 2014 (regarding the 43,000 acres) – Corps provided a baseline assessment of 43,000 acres of wetland mitigation. This estimate is based on approximately 32,500 acres of permittee responsible bank mitigation documented in ORM2 database for FY2010, approximately 8,200 acres of bank mitigation in RIBITS database FY2010, and approximately 2,200 of in-lieu fee mitigation estimated from the ratio of ORM2 entries for banks (26%) and ILF (7%) for FY2010.

- Monitoring (5 years);
- Reporting (5 years).

Fourth, the Agencies' estimated per linear foot costs for stream mitigation in the majority of states are significantly lower than real-world mitigation costs. Similar to wetland projects, stream restoration projects frequently benefit from economies of scale, with smaller projects costing more per linear foot,¹⁵⁹ and stream restoration projects involving extensive realignment being more expensive than those solely involving softer stabilization activities.¹⁶⁰ In some cases, stream restoration costs can be as much as approximately \$1,000 per linear foot. The Agencies' analysis included an average per acre cost ranging from \$200 to \$300. Stream restoration project costs include all of those activities listed above for wetland mitigation, but also typically involve more complex engineering and stakeholder negotiations such as:

- Hydrogeomorphic evaluations;
- Structural bed and bank stability planning and design;
- Negotiations with local planners, land owners, and flood prevention agencies;
- Repair of erosion and/or structural elements following severe weather events.

When individual states are evaluated rather than average values, the Agencies underestimated restoration costs for approximately 80 percent of the states with only 10 of 50 states identified as having even the high-end unit cost per acre for wetland restoration exceeding \$100,000 (Appendix A, Exhibit 31 of the PEA, 2014).

Again, although these figures provide an indication of underestimates in the economic impact analysis for the Proposed Rule, the true increase in mitigation cost cannot be estimated until an accurate increase in jurisdiction is developed. What is certain, however, is that the overall increase in costs will be significantly larger than those currently included in the Agencies analysis. (p. 63-65)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs).

11.2.240 4.2 An individual analysis conducted by an API member company indicated that the Agencies' estimate of increased permitting may be low by a factor of 10 or more for upstream oil and natural gas well sites.

To better understand the impacts of the Proposed Rule on oil and natural gas activity, one of API's member companies analyzed their own well sites using detailed aquatic resource data available from actual, recent jurisdictional determinations with Agency field offices. This estimation was carried out independent of API's geospatial mapping exercise

¹⁵⁹ Bonham and Stephenson, 2005 as referenced in the PEA.

¹⁶⁰ Blair, 2000 as referenced in the PEA.

described in the previous section, and will be referred to as the “API Regional Project Impact Analysis.”

A realistic baseline for current regulatory practice was established because all sites in this data set had received permits.¹⁶¹ Completing a “bottom-up” site-by-site analysis, environmental experts compared the amount of impacted jurisdictional waters (in stream-feet or acres of wetlands) that were permitted under current regulations with amounts projected to be impacted under the Proposed Rule, and identified the concomitant changes to the type of permit needed or its requirements.

Determining the requirements for Section 404 “dredge and fill” permitting is complex. If the project proponent can demonstrate only minimal amounts of jurisdictional waters are affected, work generally may begin upon notice to the Agencies. However, if impacts exceed certain threshold levels, the permit requirements also increase. These threshold “trigger” levels vary depending on the type of economic activity (i.e., does the project qualify under a Nationwide General Permit) or on the region or State in which the work takes place (i.e., does the project qualify for a Regional General Permit).

Figure 4-11 demonstrates that, for this well site, jurisdictional features from the 2008 Guidance to the Proposed Rule will increase by more than a factor of ten. Two different diagrams are shown together on the next page as Figure 4-11, then enhanced separately on the following pages.

¹⁶¹ Moreover, the data set provides a robust way to assess possible jurisdictional changes introduced by the Proposed Rule. For example, the Agencies may establish that an aquatic resource (water feature) exhibits bed, bank and high water mark, but has ephemeral flow and, if it fails a test for significant nexus, is thus non-jurisdictional. It can be reliably projected that the water feature in question will change in status to become jurisdictional under the Proposed Rule

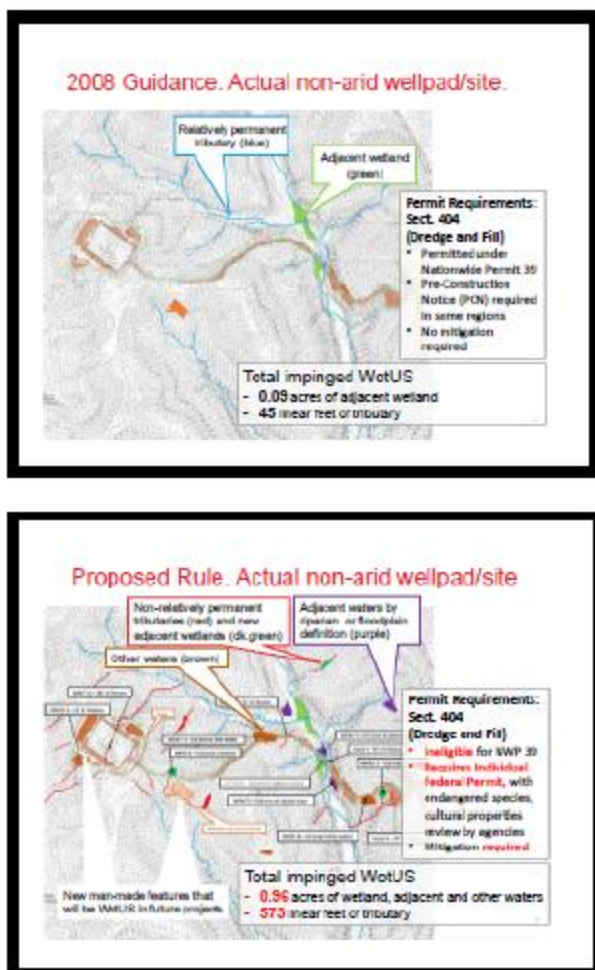
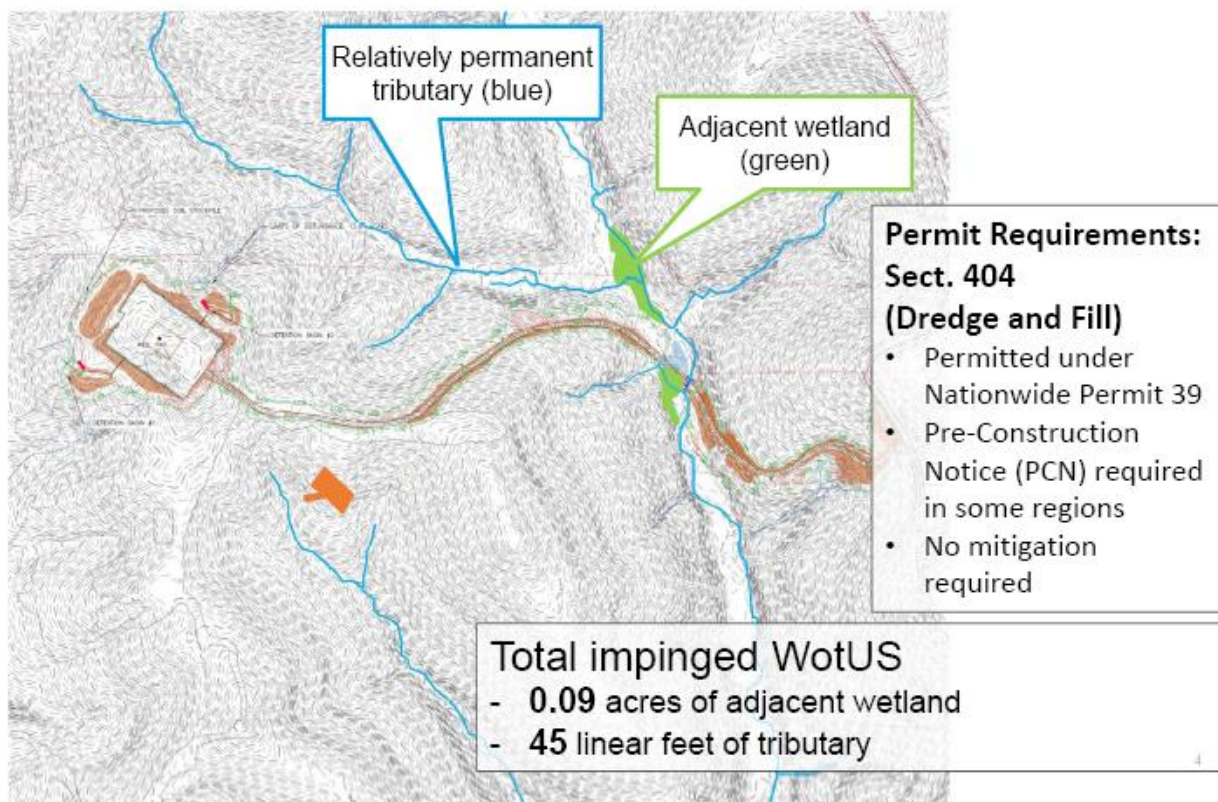


Figure 4-11 Well Site Comparison Between 2008 Guidance and Proposed Rule.

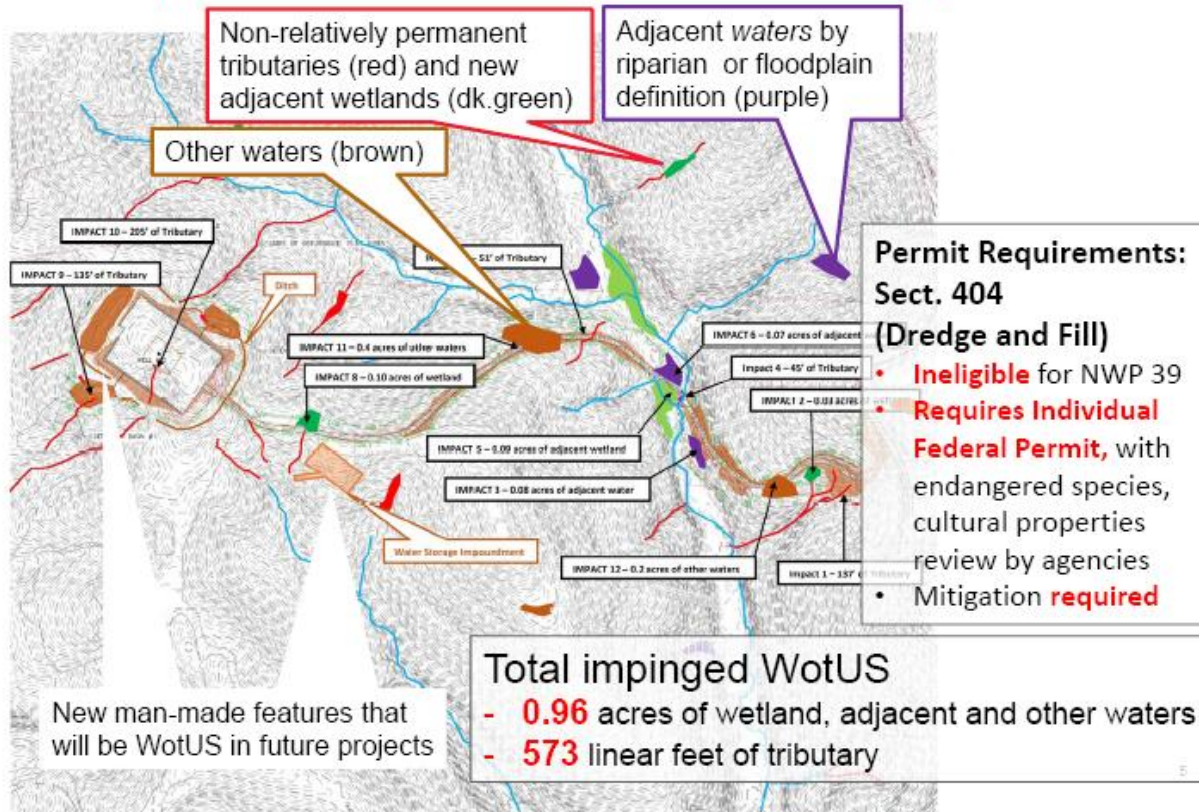
A sample well site, analyzed for impacts to waters considered jurisdictional under the current regulatory practice (light blue are relatively permanent tributaries, green are adjacent wetlands), and including waters considered newly jurisdictional under the Proposed Rule (red are non-relatively permanent tributaries and dark green their associated adjacent wetlands, purple are adjacent waters under riparian or floodplain definitions, and brown are ‘other’ waters, under assumptions that establish a significant nexus to jurisdictional waters).

2008 Guidance. Actual non-arid wellpad/site.



2008 Guidance. Actual non-arid wellpad/site.

Proposed Rule. Actual non-arid wellpad/site



Proposed Rule. Actual non-arid wellpad/site.

In the example above, as currently permitted, the project intersects 45 linear feet of relatively permanent tributary and less than a tenth of an acre of adjacent wetland – it is therefore eligible to be permitted in this State under Nationwide Permit 39 for oil and gas facilities. Pre-Construction Notice (PCN) is required in this case, which means the project developer must provide advance notice to the Agencies of the project and wait up to six weeks for their acknowledgement to proceed. No mitigation is required (i.e., no need to pay money into a fund to create or restore wetlands in some other location as compensation).

The situation changes dramatically under the Proposed Rule (see Fig.4-11). Including new classes of water increased the stream length (or acreage) of jurisdictional waters for this well site by over a factor of ten, pushing the project far beyond the threshold levels under Nationwide Permit 39. (See Figures 5-1 and 5-2 for example photographs of some of the actual features from this analysis that are projected to be jurisdictional and thus federally-protected under the Proposed Rule.)

This project now requires:

- An Individual Federal Permit (which has been estimated to take six months to two years and cost ten times more than a General Permit);¹⁶²
- Mitigation;
- Detailed review material for approval in handling threatened and endangered species issues, including but not limited to:
 - o Consultation with the U.S. Fish and Wildlife Service;
 - o Coordination with State Historical Preservation Office and tribes for protecting cultural resources; and
 - o A possible further Environmental Impact Assessment or Statement; and
 - o A potential public comment period.

Note that all these issues must be addressed to some extent under a General Permit as well, but the level of formal confirmation and documentation is significantly higher under the Individual Permit regime.

To maintain consistency with the simplified treatment of permits in the Agencies' Economic Analysis, this analysis considered only two types of permits: 1) programmatic general permits with pre-construction notice (including both Regional General Permits and Nationwide Permits), which are considered the minimum permit requiring Agency action; and 2) the more effort-intensive Individual Federal Permit.

However, regional differences in permit requirements can challenge this simplification. For example, East Texas has a Regional General Permit system, with heightened protection for certain local threatened and endangered species, which may approach Individual Federal Permits in terms of acquisition difficulty. This factor should be borne in mind when looking at the regional differences in permitting.

Transporting production is an essential part of oil and natural gas facilities. Figure 4-12 demonstrates a similar analysis conducted for a small buried pipeline, a class of oil and gas facilities known as "linear infrastructure," (and generally covered under a separate Nationwide Permit, #12). One impact that should not be overlooked here is the increase in costs for "delineation," which is the practice of having environmental specialists cover on foot the area surrounding a proposed disturbance area (for pipelines, generally twice the width of the proposed right-of-way) in order to identify all jurisdictional waters that may be impacted. It is no longer enough to simply find where the water starts in this area. The new tributary definition under the Proposed Rule includes man-made or natural breaks of any length. So a search will need go further up-gradient, beyond any potential

¹⁶² D. Sunding and D. Zilberman. 2000. Analysis of the Army Corps of Engineers' NWP 26 Replacement Permit Proposal. Prepared for the National Association of Counties and the Foundation for Environmental and Economic Progress. (January).

breaks, looking for evidence of bed, bank and ordinary high-water marks. In connection with the new definition of adjacent waters in terms of floodplain and riparian areas, these too will need to be scouted for any isolated waters they may contain. Two different diagrams are shown together on the next page as Figure 4-11, then enhanced separately on the following pages.

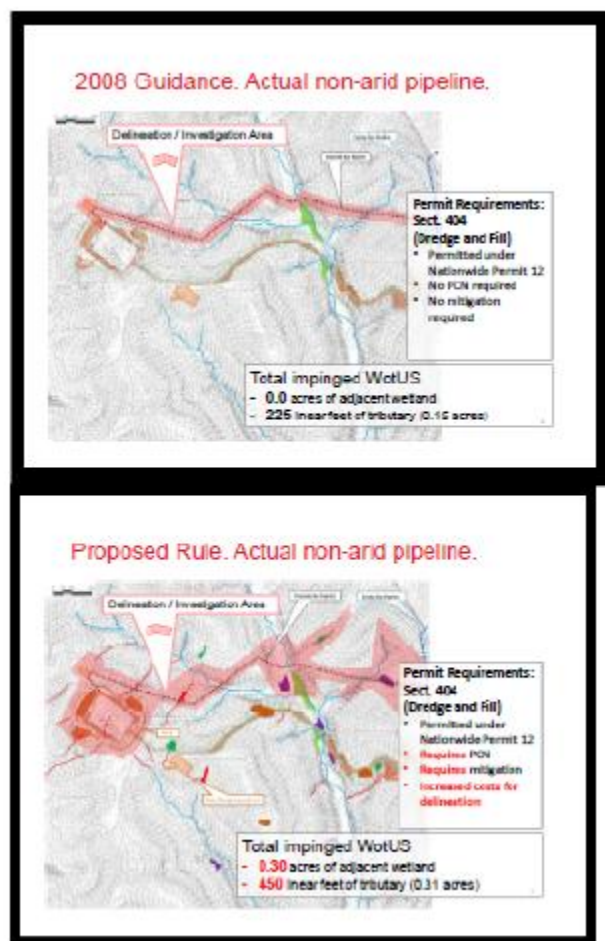
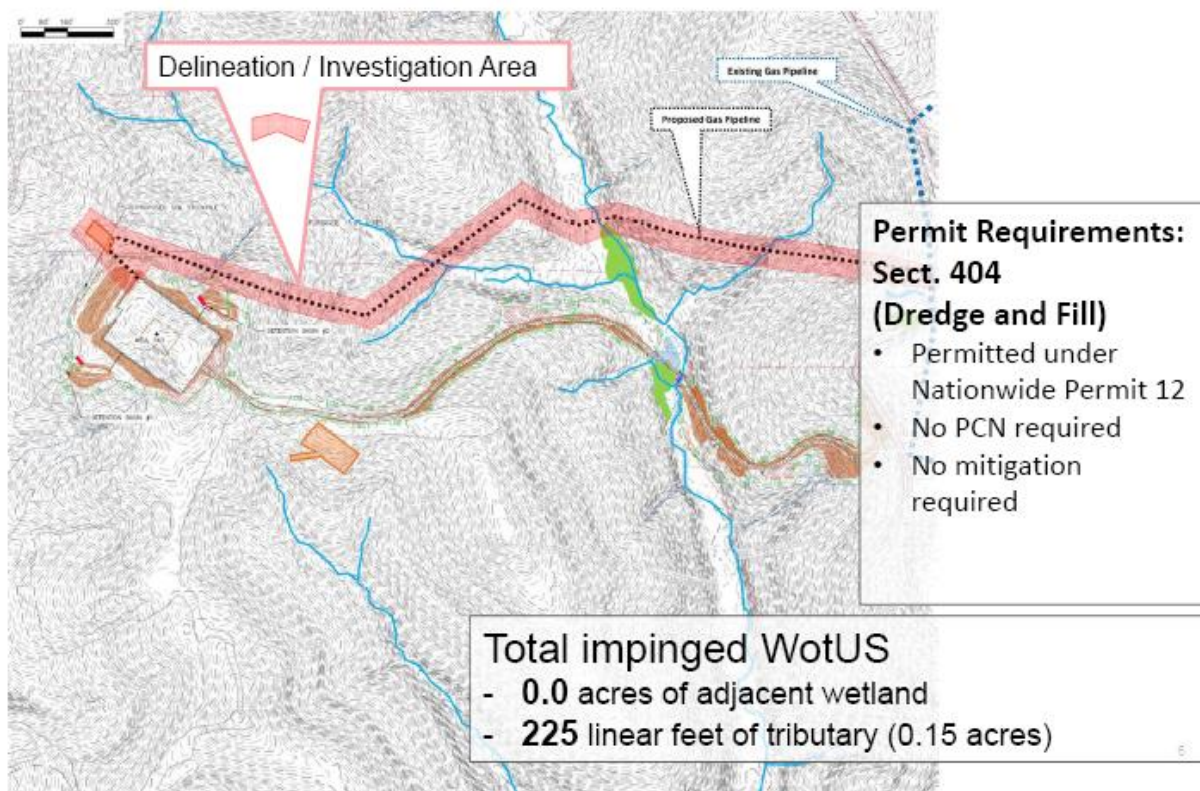


Figure 4-12 Pipeline Site Comparison Between 2008 Guidance and Proposed Rule.

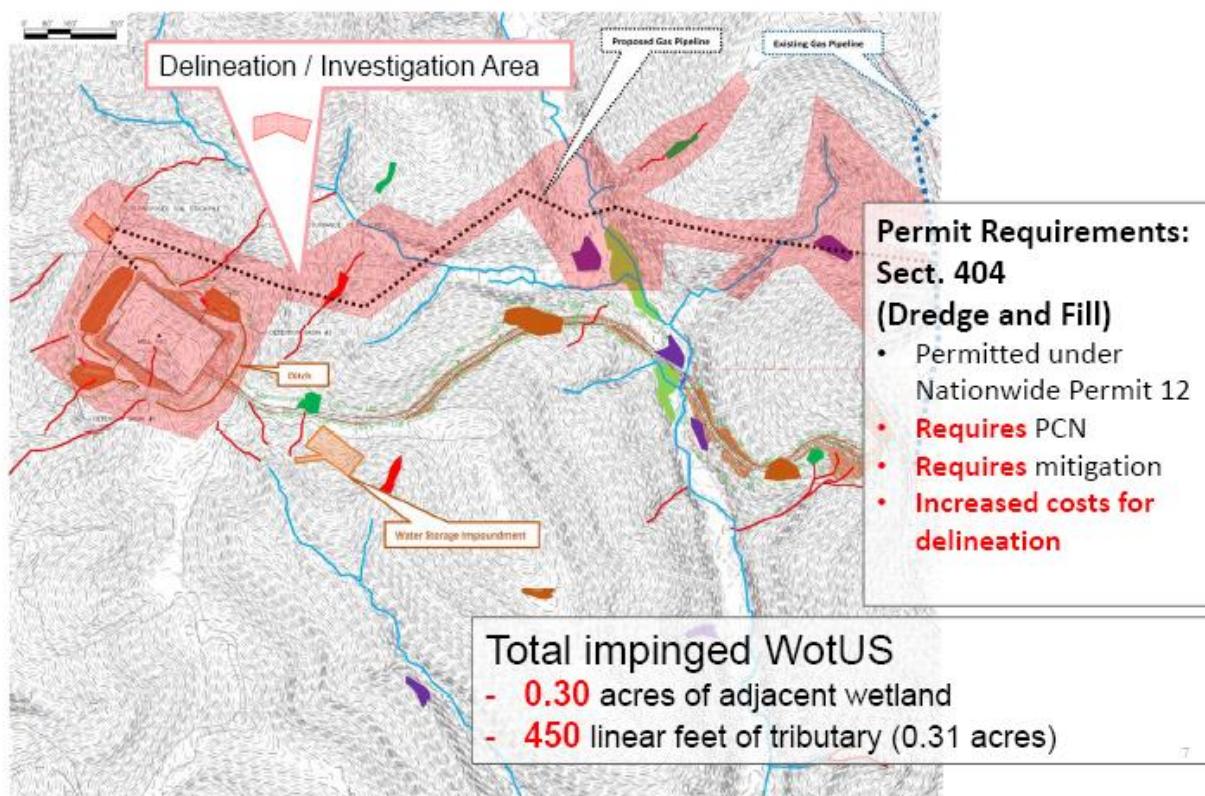
A sample pipeline site, analyzed for impacts to waters considered jurisdictional under the current regulatory practice (light blue are relatively permanent tributaries, green are adjacent wetlands), and including waters considered newly jurisdictional under the Proposed Rule (red are non-relatively permanent tributaries and dark green their associated adjacent wetlands, purple are adjacent waters under riparian or floodplain definitions, and brown are ‘other’ waters, under assumptions that establish a significant nexus to jurisdictional waters). The pink area is the area of delineation, which in the 2008 case is approximately double the width of the proposed disturbance area. Experts must cover the delineation area on foot to identify all WOTUS.

2008 Guidance. Actual non-arid pipeline.



2008 Guidance. Actual non-arid pipeline.

Proposed Rule. Actual non-arid pipeline.



Proposed Rule. Actual non-arid pipeline.

Under the 2008 guidance, the pipeline shown above would impact relatively permanent tributaries at only three points and be eligible for a special Linear Infrastructure Nationwide Permit (#12). In some but not all regions, a pre-construction notice might be required.

However, under the Proposed Rule, the impinged jurisdictional waters double. In this case, the pipeline is still eligible for a Nationwide Permit; however, it does now require a Pre-Construction Notification (PCN).

The increased delineation area (pink) also represents a significant new cost of compliance, which does not appear to be fully reflected in the Economic Analysis.

Summing up these analyses for 247 such sites in two regions (East Texas and Appalachia), we learn that in both regions the number of sites containing newly-jurisdictional aquatic resources increases by roughly the same amount, between 40 and 60 percent. The change in Section 404 “Dredge and Fill” permitting for the oil and gas industry is shown in the following Table.

	Current Guidance	Proposed Rule
Percentage of all sites in Appalachia portfolio (100 sites total) requiring a 404 General permit or equivalent with Pre-Construction Notice (a minimum permit requiring Agency action)	8%	12%
Same, requiring a 404 Individual Permit	2%	5%
Percentage of all sites in E.Texas portfolio (147 sites total) requiring a 404 General permit or equivalent with Pre-Construction Notice (a minimum permit requiring Agency action)	19%	34%
Same, requiring a 404 Individual Permit	2%	3%

Table 4-4 API Member Example Jurisdictional Change Between Current Guidance and Proposed Rule

It may be concluded from this analysis that:

- The change in definition of jurisdictional waters under the Proposed Rule leads to a consistent increase in the number of jurisdictional aquatic features found within the well sites and an attendant increase in the amount (stream-feet or acres of wetlands) of total disturbance arising from impact to these newly-jurisdictional waters.
- The increase in disturbance leads to a consistent increase in permit requirements. The number of sites needing a 404 “General” permit with PCN will double or nearly double. Well sites now requiring the more time-intensive Individual Permit can more than double.

The API Regional Project Impact Analysis focused on upstream oil and gas projects for only one company in two regions (portions of four states) over recent periods of time in which activity has been high. In contrast, the Agencies’ analysis purports to cover all types of economic activity over 30 states, during a period of time which represented a historic low in economic activity.

Thus, although the sample sizes and level of detail are comparable, one should be careful about extrapolating the Regional Project Analysis impact study results to general economic activity. Conversely, the API Regional Project Impact Analysis is likely a more accurate representation of the potential regulatory impacts to energy industry activities that, like oil and gas exploration and production, are built and operated in remote areas, than the more general results of the Agencies’ study.

That said, some general conclusions may be drawn from the fact that the results of the API analysis differ sharply, qualitatively and quantitatively, from the Agencies’ analysis.

- API's analysis casts doubt on the Agencies' central assumption that little or no impact will arise from definitional changes to tributaries and adjacent waters.
- By contrast, API's analysis found that the number of sites containing newly-jurisdictional aquatic resources increases by between 40 and 60 percent, consistently in both regions. **This is an order of magnitude higher than the 2.7 percent estimated by the Agencies.**
- API's more detailed analysis of 404 permitting requirements found that the number of sites requiring increased permits nearly doubled or more than doubled. **This is roughly two orders of magnitude higher than the 2.7 percent estimated by the Agencies.** This casts doubt on the Agencies' simplified approach of assuming the increase in permits is directly proportional to the increase in jurisdictional cases, and may be an artifact of the non-linear 'impact threshold' nature of 404 permit requirements.

To extrapolate the results of the API study for a single company's portfolio to the oil and gas industry as a whole, we multiply these portfolio percentages by the number of oil and gas wells drilled in the US each year (30-40,000, according to the Energy Information Administration of the US Department of Energy), assuming a conservative value for the number of multi-well sites. In a rough order-of-magnitude estimate, the number of Individual Permits per year could increase by a number in the mid-hundreds, concentrated in oil and gas regions. The increase in less time-intensive General permits will be in the mid-thousands.

For perspective, the Fort Worth district office of the Corps handles 500 cases a year, from all industries, with 6-8 key staff and one archaeologist. Other agencies (Fish and Wildlife Service, etc.) are similarly burdened. This simple comparison raises concerns that overworked field offices could begin to fall behind in permits, or require more resources on an unplanned basis, at a time when government budgets are uncertain or being cut back.

Delay is the most serious potential consequence arising from increased permitting – and one which the Agencies have failed to consider in its cost-benefit analysis. API's Regional Project Impact Analysis reports that Individual Permits already require 6 to 24 months processing time - which agrees well with the data point from a key study on permitting costs and time requirements, cited by the Agencies (788 days on average).⁵⁵ Any delay of months complicates scheduling of drill rigs and timing of operations. Considering that a typical drilling lease is three years, this magnitude of delay can easily put a well pad in jeopardy, entailing enormous impact on net present value and eventual resource recovery. It would be reasonable to expect a perceptible drop in U.S. oil and gas production, production revenues and job loss. Private land owners will also experience loss of royalty revenues. The federal government and state governments will also experience loss of tax revenues.

Table 4-5 contrasts the API Regional Project Impact Analysis with the analysis done by the Agencies in the Economic Analysis for the Proposed Rule.

	The Agencies' Analysis	E. Texas Analysis (API)	Appalachia Analysis (API)
Description of case analysis	262 sample "project files" from all sectors, over 30 states for which detailed data from a Jurisdictional Determination (JD), 404 permit, or wetlands delineation is available.	147 "project files" from representative oil and gas sites belonging to a company in an area covering two States, for which detailed data from a JD, 404 permit, or wetlands delineation is available. - Excluded some ponds that would require IPs and so likely not be built.	100 "project files" for ALL oil and gas sites belonging to a company in an area covering two States, plus select sites of other companies in this area where comparably detailed data from a JD, 404 permit, or wetlands delineation is available.
Scope	- By previous analysis, jurisdictional tributaries and wetlands had been shown to increase insignificantly. - Therefore, the Agencies analyzed only the change in these project files for the 'other waters' category in Impact areas (not identical to "Other Waters" defined in the Proposed Rule.)	Analyzed changes to all water categories per 2008 and Proposed Rule over entire parcels.	Same.
Age of project file data	4-6 years (June 2008-January 2011)	1-5 years	2 years
Analysis of permitting increase	- Estimates over all sectors by assuming the increase is the same as the estimated percentage increase in jurisdictional cases (2.7%) and multiplying by the number of 404 permits (IP and GP) issued in FY2010. - Note that 2010 was a historic low in permitting activity.	- Compared impacts from newly jurisdictional waters in linear feet or acres to permit threshold conditions to estimate increase in number and type of permits needed for the specific 147 oil and gas sites in this portfolio. - Roughly extrapolates this increase for the oil and gas industry as a whole using recent EIA data on total number of wells drilled each year.	Same, for 100 sites in this portfolio.
Analysis of permitting impacts	- Ignores delay impacts and impact avoidance costs. - Uses Sunding Zilberman (2000)⁵⁸ and in-house estimates to quantify increase permit application costs over all sectors for 2.7% increase. - Estimates compensatory mitigation costs.	- Roughly compares increased permits to agency processing capacity to argue that delays are likely. - Qualitative discussion of severe delay impacts for oil and gas projects. - Uses Sunding Zilberman (2000) estimates to describe increased permit application costs.	Same.

Table 4-5 Comparison of Agencies Economic Analysis and API Regional Project Impact Analyses (East Texas and Appalachia Sites)

[1] The Agencies' analysis looked at 141,965 "aquatic resources" recorded within impact areas in the Army Corps of Engineers 2009-2010 ORM2 database. This number would not include cases in which the proponent chooses not to question jurisdiction, or does not realize jurisdiction is possible. It also excludes 18.4 percent of records that did not have any aquatic resource entered in ORM2. Of the remaining records, the Agencies claimed 67 percent are streams and 98 percent were jurisdictional; 27 percent are wetlands and 98.5 percent were jurisdictional; 6 percent are 'other waters' and none were jurisdictional. Increase of streams and wetlands to 100 percent jurisdictional was assumed, leading to this assumption of insignificant increase (98 percent and 98.5 percent to 100 percent). Thus the detailed analysis focused on 262 select cases to estimate an increase to 17 percent jurisdictional in the 'other waters' category (which differs in key regards from the Other Waters category in the Proposed Rule, e.g., increases due to "aggregation" were excluded.) Total increase in jurisdictional aquatic resource records was estimated at 2.7 percent. (p. 107 – 121)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topics 11.3, 11.3.1 and 11.3.2 (Section 404, Costs, Benefits).

11.2.241 (...) The discussion below provides typical costs for a reasonable cost scenario to acquire and comply with a Section 404 permit where both listed species and cultural resources issues are involved and where mitigation requires a site-specific restoration plan.

Item	Cost
Section 404 Wetland Delineation and Technical Report • Delineation • Significant Nexus Assessment • Biological Survey (botanical and wildlife) • Functional Assessment	\$35,000
Section 404 Wetland Mitigation Plan	\$15,000
Section 404 Section 7 – Endangered Species Act Compliance • Biological Assessment Preparation • Agency Interaction	\$50,000
Section 106 – Historic Resources Assessment • Cultural resources & survey report • Agency interaction	\$25,000
Section 404 Permitting (Individual Permit) • Application preparation • Agency interaction • Public Hearing Support	\$115,000
Section 401 – Water Quality Certification • Application preparation • Agency interaction • Permit fees	\$15,000
Wetland Mitigation – Per Acre Cost – Reasonable case including 5 years of maintenance, monitoring, and reporting • Site selection (not including land acquisition costs) • Plant materials (cuttings, seeds, container plants) • Irrigation (restoring ephemeral systems will require irrigation to gets plants established) • Maintenance (3 years) – weed abatement • Monitoring (5 years) • Reporting (5 years)	\$150,000
TOTAL Project Cost with One Acre of Restoration:	\$405,000

Table 5-1 One-Acre Site Section 404 Permit Compliance Costs Under Proposed Rule

(p. 137-138)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs).

Coastal Louisiana Levee Consortium (Doc. #19324)

11.2.242 Our prime concern is that under the proposed rule, more waters would become WOTUS, and as a result, more applicants will need to obtain an individual permit from the Corps. The increased utilization of individual permits will trigger more companion federal permitting processes; during these costly review procedures, consulting federal agencies are not bound by a specific time limit. Over \$1.7 billion is spent each year by

the private and public sectors on administrative costs to obtain wetlands permits, without taking into account the cost of required mitigation, and it is our fear that this proposed rule will increase both this dollar amount and the time required to obtain these permits. (p. 3)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3.1 (costs).

The Mosaic Company (Doc. #14640)

11.2.243 **3.1 Section 404**

Section 404 of the CWA requires project proponents to obtain permits for activities involving the dredge and fill of jurisdictional wetlands and waterbodies. In the first step of the permitting process, projects may require alteration or redesign to avoid and minimize impact to jurisdictional waters. Upon completion of this exercise, permit approval will be conditional upon compensatory mitigation for unavoidable jurisdictional impacts. Mitigation can be accomplished by purchasing credits from third-parties, through permittee-developed mitigation plans, or in-lieu fee payments.¹⁶³

To yield a proper cost estimate for wetlands under the Section 404 program, four (4) factors must be considered: 1) financial and opportunity costs associated with delays in project implementation due to permit processing time or project redesigns required to avoid or minimize a project's impact on jurisdictional waters, 2) an assessment as to whether the incremental increase in permits due to the proposed rule are more likely to be Individual or General permits, 3) a projection of impacted acreage for each state or region is needed for reliable total cost estimates given regional variation in mitigation credit prices, and 4) compensatory mitigation cost estimates must use representative credit prices and costs associated with permittee-responsible mitigation.

3.1.1 EPA Omits Important Components of Section 404 Compliance Costs

In its estimate of permit application and compensatory mitigation costs, the EPA Study omits financial and opportunity costs associated with project delays due to permit processing time, and reductions in project scale necessary to achieve avoidance and minimization requirements. A lack of a "defensible, ready basis for estimating these costs", is cited as the reason for excluding them, even while acknowledging they can be significant. (EPA Study, p. 14).

Depending on the nature of the development activity, delays in permit processing can have significant impacts on economic returns. For example, a single-family housing project delay could mean higher prices or interest rates to prospective buyers, which in turn can affect demand, the price the market will bear, and ultimately the return to the

¹⁶³ The EPA's 2008 Compensatory Mitigation Rule encourages use of mitigation banks and in-lieu fee payments.

developer. Further, changes in the scale of an operation required to minimize or avoid impacts, while helping to reduce the cost of compensatory mitigation, could result in lost profit or income to the permittee, and potential socioeconomic costs in the form of lost jobs and expenditures on goods and services in related industries.

These indirect costs can be significant depending on the permittee's development project, length of the permit delay, and scale of project or operational redesign. Although seeming to recognize these facts, the EPA Study does not address if, or to what degree, the proposed rule will change the average Section 404 permit processing time, or whether the nature of the newly jurisdictional areas will increase the incidence of project redesign.

3.1.2 EPA Assumes the Distribution of Individual and General Permits will Remain Unchanged

As demonstrated in Exhibit 5 of the EPA Study, the Study projects the incremental increase in Section 404 permits and impacted acreage separately for Individual Permits (IP) and General Permits (GP). The weighted average of the two permit types then form the baseline for the incremental acreage increase resulting from the proposed rule. The Study also assumes that the distribution of Section 404 permits between IP and GP will remain unchanged under the proposed rule. However, since projects must meet certain criteria to qualify for GPs and since the proposed rules will likely increase the total wetland acres on any given project, it seems unlikely that the number of projects utilizing GPs will remain in the same proportion as in FY 2009/10 as the Study assumes.

While this difference in the assumption sounds benign, it introduces considerable uncertainty into the estimates of Section 404 compliance costs. The study by Sunding and Zilberman cited by EPA, estimates the cost of IP permit applications as significantly higher than GP permit applications (EPA Study, Exhibit 6). Further, the average impacted acreage differs significantly between IPs and GPs. IPs, which represent 5 percent of actual Section 404 permits issued in FY 2009/10, have an average of 12.81 acres of wetland impact per permit. This compares with 0.28 acres of wetland impact per permit for the average GP project. GPs comprised 95 percent of the Section 404 permits issued in FY 2009/10. As Table 3-1 illustrates, if the number of IP permits increases from 5% to 10% under the proposed rule, (using the same wetland impact acreage by permit type) the incremental impacted acreage would increase by 60 percent, from 1,332 to 2,149 acres. In this case, projects would be expected to undergo a proportional increase in total estimated costs for Section 404 compliance.

Permit Type	EPA # Permits Added with Proposed Rule	% Permits Added, FY 2010	Average Impact per Permit, FY 2010 (Acres)	EPA Total Added Impact (Acres)	Alternative % Permits Added	Alternative # Permits Added	Alternative Total Added Impact Acres
Individual	75	5%	12.81	960	10%	140	1,796
General	1,327	95%	0.28	372	90%	1,262	353
Total	1,402			1,332		1,402	2,149

Table 3-1. Implications of the Distribution of Section 404 Permit Types

3.1.3 EPA’s Cost Estimates Don’t Adequately Account for Regional Variation in Mitigation Credit Prices

While Exhibit 3-1 of the EPA Study purports to represent estimated incremental wetland (acres) and stream (linear feet) mitigation for each state, the estimates are not based on the landscape extent and location of isolated waters or industry characteristics of each state. Not knowing where impacts to these isolated waters are likely to occur, the EPA Study allocates the incremental increase in wetland and stream mitigation to individual states in proportion to the number of JDs by state in FY 2009/10, “assuming this serves as a proxy for permitting activity in each state” (EPA Study, p.23). Drawbacks to this approach include: 1) the global financial crisis had disproportionate impacts on development in certain states and 2) the landscape distribution of isolated waters may be altogether different than for current jurisdictionals reflected in the ORM2 database records for FY 2009/10. The actual incremental mitigation acreage in each state, however, is critical for reliably estimating the costs (and benefits) associated with the proposed rule, because the cost of compensatory wetland mitigation varies so dramatically across regions and states; from \$500 per acre in Alaska to \$240,000 per acre in New Jersey. In order to develop an accurate estimate of Section 404 associated costs, EPA would need a more accurate estimate of the number and acreage of jurisdictional areas under the proposed rule at the state level, rather than at the national level.

3.1.4 EPA Uses Unrepresentative Mitigation Credit Prices

The EPA Study uses a flat cost per mitigation credit regardless of where a project is located within the U.S., which is not likely to accurately represent actual costs. For example, it appears that wetland mitigation credit costs in North Carolina range from \$23,000 to \$42,000 per acre (EPA Study Exhibit 31) for non-riparian wetlands. If only isolated wetlands become jurisdictional under the proposed rule, this estimate may be accurate. However, many wetlands and waterbodies previously identified as isolated and non-jurisdictional will fall under the new definitions of “adjacent” and “neighboring”. Based on the price of mitigation credits from private banks, compensatory mitigation for riparian wetlands in North Carolina can range up to approximately \$70,000 (North Carolina Department of Environment and Natural Resources 2014). Adjusted for

inflation to 2010 price levels, for comparability to the EPA Study, this reflects a 50 percent higher per acre wetland mitigation cost than provided in the EPA Study's cost estimate.

3.1.5 EPA's Estimate of Compensatory Mitigation Ignores Costs Associated with Permittee-Responsible Mitigation

While the 2008 Guidance encourages use of mitigation banks and in-lieu fee payments, some share of projects may still require permittee-responsible mitigation. Indeed, EPA reports that 32,500 of the 43,000 acres of wetland mitigation during FY 2009/10 (80 percent) were permittee-responsible as opposed to third-party wetland mitigation.¹⁶⁴

Where mitigation credits are used, they must be purchased from banks located within the same watershed of the project. However, where the demand for credits exceeds the available supply,¹⁶⁵ if the permittee wishes to proceed with the project as scheduled, permittee-responsible mitigation may be the only option. While the EPA Study may have focused on the cost of mitigation credits, it cannot ignore the potential for some proportion of permittee-responsible mitigation, particularly as the economy improves, land values rise, and credits are used up. Direct financial costs of permittee-responsible plans may be more or less costly than mitigation bank credits depending on the region, sophistication of the permittee, site-specific characteristics, and lost opportunity costs. (p. 45-47)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topics 11.3, 11.3.1 and 11.3.2 (Section 404, Costs, Benefits).

11.2.244 3.4 Distribution of Impacts

Federal guidance documents establish that evaluating the distribution of impacts is an important component of an economic analysis. Most prominently, The Unfunded Mandates Reform Act of 1995 (UMRA) requires an examination of the potential disproportionate impacts on state, local, and tribal governments; urban or rural or other types of communities; or particular segments of the private sector. OMB Best Practices require that when distributional effects are thought to be important, the analysis should include their magnitude, likelihood, and incidence of effects on particular groups. The EPA Study does not address the distribution of compliance costs associated with incremental Section 404 permits required under proposed CWA jurisdiction on the

¹⁶⁴ Because EPA again relies only on FY 2010 to develop this statistic, it is unclear whether the economic downturn resulted in a shift from third-party (bank) to permittee-responsible mitigation. As previously stated, this is something EPA can address by examining permitting data prior to the SWANNC and Rapanos decisions.

¹⁶⁵ As the US economy improves, the incidence and scale of development projects will begin to increase in kind. With land values rising, the opportunity cost associated with land in mitigation banks will also increase. These forces, coupled with a greater share of development projects requiring mitigation due to the proposed CWA jurisdiction, may result in a short-run mitigation credit supply shortage, depending on the specific watershed.

private sector. Because the EPA Study projects the incremental increase in permits for the United States as a whole, the fact that certain regions may be characterized by higher or lower degrees of isolated wetlands and other waters was not taken into consideration.⁷ Projecting the incremental impact acreage based on the hydrologic, development and industry characteristics of each state or region, the study would provide at a minimum, a discussion about the likely distribution of incremental Section 404 compliance costs across affected private industry. In addition, because state jurisdiction is required to be at least as inclusive as federal jurisdiction, states with the highest incidence of impact and the least inclusive jurisdiction will bear a disproportionate share of costs to state regulatory agencies. (p. 50)

Agency Response: See Agencies' Summary Response under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3.1.

Iowa Farm Bureau Federation and American Farm Bureau Federation (Doc. #7633)

11.2.245 We believe a serious consequence of the proposed assertion of jurisdiction over ephemeral drains and small, isolated wetlands is the inability of new or younger farmers and ranchers to begin operations on lands containing these features without a section 404 permit. Even if section 404 permitting were required “only for the first year,” this is a major roadblock to new farming or ranching operations. EPA’s own figures (adjusted for inflation) put the cost of individual section 404 permit application at \$62,166, plus \$16,787 per acre of impacts to “waters of the U.S.” For nationwide permits, costs are estimated at \$24,004, plus \$13,212 per acre of “waters of the U.S.” impacted. Few new farmers and ranchers would be able to take on this burden – and yet, given the scope of the features to be regulated under the proposed rule, in most parts of the country it literally would be impossible to avoid these features. They are simply too prevalent across the landscape to “farm around” them. (p. 3)

Agency Response: The agencies recognize the vital role of farmers in providing the nation with food and fiber and are sensitive to their concerns. The final rule reflects the intent of the agencies to minimize potential regulatory burdens on the nation’s agriculture community, and recognizes the work of farmers and landowners to protect and conserve natural resources and water quality on agricultural lands. The rule reflects this framework by clarifying the waters subject to the activities Congress exempted under CWA Section 404(f). See Agencies’ Summary Response under Topic 11.3 (Section 404).

North Dakota Soybean Growers Association (Doc. #14121)

11.2.246 **Incremental and Section 404 Mitigation-Cost Calculations**

A concern we have in the provided cost calculations is the lack of permit-application and issuance analysis in terms of dollars or time. Values from the Sunding and Zilberman study are nearly 20 years old and are unadjusted for the proposed programmatic changes and inflation. The economic analysis concludes that there is little additional cost to

federal entities while failing to address likely increased application and permitting costs for states and citizens; or avoidance, minimization or full compliance enforcement costs.

“Other Waters” occur in fully three-quarters of North Dakota (See the attached EPA/Corps map.) and will await future jurisdictional determinations residing with an ever-evolving series of EPA/Corps decision makers. The presented analysis is based on a 17% ratio of “other waters” being determined as fully jurisdictional. We believe that the large amount of “other waters” land in North Dakota will lead to more than a 17% jurisdictional inclusion ratio in our state, increasing costs and mitigation requirements.

The EPA/Corps’ selection of studies on which to base its analysis and conclusions is a significant concern for us. Nine of the 10 studies cited are more than a decade old, and one is almost 30 years old. Additionally, several cited studies are not published in peer-reviewed journals. North Dakota’s farmers and ranchers have successfully implemented significant technological and environmentally friendly practice adaptations during the period since these studies were initiated and the conclusions made.

An additional concern is the cost factors for individual farmers and ranchers with the potential for third-party lawsuits and an ever-growing threat to America’s agriculture community. Our specific concern is the available resources for many special-interest groups that have targeted American agriculture. (p. 12)

Agency Response: The agencies recognize the vital role of farmers in providing the nation with food and fiber and are sensitive to their concerns. The final rule reflects the intent of the agencies to minimize potential regulatory burdens on the nation’s agriculture community, and recognizes the work of farmers and landowners to protect and conserve natural resources and water quality on agricultural lands. The rule reflects this framework by clarifying the waters subject to the activities Congress exempted under CWA Section 404(f). Although the EPA cannot preclude third parties from filing suit pursuant to the Clean Water Act’s citizen suit provisions, the EPA and the Corps plan to clearly articulate the concepts embodied in any final rule in order to provide maximum clarity to permit applicants, agencies, and the public. We believe that doing so will reduce, not increase, the possibility that these provisions may be misunderstood by permittees, third parties, or other stakeholders, thereby leading to less litigation. Such clarity will also aid courts in responding consistently to citizen suits. See Agencies’ Summary Response under Topic 11.3.1 (Costs)

Florida Crystals Corporation (Doc. #16652)

- 11.2.247 Before the Army Corps can act on any CWA § 404 permits, it must engage in a series of procedural actions. Those actions include complying with other procedural laws such as the National Environmental Policy Act (“NEPA”) and the Endangered Species Act. These procedures dominate the permitting process, and impose significant costs on private landowners forced to participate. (p. 10)

Agency Response: See Agencies' Summary Response under Topic 11.3.1 (Costs) and Topic 13.

Department of Public Works, City of Northglenn, Colorado (Doc. #14990)

11.2.248 The Proposed Rule expands the definition of the term "Waters of the United States" to include categories of waters that were previously never regulated as WOTUS, such as all waters in floodplains, riparian areas, and certain ditches. The inclusion of these waters will broaden the scope of the CWA and will increase the costs associated with each regulated program. In support of the Proposed Rule, the Agencies provided *The Economic Analysis of Proposed Revised Definition of the Waters of the United States* (Economic Analysis). The Economic Analysis is of particular concern to Northglenn because of the limited discussion on MS4s. Under the Proposed Rule, many stormwater systems and features themselves could now be classified as WOTUS. The Economic Analysis does not address or quantify the increased permitting requirements for stormwater conveyances that would result from the Proposed Rule. In fact, the Economic Analysis states on Page 26 that "*It is unclear specifically how a broader assertion of CWA jurisdiction under this Proposed Rule would affect MS4 permits,*" and "*...MS4 outfalls tend not to be in wetlands*". MS4s may, at times, develop manmade wetlands for water quality features and also may need to remove features in order to protect the infrastructure's functional purpose, such as controlled release for water quality. Any work on the stormwater conveyances, work aimed at achieving environmental best management practices, as well as routine improvements required by stormwater permits, will trigger section 404 permitting requirements under the Proposed Rule. The 404 permitting process is a time consuming and expensive process. As local USACE offices are inundated with an increase in 404 permit applications state wide, we are concerned about the immediate associated construction delays and cost increases for projects after the Proposed Rule is final. (p. 4)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction), Topic 11.4, and Topic 7.

Orange County Public Works, Orange County, California (Doc. #14994)

11.2.249 5. The Economic Analysis ("Analysis") does not capture all of the impacts and cost of the Proposed Rule. The Analysis evaluates only the potential increase of previously identified waters of the U.S. and does not consider new and additional waters of the U.S. that would be captured by the Proposed Rule, thereby underestimating the economic impacts. The Analysis does not acknowledge the inappropriate expansion of waters of the U.S. over MS4s, and hence, ignores the major economic costs of compliance under the CWA, particularly with respect to meeting additional total maximum daily load ("TMDL") allocations. EPA should analyze the full impacts and costs from the Proposed Rule to all programs in the CWA affected by the revised definition; otherwise, the Proposed Rule does not comply with the cost-benefit analyses of Executive Order 12,866. (p. 4)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction), Topic 11.4, and Topic 7.

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

11.2.250 The cost of securing a Section 404 permit can be substantial, even if a general permit (such as a Nationwide Permit) is available. A 2002 article in the Natural Resource Journal estimated that "the cost of preparing a nationwide permit application averages \$28,915" nationwide. This estimate is 12 years old and therefore likely very low compared to today's costs. Securing an individual permit is a considerably more onerous and expensive task. The Section 404 permitting process often results in significant time delays, which can be more injurious to cooperatives than the direct costs associated with permitting. (p. 8)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

Arizona's Generation and Transmission Cooperative (Doc. #14901)

11.2.251 If the Proposed Rule were to be implemented, any activity that will result in the discharge of fill material to an ephemeral wash, no matter how small, will require a Clean Water Act (CWA) Section 404 permit. This includes activities ranging from the construction of a substation to maintenance of an unpaved road.

The cost of securing a Section 404 permit can be substantial, even if a general permit (such as a Nationwide Permit) is available. A 2002 article in the Natural Resource Journal estimated that "the cost of preparing a nationwide permit application averages \$28,915" nationwide. This cost, escalated at 3 percent per year for inflation, equates to \$41,000 in 2014 dollars. This substantial cost can impact the viability of many small projects. Securing an individual permit is a considerably more onerous, and expensive, task. (p. 8)

Agency Response: See Summary Responses under Topic 11.2 (Change of scope of Jurisdiction), Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits)

Salt River Project Agricultural and Power District and the Salt River Valley Water Users Association (Doc. #14928)

11.2.252 Currently, Nationwide Permit {NWP} 12 is used to address locations where SRP's projects cross TNW's or tributaries that were identified through a Corps jurisdictional determination. If the agencies determine ephemeral waters are categorically jurisdictional as proposed, SRP projects may no longer qualify for NWP 12, resulting in the need to obtain individual §404 permits.

The extra burden associated with applying for and obtaining an individual permit for utility line construction is substantial. The average cost for preparing a NWP application

in 2011 was \$35,954, while the average cost for preparing an individual permit application in 2011 was \$337,577.4 In addition, it typically takes 10 months to obtain authorization under a NWP, but 2 years to obtain an individual permit.¹⁶⁶ (p. 7-8)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3.1 (costs).

Utility Water Act Group (Doc. #15016)

11.2.253 In addition to feasibility concerns, there is the matter of cost and resulting economic impact. Replacing waste treatment systems that use man-made or man-altered water features with alternative technology is exceptionally costly. Capital costs of installing an effluent treatment facility could be hundreds of millions of dollars, with tens of millions in annual operating and maintenance ("O&M") costs. One UWAG member estimated that the capital costs and O&M costs of replacing ponds used to treat low volume waste with a physical-chemical treatment system would cost millions of dollars. Additional economic impacts would include added costs for permitting work within the ponds (e.g., Corps CWA § 404 permitting for the placement of treatment equipment and structures within the ponds) and increased costs to maintain these ponds. All of these costs would be incurred and likely passed to electric utility ratepayers, with no added environmental benefit.

In Section I.C.4 above, we described the implications of the Proposed Rule for the SPCC program. The waste treatment system exclusion serves as an important tool for avoiding intractable conflicts with that program as well. Steam electric plants, like other industrial facilities, often rely on on-site ditches, basins, and other water features to capture and contain oil and other substances that may spill. Their SPCC plans contemplate that the facility will use such features, along with either portable or fixed equipment placed in those water features, to contain spills. When spills occur, they must be cleaned up promptly, involving work in those features. As is the case for the NPDES program, absent a robust waste treatment exclusion of the sort applied under current law, the burdens and costs of providing alternative spill containment and countermeasures would be enormous. (p. 75-76)

Agency Response: See Agencies' Summary Response under Topic 11.3, 11.3.1, 11.3.2, and 11.4. See also Topic 7.

American Wind Energy Association (Doc. #15208)

11.2.254 Through redefining what is a "water of the United States," the proposal would increase of streams under CWA jurisdiction by 49,075 additional feet and result in an additional \$200-300 per unit, or an additional \$8.7 to \$13 million annually. Due to the

¹⁶⁶ These figures do not include mitigation or design change costs associated with permitting.

additional 2,042 acres of wetlands that come under agency jurisdiction under the proposed rule, per unit costs rise by \$25,000 to \$49,200 with an additional \$51.1 to \$100.5 million in annual costs.¹⁶⁷ EPA's economic analysis, which many consider to severely underestimate costs, estimates that this proposal would add 75 more individual permits per application under section 404, adding costs anywhere between \$2.4 to \$19.1 million annually to the cost project permitting. This proposal also would add 1,327 more general permits per application and add costs ranging from \$17.4 to \$33.8 million annually; breaking this number down shows a cost of \$22,079 per unit plus \$12,153 per acre. Mitigation costs must be considered as well because the Army Corps requires compensatory mitigation, which may be accomplished in three ways: mitigation banks, in-lieu fee mitigation, or permittee responsible mitigation.¹⁶⁸ These compensatory mitigation rules can take up to 225 days to be reviewed and 330 days if there is a dispute.¹⁶⁹ The impact of avoidance and minimization costs, such as construction of bridges, docks, roads, etc., would necessarily increase to avoid discharges of pollution to the newly defined waters. The maintenance and upkeep of these measures would also add to expenditures. (p. 3-4)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topic 11.3.1 (costs).

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

11.2.255 III. (Unintended) Consequences of Proposed Rule

The expansion of CW A jurisdiction as written in the proposed rules will have far-reaching consequences for the power generation, transmission, and mining industries, and regulators alike. Tri-State is also concerned about how the proposed rule will impact obligations under numerous CW A programs and other environmental and safety statutes.

Many activities, e.g., construction of sediment ponds on mine sites and overland access routes for transmission line corridors, are already subject to comprehensive Section 404 permitting requirements. Section 404 permitting often involves lengthy and expensive consultations among federal and state agencies to evaluate the impacts of proposed discharges. Permit applicants are also required to obtain Section 401 state water quality certifications as part of the permitting process, in some cases. If the proposed rule results

¹⁶⁷ E.P.A., Economic Analysis of Proposed Revised Definition of the Waters of the United States 17 (2014),

¹⁶⁸ Mitigation banks are credits gained by a permittee when they restore, establish, enhance or preserve an aquatic resource; these credits are then set aside to compensate for future impacts, with wetland mitigation bank credits costing \$15,000 or more per credit. In-Lieu Fee Mitigation is a payment made by a permittee to a government agency or non-profit organization which will then restore, create, enhance or preserve an aquatic resource. Permittee responsible mitigation is mitigation through an aquatic resource restoration, establishment, enhancement, or preservation provided by and the full responsibility of the permittee.

¹⁶⁹ 9E.P.A., U.S. Army Corps of Engineers, Compensatory Mitigation Rule: Improving, Restoring, and Protecting the Nation's Wetlands and Streams 6 (2008), available at http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_03_28_wetlands_Mit_rule_QA.pdf.

in the expansion of CW A jurisdiction, facilities will face even more permitting requirements for routine activities and new construction, potentially imposing substantial costs and operational delays.

Such permitting would also bring with it additional mitigation requirements, which adds substantial cost to projects. Recent quotes from Colorado wetland banks indicate costs between \$75,000 and \$85,000 per credit-acre,¹⁷⁰ which is substantially higher than the stated range of \$32,000 to \$66,000 for Colorado in Appendix A of the economic analysis of the proposed rule.¹⁷¹ These ranges for mitigation banking in Colorado should be updated to better reflect actual estimated cost ranges. The Brattle Group made a similar point in their review of the EPA's economic analysis for this rule. As noted in Table 5 of the Brattle report, the unit mitigation cost range for Colorado estimated by the EPA in 2011 for their proposed clarifying guidance document was \$32,000-\$100,000.¹⁷² While the lower bound number remained the same in EPA's 2013 analysis for this rule, the upper bound for Colorado was reduced by \$34,000 per acre without explanation. The upper bound number for Colorado from EPA's 2011 analysis (\$100,000) is a better estimation of the actual mitigation cost range and should be used in a revised economic analysis of this proposed rule. In addition, as a result of the proposed rule, mitigation costs are almost certain to rise to the point where at least some facility operations and expansions become cost prohibitive if there becomes a need to mitigate for features that are currently non-jurisdictional. (p. 3-4)

Agency Response: See Agencies' Summary Responses under Topic 11.2 (Change of Scope of Jurisdiction) and Topics 11.3, 11.3.1 and 11.3.2 (Section 404, Costs, Benefits).

Greater Lafourche Port Commission (Doc. #8411)

11.2.256 Additionally, the proposed large scale expansion of WOTUS means that more Section 404 permits will be needed. Section 404 permits are federal "actions" that trigger additional companion statutory reviews by other agencies, in addition to the state permitting agency, including reviews under the Endangered Species Act, the National Historic Preservation Act, and the National Environmental Policy Act. Longer permit preparation and review times, when combined with the higher costs associated with these additional reviews, place small businesses in an impossible situation, as they lead to higher costs overall and greater risks that can ultimately jeopardize a project. As a stakeholder who applies for numerous Section 404 and other permits from the Corps, we

¹⁷⁰ Personal Communication. Chris Reichard, Tri-State Generation and Transmission Association, Inc., with Riverdale Mitigation Bank and Middle South Platte Mitigation Bank, September 2014

¹⁷¹ U.S. Environmental Protection Agency and U.S. Army Corps of Engineers. "Economic Analysis of Proposed Revised Definition of Waters of the United States". March 2014.

¹⁷² The Brattle Group, David Sunding, Ph.D. "Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States". 15 May 2014

are keenly aware of how overwhelmed the regulatory branches of the Corps currently are, without the proposed large-scale expansion of WOTUS. Our experience tells us that the likely effect of the proposed rule directly conflicts with the Administration's stated commitments to expediting infrastructure projects as well as assisting smaller businesses and individuals climb the ladder of opportunity. (p. 2)

Agency Response: See Summary Responses under Topic 11.3 (Section 404), as well as Topics 11.3.1 and 11.3.2 (Costs/Benefits).

Iowa Waters Advocacy Coalition (Doc. #14120)

11.2.257 (...) Ultimately, the rule would put more areas under the federal government's jurisdiction, which will lead to more litigation and project delays; more landowners needing permits; and higher costs for permitting, avoidance and mitigation. These expenses are not insignificant. The cost of obtaining a § 404 permit can range from tens of thousands to hundreds of thousands of dollars – and that does not include the costs for mitigation or project delay, which can be considerable. (p. 2)

Agency Response: The final rule is narrower than the existing regulations and historical practice. See Agencies' Summary Response under Topic 11.2 (Change of Scope of Jurisdiction).

11.3.2. Benefits

Agency Summary Response

The agencies prepared an economic analysis for informational purposes, and the final decisions on the scope of “waters of the United States” in this rulemaking are not based on consideration of the information or analysis in the economic analysis. However, the analysis shows that under each scenario, benefits exceed costs.

Commenters suggest that the approaches and studies used to calculate the Section 404-related benefits are of concern. The general methods used in the analysis such as contingent valuation and benefits transfer are established and accepted valuation tools with well-defined guidelines for implementation as outlined in the Office of Management and Budget's Circular A-4, EPA's Guidelines for Preparing Economic Analysis, and numerous academic articles and conferences. The agencies' benefit transfer meets the requirements of all OMB and EPA guidance. Similarly, the agencies chose to focus on studies that best represented the types of wetlands similar to those expected to be incrementally protected under the final rule. Studies that assessed overseas, tidal, and coastal wetlands were not included as part of this analysis by design.

The most applicable studies are predominantly from the 1980s and 1990s. The agencies recognize that there have been methodological advances for studies of this kind. Some of these methodological improvements, such as techniques to remove hypothetical biases, have resulted in general in lower estimates of willingness to pay (WTP) in recent studies. However, since the

early 1990s there may also have been other changes such as increased awareness of wetland services and changes in household income that could increase WTP. Therefore, there is uncertainty as to whether the overall effect of these methodological improvements and other changes would result in an underestimate or overestimate of WTP. While it would be preferable to include more recent studies reflecting the current state of the art in stated preference analysis, the agencies were unable to do so for this analysis as there have not been recent publication of applicable studies. In this case, the agencies believe that basing the benefit transfer on studies that more closely value the resource in question versus studies that may have methodological improvements offers less overall uncertainty and error. In response to comments, the agencies did re-examine the application of the studies considered in the benefits transfer exercise, making several changes to how these studies were utilized to improve the standardized WTP values.

The agencies made several other changes in the EA for the Final Rule in an attempt to respond to commenters and improve the benefits estimates. For example, commenters note that the agencies assume wetlands included in contingent valuation studies have identical functions as the wetlands that are being considered in the EA for the Proposed Rule, and that this is a flaw that undermines the attempt at benefit transfer. The agencies attempted to address this issue by completing a more precise benefits transfer exercise. The agencies determined that the vast majority of the wetlands that could become jurisdictional under this rule would fall into National Wetlands Inventory categories of Freshwater Forested/Shrub and Freshwater Emergent, and therefore assigned estimates from relevant benefits studies into one of these two categories. The projected increase in impacted acres now offset via mitigation and therefore from which benefits will accrue was also divided into forested and emergent wetlands by state, using state-level data from the National Wetlands Inventory on the prevalence of each of these wetland types.

Commenters also state that the value of benefits from individual wetlands are likely to be highly localized. In the EA for the Proposed Rule, the agencies allowed benefits from wetlands to accrue to households within the same wetland region (regions identified by the USDA Economic Research Service). Alternatively, benefits could accrue only to households within the same state as a given wetland. Depending on natural characteristics, the size of the state or the region, the amount of wetlands in each, and the population in each, one approach may make more sense than the other. There are no clear boundaries determining to whom benefits should accrue, and this is confounded when adding in use/nonuse components to valuation (while use values may more sense at a smaller scale, nonuse values may not). To avoid this additional level of complication, while still addressing questions to the analysis, the agencies determined to pursue a blended approach for the Final Rule, incorporating both the state and regional level approaches to valuation.

Commenters also indicated that because of the effect of state protection programs the number of wetland acres mitigated by the proposed rule changes would be less than the agencies estimated. The agencies disagree. The EA used values from the ORM2 database to calculate impacted acres per permit. The ORM2 database uses information from sites already covered by state programs so the impact of these programs in the aggregate is included in the assessment of acres protected and the estimated benefits values.

A commenter makes the claim that the benefit estimates is subject to double counting because the analysis takes credit for the benefits of mitigated acres that states would already require mitigation for. Although the extent of a state's CWA jurisdiction may not be smaller than the definition of waters of the U.S., states and tribes may elect to implement their water quality protection programs more broadly, according to a definition of "waters of the state" or "waters of the tribe." Where individual states have elected to regulate waters more broadly, the estimated costs and benefits of this rule would be smaller than presented here (because states may already be asserting jurisdiction over waters for which this analysis presumed jurisdiction was not generally asserted in practice). Therefore it is not a case of double counting benefits, as overestimating both the benefits and costs of the rule.

A commenter suggests the benefit estimates should be discounted, or weighted less than costs due to the greater uncertainty associated with them. While the agencies agree that the uncertainty related to any cost or benefits estimate should be accurately characterized, and uncertainty bounds should be quantified if possible, the agencies do not consider putting less weight on an estimate because of uncertainty to be an acceptable practice. The greater the uncertainty for a given estimate, the less information that is available to create an acceptable weighting scheme.

See section 9 of the EA for the Final Rule, "CWA Section 404 Benefits" for a full discussion of how the benefits from the implementation of the CWA section 404 program were calculated.

Specific Comments

Water Advocacy Coalition (Doc. #17921.15)

11.2.258 V. Errors with EPA's Incremental Benefits Calculations

A. SECTION 404

EPA lists several section 404 benefits that will result from a change in the "waters of the United States" definition. These include avoidance and minimization of permit impacts, which result from improved clarity in the CWA, and ecosystem benefits associated with additional compensatory mitigation that will now be required. Since quantifying the former is difficult, its analysis focuses on benefits from incremental compensatory mitigation requirements.¹⁷³ The authors use a benefits transfer approach and adopt estimates of the value of wetland mitigation from previous studies. Specifically, they select 10 contingent valuation studies that provide willingness to pay (WTP) estimates for wetland preservation. Those studies span 12 states and yield estimates for wetlands that "provide a suite of services expected to be similar to those provided by waters incrementally protected under the proposed rule". The results from these studies were standardized by determining WTP at the per-household per-acre level.¹⁷⁴ The authors

¹⁷³ EPA only addresses benefits associated with wetland mitigation and omits benefits from stream mitigation.

¹⁷⁴ For studies that reported annual WTP, total present value was determined over a period of 50 years using a 3% and 7% discount rate. For studies that reported WTP per individual, one individual per household was assumed.

then calculate an average WTP, weighted by the number of respondents in each study. This yields values of \$0.016 and \$0.012 per household per acre using a 3% and 7% discount rate, respectively.

EPA calculates benefits for incremental compensatory mitigation by multiplying WTP estimates by the number of households and the number of acres impacted in eight different “wetland regions.” These regions were developed by the US Department of Agriculture’s Economic Research Service, and the analysis operates under the assumption that “per acre benefits values accrue to all citizens in the region.”¹⁷⁵ The calculations used to generate incremental compensatory mitigation benefits are presented in Table 6.

Table 6: Derivation of Compensatory Mitigation Benefits

Region	Incremental Impact Estimate (Acres)	Number of Households	Present Value of Benefits per Year- 7% Discount (2010\$ millions)	Present Value of Benefits per Year- 3% Discount (2010\$ millions)
Central Plains	30	3,201,336	\$1.20	\$1.50
Delta and Gulf	85	14,521,178	\$14.80	\$19.80
Mountain	145	7,390,812	\$12.90	\$17.30
Midwest	322	23,909,088	\$92.30	\$123.70
Northeast	240	23,839,690	\$68.70	\$92.10
Pacific	79	16,163,714	\$15.30	\$20.50
Prairie Potholes	241	2,176,626	\$6.30	\$8.40
Southeast	187	20,485,107	\$46.10	\$61.70
Other	3	234,779	\$0.00	\$0.00
National	1,332	111,922,330	\$257.60	\$345.10
Calculations	A	B	$C = A * B * 0.012$	$D = A * B * 0.016$

Table 6. Derivation of Compensatory Mitigation Benefits

The benefit transfer analysis used to approximate section 404 benefits is poorly documented and not consistent with best practices in environmental economics. EPA synthesizes ten previous studies to estimate an average WTP for each acre of wetland mitigation. Those studies are largely irrelevant and do not provide accurate estimates of benefits. Nine of the ten studies were conducted more than a decade ago, and the earliest was written nearly 30 years ago. Several of the studies EPA relies on were never published in peer-reviewed journals. Given these shortcomings, it is reasonable to suspect that WTP estimates may not reflect the actual preferences of individuals for expanding jurisdiction over various types of waters.

While EPA attempts to value ecological services provided by wetland mitigation, it assumes that the wetlands included in the contingent valuation studies have identical functions as the wetlands that are being considered in the current analysis. This is an important flaw that undermines EPA’s benefit transfer analysis. Benefit transfer analysis operates under the presumption that benefits calculated for a specific geography and time

¹⁷⁵ Heimlich, R.E., R. Claassen, K.D. Wiebe, D. Gadsby, and R.M. House. 1998. Wetlands and Agriculture: Private Interests and Public Benefits. AER-765, U.S. Dept. Agr. Econ. Res. Serv., Aug.

can be readily applied elsewhere. This oversimplification comes at the expense of accuracy. For example, the Loomis et al. study used in the EPA analysis examined WTP to reduce contamination from agricultural drainage in wetlands in California. While this service may have considerable value, this value is likely highly localized. Indeed, Loomis found that respondents near the wetlands in question had WTPs approximately 15% higher than respondents elsewhere in the state.¹⁷⁶ This pattern is likely to be more pronounced when extrapolating benefits to regions containing multiple states and heterogeneous patterns of wetlands.

EPA's analysis rests on an unstated assumption that all of the incremental wetlands affected by the definitional change would be compromised if federal jurisdiction is not expanded. Conversely, it also assumes that all would be preserved or mitigated if federal jurisdiction is extended. The reality is likely to be quite different. State and local regulatory programs frequently protect wetlands even in the absence of federal jurisdiction. State-level planning, monitoring, and enforcement activities can be carried out with state-specific concerns in mind, and may be better-suited to effectively preserve wetland resources. Thus, the benefits associated with expanding federal jurisdiction over wetlands could be partially offset by programmatic changes that pass control from states to federal agencies.

EPA makes little effort to account for changes in economic trends, recreational patterns, and stated preferences over time. It simply applies a multiplier based on the growth (or decrease) in permit applications. This suffers from the same error discussed above, where growth is based only on the subset of individuals who have already sought a permit. It does not address those who may seek a permit under the proposed rule. Even in the sensitivity analysis, which was conducted to address this issue, alternative calculations are carried out using the same multipliers and many of the same assumptions from the initial analysis. EPA concludes: "because estimated benefits would also rise with more wetland protection, benefits would continue to justify costs."

This amounts to a doubling down on the original benefits estimates, which contain all of the original biases and shortcomings. This is insufficient for evaluating the benefits associated with programmatic changes of this scale. (p. 76-79)

Agency Response: See Summary Response under the current section (Topic 11.3.2 Benefits).

The Mosaic Company (Doc. #14640)

11.2.259 **4 Benefits**

¹⁷⁶ Respondents in the San Joaquin Valley had a WTP of \$174 annually to prevent the degradation of an 85,000 acre tract of wetlands. Respondents in the rest of the state had a WTP of \$152.

The EPA Study quantifies the incremental benefits of compensatory wetland mitigation under the proposed rule using “benefits transfer”.¹⁷⁷ “Benefits transfer” refers to using valuations of benefits for other, comparable resources to value the subject resource. The method is commonly used in policy analysis as an alternative to more rigorous site/resource-specific valuations. However, while generally accepted as appropriate for policy analysis, there are well-recognized limitations to the benefits transfer methodology. The guiding principle for reliable benefits transfer is that resource values used in the primary studies relied upon must be comparable to the subject resource in terms of the types and level of services provided. Further, when valuations are elicited using stated preference surveys (SPS), the tastes and preferences of the survey respondents must be representative of the population to which benefits will accrue from the subject resource (EPA Study, p. 20).

Based on our review, the benefits transfer approach used in the EPA Study does not provide meaningful or reliable information about the benefits of the proposed rule. The Study acknowledges that the benefit estimates used in this case should be viewed as only “illustrative” (EPA Study, p. 20). It is not clear, however, how “illustrative” values should be used in benefit-cost analysis. For example, giving \$1 of “illustrative” benefits the same weight as \$1 of compliance costs is likely to overstate the benefit side of the equation. Rather, due to the uncertainty of “illustrative” benefits, we would expect a discount value be applied to illustrative values before making direct comparisons to actual costs.¹⁷⁸

The reference studies used to develop wetland function value also overstate potential benefits because the types of wetlands and corresponding functions evaluated in those studies are vastly different than the types of wetlands EPA aims to protect under the proposed rule. The expansion of wetland jurisdiction under the proposed rule encompasses many wetlands that are only marginally considered wetlands under today’s rules, many of which could be said to add little if any incremental functional value to the wetlands already claimed under the 2008 Guidance. Further, values from the studies represent dollar amounts households stated they would be willing to pay to protect or enhance wetlands. Respondents do not actually have to pay that amount, which could result in an overstatement of wetland value, and respondents do not understand that all wetlands are not the same aesthetically or functionally, which could also influence the amount respondents would be willing to pay. Finally, the quantification assumes that all

¹⁷⁷ The EPA Study recognizes other benefits including cost savings associated with enforcement of CWA jurisdiction, the burden of which EPA asserts will be reduced after the WOTUS definition is clarified. While EPA quantifies benefits associated with Section 402, the method is simply an extension of its cost estimation approach, meaning that incremental benefits are proportional to incremental costs.

¹⁷⁸ The term discount is not to be confused with the financial concept of discount future streams of money. In this scenario, discount means to give less weight to the estimated benefits given the admittedly illustrative nature of the benefits estimates when comparing to costs.

households in all states receive the same degree of ecosystem service benefits from wetland protection.

As described further below, the EPA study needs to include a discussion about the appropriate role of illustrative values in cost-benefit analysis, and how or if the uncertainty surrounding “illustrative” values can be quantified and incorporated in a meaningful way to inform decision-makers and the regulated community. (p. 51)

Agency Response: See Summary Response under the current section (Topic 11.3.2 Benefits). In addition, the term “illustrative” is used to indicate that EPA conducted a “scenario” analysis; this concept is explained in Topic 11.3.1 Costs.

11.2.260 4.1 Values Reported in the Primary Studies are Hypothetical

The use of Stated Preference Survey (SPS) values in the EPA Study as a surrogate for “benefits” of the proposed rule are hypothetical in that they don’t reflect the value people actually place on wetlands. SPS studies derive values from statements about what people would pay, without data revealing what people actually have paid (EPA Study, p.20) or the value of benefits actually provided. SPS studies are plagued with a host of biases, as discussed in Daniel McFadden’s 1994 review of hypothetical bias in valuing wilderness areas in the Selway Bitterroot Wilderness Area, Contingent Valuation and Social Choice, as well as Daniel Kahneman’s 2011 book, Thinking Fast and Slow.

The use of SPS methods for valuing ecosystem services is particularly troublesome, because the survey questions assume the respondents are fully and accurately informed about the specific goods or services being valued. Because wetlands can provide a host of services, EPA uses a total value approach where “the values elicited account for the varying degree and interrelationships among services provided, assuming respondents are sufficiently informed” (EPA Study, p.21). However, it is well known in the ecological literature that not even scientists and practitioners agree on a definition of ecosystem services, and values may vary depending on the distance from a TNW. Therefore, it is extremely unlikely that a typical respondent from a random household can properly value wetland function. (Fisher, Turner and Morling 2009; Barkmann et al. 2008).¹⁷⁹

The only reliable approach for estimating the functional benefit value provided by these waters of flood protection, water supply, and water quality, is based on actual investments made to engineer/create those services. This requires an inventory of the waters likely subject to CWA jurisdiction under the proposed rule, and some measure of the types and level of services provided. By developing the cost to create engineered solutions to provide the same types and level of services, EPA can begin to measure

¹⁷⁹ Fisher, Turner and Morling state “while there have been several attempts to come up with a classification scheme for ecosystem services, there has not been an agreed upon, meaningful and consistent definition for ecosystem services”. Barkmann et al. state “lay respondents are usually unfamiliar with the implications of scientific descriptions of ecosystem functioning. Thus, the applicability of stated preference methods for the valuation of ecosystem functions is a matter of debate.”

benefit values. This approach is not without limitations, as users are only willing to pay for engineered solutions, where they perceive an actual need, such that the location of the newly jurisdictional waters is an important determinant of the benefit value that EPA must consider. (p. 52)

Agency Response: See Summary Response under the current section (Topic 11.3.2 Benefits).

11.2.261 **4.2 Wetlands Valued in the Primary Studies are not Comparable with Wetlands Protected under the Proposed Rule**

Putting aside the question of whether the SPS method is appropriate, at the very least, the wetlands valued in the primary studies must be similar in size and ecological function to the wetlands that are the subject of the proposed rule, in order for the “benefits transfer” approach to be reliable. A recent article that reviews the methodology and challenges of the benefits transfer approach points out that “[t]he heterogeneity of some environmental goods, such as wetlands, presents a challenge with respect to acquiring sufficient primary study data that satisfies the requirement for commodity consistency.” (Boutwell and Westra 2013). This is because wetlands have a high degree of heterogeneity between sites (and even within sites) that affects the characteristics of the services provided. For example, what constitutes an environmental improvement to wetland functionality in one area may not be applicable or even viable in another area. While EPA purports to have focused on studies that value a “bundle of services” or “total resource values” provided by wetlands, the high degree of heterogeneity between and within wetland sites means the services valued are likely to vary drastically from site to site (EPA Study, p.21). Further, the values EPA extracts from the primary studies are unlikely to adequately represent the varying type and function of the 1,332 wetland acres EPA estimates will be affected by the proposed rule across the entire United States. In addition, the 10 primary SPS studies cover only 13 states which account for less than 30 percent of the expected impacted acres (EPA Study, Exhibits 31 and 36; Heimlich et al. 1998). In fact, the entirety of the Mountain, Northeast and Southeast USDA ERS wetland regions utilized in aggregating household benefits are unrepresented by any of the primary SPS studies.

Even assuming all wetlands and their services are homogenous, the EPA’s benefits transfer approach is unreliable because the scope and scale of the wetlands at issue in SPS studies do not correlate to the incremental scope and scale of wetlands at issue in the proposed rule. For example, Loomis et al. 1991 values 85,000 to 125,000 acres of wetlands within California’s San Joaquin Valley, while Poor 1999 values expanding wetland areas within Nebraska’s Rainwater Basin by 41,000 acres (EPA Study, Exhibit 36). Further, a SPS study by Land and Tobin in 1989 provide a value for approximately 1,500 acres of wetlands close to the EPA’s estimated nationwide impact. That study area involved riparian corridors within Illinois and Iowa, very different from the fragmented wetland distribution pattern at issue in the proposed rule. The fact that none of the primary studies EPA relies upon value an area of wetlands as small and over a

geographic area as large as in the EPA study, suggests the value of wetland preservation resulting from the proposed rule cannot be appropriately detected by SPS methods.

Finally, by assuming all of the acres impacted due to the proposed rule are wetlands, EPA's benefits calculation fails to recognize that certain waterbodies described in the proposed rule may in fact diminish ecosystem service function, or otherwise degrade the environment. For example, some man-made drainage features (ditches) that will be claimed as jurisdictional under the proposed rule even though they actually degrade ecosystem function by draining natural hydrology from wetlands and landscapes. Such features can serve to transport sediment and pollutants to downstream waters that would otherwise be trapped or infiltrated under the natural condition. This exposes two flaws in the benefits transfer methodology: First, the method assumes that all waterbodies (regardless of size, type, location, or purpose) under the proposed rule exhibit the same positive ecological function as the wetlands valued in the cited SPS studies. Second, the method overestimates the benefits by assuming all waterbodies covered under the proposed rule equally benefit the ecosystem in which they are located. (p. 52-53)

Agency Response: See Summary Response under the current section (Topic 11.3.2 Benefits), as well as Section 9 of the Economic Analysis.

11.2.262 4.3 EPA's Methodology Double-Counts Ecosystem Service Benefits Provided by State Wetland Regulations

The ecosystem benefit analysis presumes that without adoption of the proposed rule, the benefits being provided by the wetlands at issue would be lost with no mitigation provided as compensation. This assumption does not take into consideration that some states already claim jurisdiction over the wetlands and waterbodies described by the proposed rule (EPA Study, p.3). The State of Florida, for example, claims jurisdiction over most, if not all, of the waterbodies that USACE currently does not consider jurisdictional. Consequently, in Florida, the ecosystem service benefits purportedly associated with the proposed rule are already being realized due to State mitigation requirements. The EPA economic analysis counts, but will not provide, any incremental benefit increase. Thus, the EPA Study overstates ecosystem service benefits to some degree, depending on the status of individual state claims with respect to wetland jurisdiction.

This fact is non-trivial for two reasons. First, the EPA study claims "that approximately half the states have some provisions that extend protections beyond waters of the U.S." (EPA Study, p. 4). Second, recognizing state jurisdiction and mitigation requirements clearly means the regulated community will incur the costs of obtaining the USACE permit, for no incremental benefit over what is already achieved by state regulations. This imbalance is not explicitly recognized, nor adjusted for, in the EPA Study. Rather, the EPA Study states: "[t]o the extent states have elected to [implement CWA programs more broadly], the economic impacts may be smaller than presented here" [emphasis

added] (EPA Study, p.3). The phrase “economic impacts” implies that both costs and benefits will be lower, when in fact, it is just the benefits that would be lower.

The implication of wetland protection through state-specific programs and requirements, indicates the EPA Study needs to be corrected to (as suggested in Section 3.1) to reflect the incremental acreage impacts associated with each state, instead of for the nation as a whole, and then to adjust the incremental benefits to recognize benefits that are already being achieved by state regulation. (p. 53-54)

Agency Response: See Summary Response under the current section (Topic 11.3.2 Benefits).

American Petroleum Institute (Doc. #15115)

11.2.263 3.2.1 The Agencies’ benefits for avoiding wetlands losses rely upon a problematic estimate of wetland acres and a benefits-transfer approach that fails to meet EPA’s own guidelines.

Of the annual benefits from the Proposed Rule, the Agencies attribute \$258 million to \$345 million to preserving or replacing of wetlands under CWA Section 404 (86 percent of the estimated annual benefits). In calculating these numbers, the Agencies used the following: 1) the annual incremental number of wetland acres that would be preserved or replaced by mitigation after implementing the Proposed Rule (hereafter “benefit acres”), assumed to be the same as the number of acres impacted; 2) an annual average value per acre of wetlands per household; and 3) the number of households in the U.S. We summarize the problems with the first two elements below.

3.2.1.1 Most of the inputs to the Agencies’ estimate of benefit acres are problematic.

The Economic Analysis’ annual incremental estimate of impacted wetlands in Exhibit 5 (1,332 acres) is based on the number of individual and general permits in FY 2010, the percentage annual increase in individual and general permits under the Proposed Rule, and the acreage of each type of permit in 2010. ARCADIS found the annual estimate of impacted wetlands problematic for several reasons.

First, the Agencies underestimated the impacts of current state protection, with the implicit and problematic assumption that these benefits arise only from Federal protection. The 1,332 acres of wetland losses avoided by the Proposed Rule in Exhibit 5 is likely an overestimate because many states protect natural resources that are not currently WOTUS under federal law. In those states where waters/wetlands are fully protected under state law (such as California), the proposed expansion of WOTUS will produce no benefits – i.e., the newly designated WOTUS will receive no additional effective protection beyond that which is currently in place under state law.

Second, the average acreage per individual and general permit in the Economic Analysis cannot be verified without access to the ORM2 database. If the average acreage per permit is different for projects affected by the Proposed Rule than projects in FY2010,

then the estimates in the Economic Analysis' Exhibit 5 will not reflect the actual economic impacts of the Proposed Rule. The Agencies need to provide access to the ORM2 database for transparency reasons. Increased acreage devoted to development and so needing permits means decreased benefits attributable to avoiding loss of wetlands. (p. 74-75)

Agency Response: See Summary Response under the current section (Topic 11.3.2 Benefits) and Topic 11.2 (Scope of Change of Jurisdiction). Transparency is of great importance to the Corps as it executes its regulatory mission. Much information can be found on its public webpage at <http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits.aspx>. Further, the Corps provides public access to specific data sets at <http://geo.usace.army.mil/egis/f?p=340:1:0:::> and is considering the addition of expanded data sets, in addition to those already provided. Public access to ORM2, which is the internal Corps regulatory program database, is not being considered at this time.

11.2.264 3.2.1.2 *The Agencies' estimate of benefits per acre relies upon a benefits-transfer approach that fails to meet the agency's own guidelines.*

The Economic Analysis uses a problematic benefits-transfer approach to estimate the average annual value per acre of wetlands per household. The approach used an average value from several existing wetland valuation studies to determine benefit estimates, rather than conducting an original wetland valuation study.

While the benefits-transfer approach may save time and money, it also poses disadvantages by reducing the reliability of the benefit estimates. To this end, a special section of Water Resources Research in 1992 contained eleven (11) articles that provided guidelines for conducting valid benefits transfer. Those guidelines provided the basis for EPA's Guidelines for Preparing Economic Analyses ("EPA's Guidelines"), which states that the benefits transfer approach "should only be used as a last resort and a clear justification for using this approach over conducting original valuation studies should be provided."¹⁸⁰ The Economic Analysis of the Proposed Rule provides no such justification.

Table 3-2 provides summary information on the 10 studies used by the Agencies in their benefits transfer. EPA's Guidelines identify two basic criteria for the benefits transfer approach: applicability and quality.¹⁸¹ The applicability criterion ensures that values from the case studies are relevant for the policy cases. It focuses on the similarity of existing valuation studies (known as study cases) and the policy case with respect to: 1) environmental commodity being valued (including scale and presence of substitutes); 2)

¹⁸⁰ EPA and the Corps 2014, p. 7-45

¹⁸¹ EPA and the Corps 2014, p. 7-46.

baseline and extent of environmental changes; and 3) characteristics of affected populations.¹⁸²

Authors (Publication Year)	State	Publication Type	Survey Year*	Survey Mode	Target Population	Response Rate	Non-Response Analysis?	Number of Respondents	Commodity Being Valued	Non-Jurisdictional Wetlands Focus?	Acres	Valuation Approach	Type of Value	Payment Frequency	Payment Vehicle	Payment Elicitation Method
Azevedo, Heriges, and King (2000)	IA	Report	1998	Mail	Mix of General Population and Hunters/Anglers	88%	NO	2,094	Purchase riverine wetlands; generic, but focused on the Iowa River Corridor Project	NO	7,000	Contingent Valuation	Mix of Use and Non use	One Time	Trust Fund cont.	Single-bounded Dichotomous Choice
						57%	NO	1,045	Purchase prairie pothole wetlands; generic - no specific sites, but focused on the Prairie Pothole Joint Venture	YES	2,500 per year for 15 years					
Bloomquist and Whitehead (1998)	KY, IN, TN, IL, & MO	Journal Article	1990	Telephone, then Mail	Households in KY and Some Nearby Cities in Other States	51% (67% times 75%)	NO	379	Preserve four types of wetlands that would be lost due to coal mining: "persistent emergent wetlands," temporarily flooded bottomland hardwood forests, seasonally flooded bottomland hardwood forests, and permanently flooded hardwood forests (i.e., Cypress swamps); fish in all four wetlands; increasing amounts of other wildlife as quality improves	NO (mostly)	500	Contingent Valuation	Mix of Use and Non use	Annual - Unspecified Duration	Trust Fund cont.	Mix of Single-bounded Dichotomous Choice & Polychotomous Probabilistic Choice
Dilmen, Beran, and Hook (1993)	SC	Report	1992	Mail	South Carolina households	21%	NO	627	Purchase of wetlands having different functional characteristics to be added to a South Carolina wetland preserve (Francis Beidler Forest)	NO	2,500	Contingent Valuation	Mix of Use and Non use	One Time	Trust Fund cont.	Dichotomous Choice
Dilmen, Beran, and Hook (1993)	SC	Report	1992	Mail	South Carolina households	21%	NO	627	Purchase of wetlands having different functional characteristics to be added to a South Carolina wetland preserve (Francis Beidler Forest)	NO	2,500	Contingent Valuation	Mix of Use and Non use	One Time	Trust Fund cont.	Dichotomous Choice
Johnson and Linder (1986)	SD	Journal Article	1983	Mail	1982 licensed resident hunters in South Dakota	61%	NO	1,053	Hunting on mix of public and private wetlands, including waterfowl production areas, wildlife production areas, meandering lakes, and portions of National Wildlife Refuges	Partial (isolated private wetlands)	529,000	Contingent Valuation	Use	One Time	Increase in hunting costs	Payment Card
Lent and Tobin (1989)	IA & IL	Journal Article	1989 (pub. year)	In person interviews	Illinois and Iowa residents	100% (only in person interviews recorded)	NO	35	Increase "poor" river quality in Edwards River basin (few riparian wetlands & 50% of river channelized) to "good" river quality in South Skunk River basin (intermittent riparian forests & 15% of river channelized)	NO	1,406	Contingent Valuation	Mix of Use and Non use	Unspecified	Increase in sales tax	Payment Card
									Increase "good" river quality in South Skunk River basin (intermittent riparian forests & 15% of river channelized) to "excellent" river quality in Wapipinicon River basin (substantial riparian forests and swamps with 0% of river channelized)	Possibly Partial	1,653	Contingent Valuation				

¹⁸² EPA and the Corps 2014, p. 7-46.

Authors (Publication Year)	State	Publication Type	Survey Year*	Survey Mode	Target Population	Response Rate	Non-Response Analysis?	Number of Respondents	Commodity Being Valued	Non-Jurisdictional Wetlands Focus?	Acres	Valuation Approach	Type of Value	Payment Frequency	Payment Vehicle	Payment Elicitation Method
Loomis, et al. (1991)	CA	Book Chapter	1991 (pub. year)	Mail followed by telephone interview	General population households in CA - San Joaquin Valley and rest of CA	51%	NO	803	Maintain a mix of seasonal and permanent wetlands on 85,000 acres in San Joaquin Valley	Partial (isolated wetlands)	85,000	Contingent Valuation	Mix of Use and Non use	Annual - Unspecified Duration	Tax	Double-bounded Dichotomous Choice & Referendum
								803	Acquire 40,000 acres of seasonal and permanent wetlands in San Joaquin Valley, bringing total wetlands acreage to 125,000 acres	Partial	125,000	Contingent Valuation				
Mullerkey and Bishop (1999)	WI	Presentation	1999 (pub. year)	Mail	Wisconsin residents	60%	NO	239	Preserve 47 acres of tributary system wetlands and 53 acres of isolated wetlands; no threatened or endangered species in wetlands; wetlands are "poor quality" next to a highway	Partial	110	Contingent Valuation	Mix of Use and Non use	Annual - Unspecified Duration	State income tax	Multi-bounded Polychotomous Choice
Poor (1999)	NE	Journal Article	1995	Mail	Nebraska households	48%	No	952	Increase acreage of Rainwater Basin wetlands, internationally recognized as important waterfowl habitat for migrating birds; location of wetlands on the Central Flyway makes them a highly valuable and unique wetlands complex.	NO (mostly)	41,000	Contingent Valuation	Mix of Use and Non use	Annual - Unspecified Duration	Tax	Double-bounded Dichotomous Choice
Roberts and Letch (1997)	MN/SD	Report	1995?	Mail	Households within 30 mile radius of Mud Lake	62%	Non-response bias was tested by comparing willingness-to-pay for use, option, and existence values among mailings	575	LaSalle wetland of Mud Lake and associated palustrine wetlands, some of which are permanently, semi-permanently, or seasonally flooded. Historically this area was prime hunting and fishing. Due to flood mitigation the lake is no longer as productive and no longer a destination for hunting and fishing.	Partial	5,000	Contingent Valuation	Mix of Use and Non use	Annual - Unspecified Duration	Voluntary donation	Payment Card
Whitehead & Bloomquist (1991)	KY	Journal Article	1989	Phone and Mail	Households in KY	31%	No	215	Preserve high-quality Clear Creek bottomland hardwood forest wetlands that would be lost to coal mining; several threatened & endangered species found in wetlands; largest wetland in western KY; part of Wildlife Management Area	NO (mostly)	5,000	Contingent Valuation	Mix of Use and Non use	Annual - Unspecified Duration	Trust Fund cont.	Single-bounded Dichotomous Choice

Table 3-2 Summary Information on the 10 Wetland Valuation Studies in the Agencies' Economic Analysis

In analyzing applicability, the Proposed Rule focuses on “isolated waters” that are not currently WOTUS. However, several of the 10 studies address WOTUS. For example, Dillman, Beran, and Hook (1993) focus on wetlands to be added to an existing wetland preserve. Lant and Tobin (1989) focus on riparian wetlands and forests in a river basin. These wetlands are WOTUS. Similarly, the wetlands valued in Bloomquist and Whitehead (1998) and Whitehead and Bloomquist (1991) are mostly WOTUS. The remaining 6 valuation studies include a mixture of WOTUS and non-WOTUS. If WOTUS, as defined under current guidance, provide more services and/or higher quality services than non-WOTUS, the former would presumably have higher value to the public

than the latter in a scenario where other things were equal. Consequently, it is likely that the 10 studies are overstating the value of the wetlands potentially affected by the Proposed Rule.

Additionally, the 10 valuation studies provide values for wetlands in just 12 states – less than one-quarter ($\frac{1}{4}$) of all states. As shown in Table 3-3, no wetlands values exist for states in 3 regions and there are wetlands for just 1 state in each of the 4 other regions containing between three and five states. In effect, the Economic Analysis is applying wetland values for the Midwest and Prairie Pothole regions to the remainder of the U.S. The number of substitutes is likely to differ in those regions, and that would also affect the public's value for wetlands. Similarly, the characteristics of affected populations (e.g., average household income and preferences toward environmental goods) are likely to differ in the Midwest and Prairie Potholes regions compared to other regions in the country. Other things being equal, people with higher incomes might be expected to set higher values for wetland services than people with lower incomes; however, the value of wetlands per household acre is also expected to vary by regional use. The Economic Analysis ignores regional differences in wetland values and assumes that all regions value wetlands the same – which is not realistic or appropriate.

Region	States in Region ⁴⁵	No. of States	No. of States in Valuation Studies	Percent
Central Plains	KS, NE, & OK	3	1	33%
Delta & Gulf	AR, LA, MS, TN, & TX	5	1	20%
Mountain	AZ, CO, ID, NM, NV, UT, & WY	7	0	0%
Midwest	IL, IN, KY, MI, MN, MO, OH, & WI	8	6	75%
Northeast	CT, DE, MA, MD, ME, NH, NJ, NY, PA, RI, VT, & WV	12	0	0%
Pacific	CA, OR, & WA	3	1	33%
Prairie Potholes	IA, MT, ND, & SD	4	2	50%
Southeast	AL, FL, GA, NC, SC, & VA	6	1	17%
Other	AK & HI	2	0	0%
TOTAL		50	12	24%

Table 3-3 Comparison of States in Valuation Studies to States in Regions in Economic Analysis of the Proposed Rule

In short, these studies are not applicable for two reasons. First, the environmental commodity being valued in the 10 studies is not applicable to the newly designated WOTUS under the Proposed Rule. Additionally, the assumption that all regions in the U.S. have the same value for the newly designated WOTUS is not realistic or appropriate.

The second criterion addresses the quality of the valuation studies because the “quality of value estimates in the study cases will in large part determine the quality of the benefit transfer.”¹⁸³ The quality criterion considers factors including: 1) the design of the valuation studies; 2) survey of development and structure; 3) sampling approach; 4) value

¹⁸³ EPA and the Corps 2014, p. 7-46.

elicitation question; 5) data processing of survey responses; and methodology for analyzing the responses to the valuation questions.

In addition to failing the applicability criterion, the 10 wetland valuation studies are also problematic for the quality criterion in several ways.

First, the response rates for 9 of the studies varied from 31 percent to 62 percent. Such low response rates may produce substantial non-response biases, which could vary greatly over the 10 studies. Although EPA's Guidelines describe two methods to evaluate potential non-response biases,¹⁸⁴ the 10 studies do not mention the use of either method to test for non-response bias.

Second, the 10 studies all use the contingent valuation method (CVM) to estimate the public's value for wetland services. Responses to CVM questions may suffer from hypothetical biases – which are especially likely when respondents are asked to value commodities that are not well known or understood by the general public (e.g., wetlands). While EPA's Guidelines describe several tests for such biases,¹⁸⁵ none of the 10 studies indicate that they implemented and passed such tests.

In addition to hypothetical biases, CVM responses can exhibit other types of bias. These include, but are not limited to the following:

- Strategic responses – responses intended to influence the “policy” associated with the environmental commodity rather than reflect the respondent's willingness to pay for the commodity;
- Protest responses – responses based on a rejection of the valuation scenario or payment vehicle for the environmental commodity (e.g., increased taxes);
- Yea saying – the tendency for respondents in personal interviews to accept the valuation scenario in an attempt to please the interviewer;
- Anchoring bias – the tendency for respondents to state a value influenced by a value provided in the valuation scenario; and
- “Warm glow” responses – a value provided by respondents that reflects their enjoyment of supporting a worthy cause rather than their value for the environmental commodity.

Due to significant controversies about these and other biases in CVM responses, the National Oceanic and Atmospheric Administration (NOAA) formed a Blue Ribbon Panel in the early 1990s to develop guidelines on the use of the methodology. The Panel issued its guidelines in early 1993,¹⁸⁶ indicating that no CVM studies up to that point met its

¹⁸⁴ See p. 7-43, and 7-44.

¹⁸⁵ See p. 7-41 to 7-43.

¹⁸⁶ 58 Federal Register 4,601 (January 15, 1993).

guidelines. Six of the 10 valuation studies in the Economic Analysis for the Proposed Rule were implemented prior to the issuance to the Panel’s guidelines and do not meet them. Thus, it is very unlikely that the 10 valuation studies produce valid results for wetlands.

Additional problems with the benefits transfer of the 10 studies include:

- The 10 studies also have different payment frequencies and payment vehicles (e.g., trust fund donation, sales tax, and income tax). Past research has shown that these factors influence valuation responses. It is unlikely that the mix of payment frequencies and payment vehicles reflected in the 10 studies produces a valid estimate of wetland values for the Proposed Rule.
- Only 5 of the 10 studies are peer-reviewed journal articles (a well-known indicator of high-quality studies). The other studies include 1 book chapter, 3 reports, and 1 presentation. These “studies” may lack any peer review or may have minimal peer-review – the extent of peer review for 5 of the 10 valuation studies is simply unknown.
- The value in one of the 10 studies is clearly an outlier. Specifically, the Mularkey and Bishop (1999) value per acre per household is more than 100 times the geomean value per acre per household for the 10 studies. Removing that one study reduces the geomean value per acre per household by 40 percent for both discount rates. In other words, removing the 1 outlier value for the 10 studies would lower the Agencies’ benefit estimate for avoiding the loss of wetland acres by more than \$100 million.

In conclusion, the Economic Analysis produces an overstatement of the benefits per acre of protecting wetlands for three important reasons:

1. Most of the valuation studies involve WOTUS, which produce more services and presumably have a higher value than non-WOTUS, the focus of the Proposed Rule.
2. Many studies have demonstrated that CVM methodology produces inflated values for environmental commodities that are not well known or understood by the public, such as wetlands.
3. One of the 10 valuation studies has a value that is more than 100 times the average value for all 10 studies – removing that one study decreases the average value by 40 percent.

Given all the issues discussed above, **the Agencies’ benefits estimates for preserved/mitigated wetlands are not appropriate for use in this evaluation. The Agencies should perform an updated benefits evaluation taking all these concerns into consideration. Without these revisions, the cost-benefit analysis performed is of little value.** (p. 75-82)

Agency Response: See Summary Response under the current section (Topic 11.3.2 Benefits)

Western Landowners Alliance (Doc. #16553)

11.2.265 **2. Illustrate Benefits to Agriculture** - There have been some strong concerns expressed about this proposal from some segments of the agricultural community, despite the broad exemptions granted to agriculture in the CWA. These perspectives would benefit from illustration of the number and effect on downstream waters of CWA-related actions. Many 404 permit actions related to development, oil and gas, and CAFO activities benefit downstream water quality, water supplies, and stream health. Broader and more specific examples of these benefits would be beneficial to the dialogue on this proposal. (p. 3)

Agency Response: See Summary Response under the current section (Topic 11.3.2 Benefits) and Section 9 of the final rule EA.

11.4. OTHER CWA PROGRAMS

Agency Summary Response

Several commenters asked the agencies to carefully consider costs to Clean Water Act (CWA) programs other than Section 404 dredge and fill permitting, including 303, 305, 401, and 402. The agencies did indeed address these other programs in the economic analysis (EA) accompanying the proposed rule, and has carefully reconsidered potential impacts to all these programs for the EA accompanying the final rule. Some commenters believed that there would be costs to states to administer the Section 303(c) water quality standards program because states would need to develop new standards for the new categories of waters becoming jurisdictional as a result of the rule. The agencies stand by the assertion that states should not incur these costs because states already have standards in place for streams (often multiple types of streams) and wetlands. Under current practice, the agencies already assert jurisdiction over most waters in the categories at issue for this rule, so it is more a matter of whether or not the standards in place apply to a particular water or not. The agencies also point out that prior to the 2001 *SWANCC* and 2006 *Rapanos* Supreme Court cases addressing CWA jurisdiction, by and large the same water quality standards were in place to cover all waters at issue for this rule.

Some commenters also suggested that it is wrong for the agencies to assume states would not incur more costs to monitor the increased number of waters where the agencies would assert jurisdiction under the proposed rule. The agencies do not anticipate nor expect that states will significantly alter their monitoring expenditures or strategies as a result of this final rule. In the unlikely case that a state does alter its monitoring to include, for example, more ephemeral streams or remote wetlands with a significant nexus to navigable waters, and less monitoring at other sites, the agencies acknowledge that there would be opportunity costs associated with such a shift.

Commenters similarly suggested that the agencies did not consider potential costs to wastewater

discharge permit holders carefully enough. The agencies stand by the logic behind the assertion that current permit holders have not let their permits lapse because of assumed non-jurisdiction after the Supreme Court cases addressing CWA jurisdiction. The agencies did not receive any comment with evidence to the contrary.

Some commenters suggested that costs associated with Section 311 SPCC plans would affect a great many local entities and the costs would be greater than estimated. The agencies acknowledge the uncertainty behind the estimate of the number of entities affected, but unfortunately do not have a reliable census of the specific number of facilities without SPCC plans that would now need them. The agencies relied on unit cost information from previous rule-making efforts and was not presented a compelling reason to suggest they were no longer accurate. Some commenters believed the benefits assessment for Section 311 was wholly speculative and lacked a basis for key assumptions. In particular, some commenters believed that it was wrong to assume a facility was doing nothing to prevent an oil spill just because they may believe they are not subject to Section 311 requirements. The agencies believe there are strong benefits associated with Section 311 programs, yet acknowledge the difficulty in quantifying them using the methodology presented in the EA accompanying the proposed rule. As such, the agencies opted to omit this quantified benefits category and leave them unquantified for the EA accompanying the final rule.

Some commenters believed that there would be additional costs associated with implementing the MS4 portion of the Section 402 program and other Phase I stormwater controls. Examples of these costs include additional treatment cost of stormwater conveyances to meet numeric nutrient criteria, and enforcement fines and penalties and opportunity costs of maintenance projects delayed that would require additional permitting. The agencies continue to believe that the stormwater program implementation related efforts will not be greatly affected by the final rule because of their location and the area-wide scope of implementing BMPs. Commenters are referred to EA document for a further discussion and response. Commenters also questioned the validity of the approach taken to quantify costs and benefits to certain 402 programs. The agencies continue to assert it is reasonable to rely on the estimates of change in jurisdictional determinations related to 404 activity as a starting point, and to rely on previous efforts to quantify costs and benefits undertaken for other rulemaking. Construction-related stormwater discharges, CAFO discharges, and permit application of pesticides are more likely to occur in similar locations as CWA Section 404 dredge and fill discharge with respect to proximity to “isolated waters”, small streams, and their adjacent wetlands. Additionally, in an effort to accurately estimate the potential increase in permit costs, when applying the estimated increase in jurisdictional waters as a proxy for an increase in Clean Water Act permits, the agencies examine each respective program to adjust for growth or shrinkage since the original regulatory impact analysis was completed.

Some commenters said the agencies analysis of Section 401 implementation costs did not account for cost to industry to obtain certification or the cost of delays. The agencies acknowledge that the cost of delay was not addressed, yet are unable to provide an estimate. The agencies assume that industry does not incur separate costs to obtain certification apart from the permit costs already accounted for.

A commenter suggested that the 1994 to 2011 time period used for estimating growth in 402 stormwater permit activity were not an accurate representation, referring to them both as

recession years. The agencies acknowledge that there are fluctuations in annual levels of construction activity; however, the economy was not in recession in either 1994 or 2011 and the agencies consider the estimates from these years to be reasonably representative. Some commenters suggested the data set used for estimating 402 stormwater permit costs was too limited. They suggested using a data set covering more years to estimate activity levels and more recent data to estimate unit costs. The agencies acknowledge that the commenter's suggestions are a reasonable approach to estimating costs. However, the agencies consider the cost estimates from the Economic Analysis of Final Phase II Storm Water Rule to be appropriate, and they have the added advantage of the benefits estimates for the same set of activity.

A commenter pointed out that although the number of CAFOs has declined the average size of CAFOs has become larger, and that the 49 percent reduction made for the EA may have over compensated and the estimate may not be accurately reflecting the impact to the industry. The agencies acknowledge that as the number of CAFOs declined the average size of the CAFOs, in terms of animal units, may have increased. This would not necessarily lead to an under representation of the number of permitted CAFOs affected by the rule, but possibly an under representation of the number of acres impacted. The under representation of area would be difficult to estimate because a CAFO may have increased in average size with regards to animal units, since they are by definition concentrated in a small area. Therefore, without knowing if there was a change in animal density, the increase in average animal units cannot be translated directly into area and waters impacted. Furthermore, a primary reason that CAFOs have become larger is to capture economies of scale and presumably these economies of scale would apply to compliance costs as well. Not taking into account the economies of scale for larger CAFOs to some extent makes the cost estimates from the CAFO rule conservative.

See sections 5-8 of the EA for the Final Rule for a discussion of the costs and benefits of non-404 CWA programs.

Specific Comments

Tennessee Valley Association (Doc. #17470)

11.2.266 III. Issues of Concern - Consequences and Financial Impacts

a. Projected Consequences of the Rule - General Concerns

TVA has concerns about how the Proposal and the associated regulatory requirements will be applied and interpreted in the context of Clean Water Act programs other than Section 404. In amending the definition of "navigable waters" to expressly include "waters of the United States, including territorial seas" in conjunction with the expanded definition of WOTUS, the proposal will impact many specific programs and would change the definition for all sections of the CWA. Nevertheless, the Proposal and supporting economic analysis focuses primarily on the 5404 permit program and fails to give consideration to the effects the change will have on other CWA programs. There is inadequate consideration as to how the Proposal will affect non-404 Clean Water Act programs (i.e. prohibition of discharges of pollutants (§ 301), permitting requirements for point source discharges (5402), water quality standards and measures to attain them (§303), oil spill prevention and control (531 I), state certifications (5401), and

enforcement (5309)). This is a major concern, especially from the standpoint of economic impacts to both state regulators and the regulated public. In the case of TVA, we have strong reservations about how these non-404 program changes may hinder our ability to operate and maintain 13,000 miles of transmission lines and 75 electric power generating facilities. (p. 4)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

The United States Conference of Mayors, et al. (Doc. #15784)

11.2.267 3. The Economic Analysis of Proposed Revised Definition of Waters of the U.S. is flawed because it does not include a full analysis of the proposed rule's impact on all CWA programs beyond the 404 program (including the National Pollutant Discharge Elimination System (NPDES), total maximum daily load (TMDL) and other water quality standards programs, state water quality certification process, and Spill Prevention, Control and Countermeasure (SPCC) programs). Since of number of these CWA programs directly affect state and local governments, it is imperative the analysis provide a more comprehensive review of the actual costs and consequences of the proposed rule on these programs. (p. 3)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4 and the summary responses for Topic 11.3.1 (Costs) and Topic 7.

11.2.268 Perform a thorough economic analysis inclusive of an examination of impacts of the proposed rule on all CWA programs using deeper and more relevant data. We urge the agencies to interact with issue-specific national associations to collect these data sets. (p. 4)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topic 11.3.1 (Costs). The agencies believe sufficient data were available to present a credible analysis.

Greater Houston Partnership (Doc. #14726)

11.2.269 Underestimated Implementation Costs

Estimated implementation costs don't appear to include costs associated with changes to CWA Section 303- Water Quality Standards, CWA Section 311- Oil Spill Prevention, CWA Section 401- Water Quality Certifications, and CWA Section 402- National Pollutant Discharge Elimination System. GHP urges EPA to update the economic analysis of the rule to include these other costs. (p. 4)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4 and see Sections 5-8 of the Economic Analysis.

Water Advocacy Coalition (Doc. #17921.15)

11.2.270 **B. OTHER (NON-404) PROGRAMS**

EPA calculated costs associated with other CWA programs by adopting previous estimates and accounting for growth in jurisdictional waters and changes in program size. The cost analysis of other CWA programs is simplistic and relies on the same 2.7% acreage increase figure derived for section 404. This is especially problematic given the errors associated with the derivation of this estimate. Unsubstantiated assumptions from the incremental acreage calculations are revisited and recycled in subsequent sections to generate other cost estimates. Some of these errors could be avoided through a careful assessment of program-specific effects. Unfortunately, the EPA analysis falls short in this regard.

In its sensitivity analysis regarding the incremental acreage estimate, EPA recalculates costs and benefits under the alternative assumptions for project files related to other waters. Depending on the scenario, upper or lower bound designation, and type of doubling, they acknowledge costs could be as high as \$422 million (compared to its working upper-bound estimate of \$231 million). EPA's most-likely alternative estimate is that costs could be \$278 million, a 20% increase from current estimates. The variation between these values reveals how relatively small changes in the assumptions used to generate incremental acreages can have substantial impacts on the cost estimates. Since the validity of these assumptions is highly suspect, it becomes clear that the EPA analysis is entirely insufficient at predicting the costs associated with a "waters of the United States" definition change.

EPA explicitly omits costs to some programs that may be affected due to lack of data. EPA asserts that other programs are likely to be "cost-neutral or minimal" without providing an analysis to support this conclusion. Specifically, EPA states that a definitional change will have little to no effect on section 303 (state water quality standards and implementation plans) and section 402 (National Pollutant Discharge Elimination System (NPDES) permitting). These are bold claims that should be substantiated with a thorough analysis. (p. 70)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topic 11.2 (Scope of Change of Jurisdiction).

11.2.271 **B. OTHER (NON-404) PROGRAMS**

Much like its cost estimates, EPA calculates benefits to other CWA programs by scaling up previous estimates according to the growth in jurisdictional waters and program size. Incremental benefits associated with section 402 stormwater permitting are estimated to

be between \$25.4 and \$32.3 million per year. This is based on programmatic growth of 30% and a jurisdictional expansion of 2.7% from original 1998 estimates.¹⁸⁷

Incremental benefits from additional section 402 CAFO permitting range from \$3.4 to \$5.9 million per year, and are based on a 50% contraction in program size from 2001 estimates.¹⁸⁸ These estimates reflect benefits to large CAFOs, which comprise 85% of the operator costs and 66% of the administrative costs. Incremental benefits associated with section 311 (oil spill prevention plans) are calculated by summing expected annual benefits of \$14,255 per spill over 1,000 non-complying facilities.¹⁸⁹ This calculation yields annual benefits of approximately \$14.3 million.

The EPA analysis does not quantify benefits derived from expanded state certification of waters (section 401). It recognizes the lack of uniformity in section 401 implementation across states, and suggests: “[t]o the extent that states condition permits, added costs to permittees and environmental benefits associated with compensatory mitigation would be accounted for in the methodology for assessing those incremental impacts: they would accrue to the same extent as represented in the baseline.”

Benefits to some programs that may be affected are explicitly omitted due to lack of data. EPA suggests there may be “across the board” savings in program enforcement related to increased clarity in the CWA. While there may be some legitimacy to this claim, it remains unquantified and thus plays little value in the economic analysis. Whatever enforcement benefits are realized may be offset by programmatic changes that expand permitting and administrative requirements. A summary of costs and benefits associated with a change in the “waters of the United States” definition are provided in Table 7.

¹⁸⁷ See footnote 14.

¹⁸⁸ See footnote 15.

¹⁸⁹ Average spill volume of 1,290 gallons (2000-2005 National Response Center data) multiplied by average clean-up costs of \$221/gallon, assuming a 1/20 chance of a spill.

Table 7: Summary of Costs and Benefits (2010\$ millions)

Program	Costs		Benefits	
	low	high	low	high
\$404 Mitigation- Streams ²	\$8.7	\$13.0		
\$404 Mitigation- Wetlands	\$51.0	\$100.5	\$257.6	\$345.1
\$404 Permit Application ³	\$19.7	\$52.9		
\$404 Administration	\$7.4	\$11.2		
\$401 Administration ⁴		\$0.7		
\$402 Construction Stormwater	\$25.6	\$31.9	\$25.4	\$32.3
\$402 Stormwater Administration		\$0.2		
\$402 CAFO Implementation ⁵		\$5.5	\$3.4	\$5.9
\$402 CAFO Administration		\$0.2		
\$402 Pesticide General Permit ⁶	\$2.9	\$3.8		
\$311 Implementation		\$11.7		\$14.3
Total	\$133.7	\$231.0	\$300.7	\$397.6

Notes (from EPA documents):

- 1 \$303 impacts are assumed to be cost-neutral; \$402 impacts are components of costs and benefits previously identified for past actions, not new costs and benefits associated with this proposed rule
- 2 Benefits of stream mitigation are not quantified
- 3 Costs of potential delayed permit issuance and costs and benefits of avoidance/minimization are not quantified, nor are any benefits from reduced uncertainty
- 4 Costs to permittees and benefits of any additional requirements as a result of \$401 certification are reflected in the mitigation estimates to the extent additional mitigation is the result, yet not calculated to the extent avoidance/minimization is the result.
- 5 Benefits apply to large CAFOs only, which account for 85% of implementation costs and 66% of administrative costs
- 6 PGP benefits and government administrative costs are not available

Table 7: Summary of Costs and Benefits (2010\$ millions)

(p. 79-80)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topic 11.3.1 (Costs).

Lydig Construction Inc. (Doc. #14147)

11.2.272 Additionally, EPA's economic analysis seriously underestimates impacted acreage and completely ignores impacts to non-404 programs. Recognizing that state and local governments are managing water resources that are not under federal control, it is unclear why the agencies rushed through these and other important procedural steps designed to ensure that businesses like mine are protected. (p. 2)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topic 11.2 (Scope of Change of Jurisdiction). The agencies carefully considered costs to states, local governments, and businesses.

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

11.2.273 In reality, what certainty is being provided comes at a high price - most landowners can be almost certain any feature that captures rain during rain events will fall under federal jurisdiction, no matter how fleeting, and they can be certain that the permitting process will be long, expensive and burdensome. If a landowner is fortunate enough to have any remaining doubt about certain features, the jurisdictional determination process to gain the benefit of any of vague exemptions will be slowed even beyond what is experienced today. There is no indication that the Corps has the resources to handle the fallout from this proposed rule. Moreover, the expansion of jurisdiction under the proposed rule would also impose significant additional burdens on states, which will see their costs associated with implementation of various CWA programs - including programs under Sections 303(d) and 402 - increase even though the states have had limited input regarding the proposed rule. (p. 10)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topics 11.2, 11.3.1, 11.3.2, and 14.

Along with a narrowing of jurisdiction, the final rule also significantly reduces the uncertainty and number of case-specific determinations that will required, reducing state and federal workload associated with jurisdictional determinations.

Illinois Coal Association (Doc. #15517)

11.2.274 But the implications go well beyond 404 permitting alone. For one, bringing these features within CWA jurisdiction would, pursuant to section 301 of the Act, force states to devote limited resources toward the development and enforcement of water quality standards for these man-made and, in many cases, temporary water features. Equally absurd would be the significant amount of Company resources required to comply with these "ditchwater" standards. At the same time, the Proposal's broad definitions of the terms "tributary," "neighboring" and "significant nexus" would multiply the number of regulated outfalls under CWA section 402 at large mine sites. This would significantly increase 402 compliance costs, particularly when viewed in light of the additional requirements under EPA's currently proposed 2013 MultiSector General Permit for stormwater discharges (which serves as a model for corresponding permits in delegated states). (p. 11-12)

Agency Response: The final rule is narrower in scope than the existing regulations and historical practice. Please refer to the summary responses provided at the beginning of section 11.4 and Topics 14 and 7.

Family Farm Alliance (Doc. #1431)

11.2.275 Although the EPA's Economic Analysis purports to analyze the costs of overlaying this new "waters of the United States" definition onto other CWA programs, the analysis largely focuses on the section 404 program and essentially concludes that there will be no additional costs for other CWA programs. This cursory analysis is seems

inadequate. The agencies have not considered, for example, that many stormwater ditches and features may now meet the definition of "waters of the United States," thereby requiring the features to achieve water quality standards, including numeric effluent limitations. The agencies have not looked at how this type of change may create confusion over whether an NDPES permit is required for certain features or may place an increased burden on states administering stormwater programs and setting water quality standards. The EPA and the Corps have not truly considered how the proposed rule may affect the states implementing the various CWA programs or the stakeholders regulated by these programs. Nor have the agencies analyzed how the proposed definition of "waters of the United States" will affect their own administration of each of the CWA regulatory programs. (p. 3)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topics 11.2, 11.3.1, 11.3.2, 7 and Topic 14.

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

11.2.276 Beyond Section 404 permitting, the Proposed Rule would also impose significant costs associated with compliance obligations under multiple CWA programs that rely on the definition of Waters of the U.S. For example, CWA Section 311 relates to the spill of petroleum products to Waters of the U.S., and requires development of a formal Spill Prevention Control and Countermeasure (SPCC) plan for operations that utilize petroleum products above a certain threshold. The SPCC plan has a particular set of requirements and is subject to federal audit. However, cooperatives, whether or not they meet the threshold to require an SPCC plan, incorporate best management practices into their operations to minimize or eliminate costly petroleum spills, making an SPCC plan redundant and unnecessary. This expansion would apply equally to CWA Sections 303 (impaired waters) and 402 (stormwater discharges), all at an additional expense cooperatives. (p. 8)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topic 11.2, 7 and Topic 14.

11.4.1. 303 and 305

Agency Summary Response

Please refer to the summary response provided at the beginning of section 11.4.

Specific Comments

Wyoming Association of Conservation Districts (Doc. #14068)

11.2.277 (...) Further, the cost analysis discussion as it relates to sections 303 and 305 in essence claims that since states typically incorporate what may have been non-

jurisdictional into their water quality standards, water quality assessment reports and TMDL/watershed programs, the rule would essentially have no impact.

While the Association concurs that the state and local governments do address water quality efforts within their local watershed(s) on what would arguably be considered non-jurisdictional waters, this currently is a matter of practice due to EPA's expectations. There are a number of waters being addressed within these programmatic processes that the Association would argue are non-jurisdictional.

The Association believes the cost analysis fails to recognize the significant cost savings to the federal, state and local governments should those waters appropriately non-jurisdictional be left to state and local government entities to address. For example, as indicated earlier, due to EPA requirements the state currently spends on average \$150,000 per TMDL. Many of these would encompass waters that the Association believes would fall outside EPA jurisdiction and therefore may not require the costly and expensive processes. Yet all of these tributaries are evaluated and best management practices are implemented locally at a much more efficient rate. (p. 7)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4. The agencies did not consider potential impacts of cost savings of relying solely on state and local authorities because that was not proposed.

11.4.1.1 Costs

Agency Summary Response

Please refer to the summary response provided at the beginning of section 11.4.

Specific Comments

Arizona Department of Environmental Quality, et al. (Doc. #15096)

11.2.278 **D. Expansion of the Scope of State Regulatory Programs**

Another consequence of the proposed rule that the Agencies have overlooked is the impact on States' water quality standards programs. Like the impacts on permitting programs, the economic analysis accompanying the rule asserts, without analysis, that impacts on water quality programs implementing Section 303 of the Act will be minimal.

Currently, not all States include ephemeral waters in their regulatory programs. In comments on the 2011 guidance, Kansas noted that expanding federal jurisdiction to include ephemeral water would bring approximately 100,000 miles of dry erosion features into their State clean water act program, and Kansas would then be compelled to assign water quality standards and develop total maximum daily loads (TMDLs) for "what amounts to surface depressions that function only during sufficient

precipitation.”¹⁹⁰ After an extensive stakeholder process, the State of Missouri recently adopted changes to its stream classification program, expanding it to include all streams represented in the 1:100,000 scale of the USGS National Hydrology Dataset.¹⁹¹ The decision to exclude default classification of smaller streams (those represented at the 1:24,000 scale) was based on an evaluation of the aquatic resources of the state.¹⁹²

This increase is not limited to Kansas and Missouri. Indeed, it would be similar in most States. States are required under Section 305(b) of the Act to submit to EPA a description of the water quality of all federal waters within their borders. The most recent State reports can be found on the EPA’s website.¹⁹³ Comparing the “waters of the United States” reported by States to recent USGS maps released by EPA shows a 131% increase in federal waters.

The Agencies have failed to quantify the burden on State regulators from this increased federal jurisdiction. EPA’s ATTAINS database that tracks TMDL development reports a total of 3,533,205 river and stream miles in the United States based on data reported by States using the National Hydrography Dataset (NHD). The NHD is a database that interconnects and uniquely identifies the millions of stream segments or reaches that comprise the Nation’s surface water drainage system and is based on the USGS 1988 1:100,000-scale Digital Line Graph (DLG) hydrography dataset integrated with reach-related information from the USEPA Reach File Version 3.0-Alpha release (RF3-Alpha).¹⁹⁴

According to EPA’s report on “The Ecological and Hydrological Significance of Ephemeral and Intermittent Streams in the Arid and Semi-arid American Southwest” (EPA/600/R-08/134) (Nov. 2008), even the high resolution NHD “may grossly underestimate the number and length of drainage networks,” i.e., ephemeral streams. (“Heine et al. (2004) reported that USGS 1:24,000-scale maps under-represented drainage networks by 64.6 percent in a study in Kansas”).

EPA’s currently approved Information Collection Request (ICR) (EPA ICR No. 1560.10, Nov. 2011) for both water quality reporting and TMDL development activities estimate the cost to States for those programs at \$193,568,080 a year. Of that amount, \$21,390,991

¹⁹⁰ July 14, 2011 Comments of the State of Kansas on EPA and Army Corps of Engineers Guidance Regarding the Identification of Waters Protected by the Clean Water Act.

¹⁹¹ See 10 CSR 20-7.031(2)(A) (adopting fishable, swimmable standards for: “1. All perennial rivers and streams; 2. All streams with permanent pools; 3. All rivers and streams included within the 1:100,000 scale National Hydrography Dataset (NHD) described in subsection (1)(R) of this rule.”). This decision expanded the miles of classified streams in Missouri from 25,025 to a total of 109,870. Missouri Department of Natural Resources, Regulatory Impact Report, In Preparation for Proposing, An Amendment to 10 CSR 20- 7.031, Missouri Water Quality Standards (June 3, 2011), at 26.

¹⁹² Missouri Department of Natural Resources, Regulatory Impact Report, In Preparation for Proposing, An Amendment to 10 CSR 20- 7.031, Missouri Water Quality Standards (June 3, 2011), at 35.

¹⁹³ http://water.epa.gov/lawsregs/guidance/cwa/305b/upload/2000_06_28_305b_98report_appenda.pdf

¹⁹⁴ EPA’s ATTAINS database also reports a total of 107,700,000 wetlands acres.

is for assessment activities. The remaining costs of \$172,267,089 are for TMDL development and EPA assumes 4000 TMDLs a year, averaging \$43,000 per TMDL.

If a final rule includes all ephemeral drainages and all “adjacent water” as waters of the U.S., then the cost to States to include these in their water quality programs will increase significantly. While the Agencies have failed to include these costs in the regulatory impact analysis of the proposed rule, some States have provided cost estimates.

According to the State of Missouri, if it had to regulate all stream miles discernible at the 1:24,000 scale of the National Hydrology Dataset, it would add an additional 158,565 miles of stream (183,591 miles total) to its existing classified waters network and would more than double the State’s monitoring costs from about \$11.2 million a year to \$24.2 million.¹⁹⁵

The Agencies may argue that EPA will not require States to set standards for these waters or include them in monitoring programs; however, Section 303 of the Act applies to all waters of the U.S., and citizen plaintiffs could sue EPA for failing to force States to take such actions.¹⁹⁶

This is a real impact of the rule on State regulatory programs that the Agencies must include in their economic analysis and take into account in the amount of federal funding provided for State programs under Section 106 of the Clean Water Act. (p. 8-9)

Agency Response: Please refer to the summary response provided at the beginning of Topic 11.4 and 11.2. The agencies did not rely on hydrology dataset maps as a proxy for jurisdiction because there are other more relevant indicators that, in many cases, must be assessed on a case-specific basis.

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

11.2.279 The economic analysis estimates indirect costs to the Section 404, 401, 402 and 311 programs, but does not include any indirect costs to the programs within Section 303 of the CWA due to the expanded jurisdiction assumed.¹⁹⁷ The analysis assumes that because states have always been required to have designated uses, criteria to protect those uses, and antidegradation policies-and that requirement is not changing-that there would be no additional administrative cost increases to implement Section 303.¹⁹⁸ The analysis

¹⁹⁵ See supra n.12 at 25, 35. If existing standards do not apply to the newly regulated waters, States also will have to incur significant costs developing new water quality standards.

¹⁹⁶ Indeed, such a lawsuit was filed in Missouri. Missouri Coalition for the Environment v. Lisa P. Jackson, Case No.

10-04169-CV-C-NKL. In that case, the court agreed with EPA that imposing federal standards was a discretionary action. However, the same issue currently is being litigated in the Fifth Circuit in Gulf Restoration Network v. EPA, Case No. 12-cv-677.

¹⁹⁷ Id. at 3-33.

¹⁹⁸ Id. at 6.

simply assumes the required standards will already exist and states will be able to simply apply the standards to additional waters.

As a general matter, it seems highly unlikely EPA and the Corps actively took jurisdiction over almost all waters across the U.S. prior to 2009 in the implementation of all the relevant programs under the CWA and the analysis provides no citation or support for this assertion. If this is the case, the state agencies assume there would be data supporting the conclusion in the historic records associated with the Section 404 or other CWA programs and requests that the economic analysis be revised to include this data. If, in fact, a sub-set of all waters were actively regulated as federal waters, then it is possible that long-standing CWA programs like those under Section 303 of the CWA will experience as much impact as any of the other CWA programs. In such a case, EPA and the Corps must estimate the indirect cost impacts associated with Section 303 programs as well. (p. 30)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4. The agencies asserted jurisdiction broadly prior to the 2001 and 2006 Supreme Court decisions.

Water Advocacy Coalition (Doc. #17921.15)

11.2.280 **4. Section 303 Water Quality Standards**

EPA claims that a definitional change will have little to no effect on section 303 (state water quality standards and implementation plans). This is a bold claim that should be substantiated with a thorough analysis. For example, section 303(c) requires states to establish water quality standards (consisting of uses, criteria, and an anti-degradation policy) for all navigable waters. EPA (p. 6) assumes that states may simply apply uses and criteria developed for other categories of waters (e.g., freshwater rivers and streams used by the public for fishing, swimming, boating, and as sources of drinking water) for ditches, ephemeral streams, and other newly jurisdictional waters for which those uses and criteria would seem to be wholly inappropriate. In reality, though, states will have to designate uses and set water quality criteria for new waters and features that now meet the agencies' expanded definition of "waters of the United States." This process is extremely costly and burdensome for the states. Indeed, if states do not designate water quality standards for these newly jurisdictional waters, they are likely to be sued by third parties. In the past, states have been sued for failure to assign uses and set water quality criteria for all jurisdictional waters located within the state. EPA's analysis does not account for these obligations that will be forced upon the states and the states' increased litigation risk created by the proposed rule.

Similarly, Section 303(d) requires states to generate a list of impaired waters that do not meet specific water quality standards. States also must calculate total maximum daily loads (TMDLs) of various pollutants that are necessary to bring these waters into compliance. It stands to reason that the addition of newly-jurisdictional waters would increase the surveying, planning, monitoring, and enforcement necessary to achieve these

tasks. EPA claims: “[t]o the extent that this proposed rule may increase the coverage where a state would wish to apply its monitoring resources, states are likely to adjust sampling locations or sampling frequency without a net cost increase.”¹⁹⁹ This is simultaneously disingenuous and discouraging, suggesting states must make important decisions about water quality from a less-comprehensive scientific investigation by spreading already scarce resources even thinner. (p. 74-75)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

Nevada Mining Association (Doc. #14930)

11.2.281 But there is more. Arguably, the State (or EPA) would have to establish, and member companies would have to meet, water quality standards and Total Maximum Daily Loads ("TMDL) for these artificial ponds and their associated ditches, even though no one would ever think to fish in these ponds or channels, to recreate in them, or to use them for any purpose other than as industrial ponds. See CWA 5 303(d). Indeed, an operator might be required to make its ponds "fishable/swimmable," an absurd proposition especially with respect to tailings impoundments, which are designed as waste disposal units.

Mining companies would also have to go to enormous effort and expense to try to prove to regulators that a particular pond or channel was not an "other water." This would entail significant investigatory and advocacy costs to show that there is no "significant nexus" to deep groundwater from a pond or channel to a TNW, or that rainfall that is captured in the ponds and channels would not otherwise have flowed to a TNW in the absence of these ponds or ditches. In fact, mining companies would have to prove not only that their specific ponds and channels have no such nexus to a TNW but that no other pond or ditch operated by anyone else in the same watershed have such a nexus - something that would be extremely expensive, if not impossible, to show. (p. 15)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4. Commenter assumes certain waters would be impaired and prioritized for TMDL development. Waste treatment systems are excluded from jurisdiction.

Independent Petroleum Association of America (Doc. #18864)

11.2.282 Association member companies estimate a 50-60 percent increase in jurisdictional waters affecting operations in West Texas - well beyond the alleged 3 percent increase asserted by EPA and USACE in the proposal.

¹⁹⁹ This quote is in reference to Section 305(b), which requires states to issue a report about the water quality in all navigable waters and how they meet specific water quality goals. However, it appears to reflect the EPA's position about all programs where water quality monitoring is necessary.

One Permian Basin operator has estimated an increase from the 20 SPCC plans currently in effect to an additional 10,000 new SPCC plans under the proposal. Such plans typically cost an estimated \$5,000 per plan. This proposed definition and related regulatory impact analysis do not address such significant broadening of the "waters of the United States" program.

Another Permian Basin operator estimates that the cost of merely updating current SPCC plans in the Permian Basin in two relatively small fields (15 multi-well batteries and 20 multi-well batteries), would result in \$1,000 per well (field and office work) for a total of \$35,000.²⁰⁰

Based upon past implementation of SPCC, few hydrocarbon liquid storage facilities in the Permian Basin are adjacent to "waters of the United States," however, such operations typically have protective berms. These existing berms are not always constructed to meet the requirements of secondary containment pursuant to the SPCC regulatory program. Based upon the assessment of the proposed definition for "waters of the United States" it is estimated that for one company over 1,000 new SPCC plans (for 1,200 sites) would be required. The incremental cost for bringing those related facilities into the SPCC program would result in an expenditure of over \$11.4 million per year. Upgrading those sites would cost an estimated \$10,000 per site for a total of \$12 million. (p. 7-8)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

County Engineers Association of Ohio (Doc. #1997)

11.2.283 Proposed changes in the definition of Waters of the United States have many potential impacts on our ability to deliver maintenance and capital improvements to our constituents. Costs of ensuing changes, in our opinion, far outweigh the benefits of perceived water quality, especially without more detailed scientific reasons. (p. 2)

Agency Response: The agencies believe the rule will expedite the permit review process in the long-term by clarifying jurisdictional matters that have been time-consuming and cumbersome for field staff and the regulated community for certain waters in light of the 2001 and 2006 Supreme Court cases. The Corps' Nationwide Permit program, which authorizes Clean Water Act Section 404 discharges that would have no more than minimal adverse impacts to aquatic resources, is available for activities that qualify. For example, Nationwide Permit 3 ("Maintenance"), Nationwide Permit 12 ("Utility Line Activities"), and Nationwide Permit 14 ("Linear Transportation Projects") may specifically apply.

²⁰⁰ For this example, these wells are currently equipped with berms, so there is no additional cost for installation of berms.

The final rule reflects that the scientific evidence unequivocally demonstrates that the stream channels and riparian/floodplain wetlands or open waters that together form river networks are clearly connected to downstream waters in ways that profoundly influence downstream water integrity. The health of rivers, lakes, bays, and coastal waters depends on the streams and wetlands where they begin. Streams and wetlands provide many benefits to communities – they trap floodwaters, recharge groundwater supplies, remove pollution, and provide habitat for fish and wildlife. They are also economic drivers because of their role in fishing, hunting, agriculture, recreation, energy, and manufacturing.

Approximately 60 percent of stream miles in the U.S. flow only seasonally or after rain, but have a considerable impact on the downstream waters. And approximately 117 million people – one in three Americans – get drinking water from public systems that rely in part on these streams. These are important waterways for which EPA and the Army Corps is clarifying protection.

Arizona Public Service Company (Doc. #15162)

11.2.284 E. Options Available to Streamline Determinations of “Other Waters”

The Agencies have requested comment on ways to avoid case-by-case JDs for other waters. One option would be to determine by rule that other waters are similarly situated if they are located within certain ecoregions of the country. The rulemaking docket includes a map entitled “Level III Ecoregions of the United States” that shows approximately one-third of the state of Arizona lies within the Sonoran Basin and Range ecoregion (No. 81), one of the ecoregions included for consideration.²⁰¹ Ecoregion 81, which includes the Sonoran Basin & Range, is the landscape in which APS’s Phoenix metro facilities and the Yucca Power Plant in southwest Arizona are located. The Agencies’ proposed use of such ecoregions for per se jurisdictions would directly affect these facilities. The greatest impact to APS would be within Ecoregion 81 where 262 substations, switchyards, solar plants, and service centers, as well as a nuclear plant and at least one gas-fired plant, would be impacted and required to prepare SPCC plans and maintain compliance with such plans. The cost to bring these 262 facilities into compliance with SPCC requirements would be nearly \$9,000,000 for the first year alone. Quarterly inspections, future plan updates for the life of the facility, and required training costs add to the cost of compliance. Additionally, in the event that a release ever occurred at one of the facilities, depending on the actual location and the size the release, the costs could escalate dramatically.

An additional concern with the use of ecoregions for basing a jurisdictional determination relates to the management of transformers in the electric industry. If a leak were to occur in a transformer, this would require an outage to repair. Since an outage is a significant

²⁰¹ 79 Fed. Reg. at 22215.

event that requires planning to re-route energy to ensure no customers are affected by the planned outage, outages are not typically done on small leaks that have not triggered any environmental requirement. Using the ecoregion and floodplain concepts proposed by the Agencies, any leak from a transformer located on a power pole in a corridor located in a floodplain of one of the two ecoregions (Nos. 20 and 81) would result in a violation of the CWA. The violation itself brings hefty penalties, but it would also prompt an outage to remedy the situation. APS strongly opposes the use of ecoregions as jurisdiction by rule. APS also strongly opposes the use of the entire floodplain (with the size of event undetermined) as the boundaries of WOTUS. Finally, APS strongly opposes the use of “best professional judgment” for the Agencies to determine whether a floodplain should be defined by a 10-year storm event, 50-year storm event, 500-year storm event, or any other storm event. APS supports project-driven JDs so that current information can be used to make case-by-case determinations.

As noted above, APS’s Four Corners Power Plant is located within the landscape of the Colorado Plateau ecoregion (No. 10). APS opposes the per se jurisdictional determination based on ecoregion and believes that this is also inconsistent with related Supreme Court precedent as sitespecific or project-specific information is not considered for all areas. The Agencies offer other options, such as using hydrologic-landscape regions as a determination of similarly situated waters, or even concluding that other waters as a class of waters do not have a significant nexus and, therefore, may not be jurisdictional. While APS’s preference is for project-specific determinations that are supported by recent Supreme Court precedent, if an ecological region versus a hydrologic region were the only option, then APS would prefer the hydrologic region approach. The request for comment on these various options leaves the regulated community with no clarity or certainty about the scope and extent of a potential final rule with respect to this issue. Thus, APS requests that the proposed rule be withdrawn and re-proposed after the public has had a meaningful opportunity to better understand and comment on these options. (p. 12-14)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4. For purposes of clarity and to provide regulatory certainty, the agencies decided to use distance limits with the 100-year floodplain to define adjacency for floodplain waters. In addition, The proposed rule included a broad provision (paragraph (a)(7) of the proposal) that allowed for a case-specific determination of significant nexus for any water that was not categorically jurisdictional or excluded. In consideration of comments expressing concern over the proposed approach, the agencies made changes to provide for case-specific determinations under more narrowly targeted circumstances based on the agencies’ assessment of the importance of certain specified waters to the chemical, physical, and biological integrity of traditional navigable water, interstate waters, and the territorial seas address concerns in the approach to “other waters.”

Utility Water Act Group (Doc. #15016)

11.2.285 A 2011 EPA estimate of the annual cost borne by states, territories, and tribes for reviewing and updating state water quality standards found that the process costs a total of roughly \$9,558,800 per year. See EPA, Information Collection Request for Water Quality Standards Regulation (Renewal) at 26, 29 (Oct. 11, 2011), EPA-HQ-OW-2011-0465-0003 (“2011 WQS ICR Renewal”) (providing a rough estimate based on input from eleven states). Because EPA’s estimates are provided in aggregate terms, it is not clear how much of that cost involves conducting UAAs. But given the disincentives for states to conduct UAAs, and the fact that EPA’s estimate does not encompass the costs to the regulated community of conducting UAAs, there is no reason to believe that EPA’s cost estimates include much in the way of UAA costs, much less the costs of performing UAAs for the types of industrial waters that the Proposed Rule could reclassify as jurisdictional.

Notably, EPA’s cost estimates do not include the costs of the development of water quality criteria guidance, which the Agency strongly encourages states to adopt.²¹ 2011 WQS ICR Renewal at 21. EPA’s pollutant-specific and biological criteria were developed to protect fishable/swimmable uses. They are not relevant for industrial water features and cannot appropriately be applied to such features. Nor do the rules and guidance under which states set site-specific criteria solve the problem, since such criteria simply adapt, rather than replace, aquatic criteria designed to protect fishable/swimmable uses. The Agencies have not accounted for the costs of developing criteria guidance better adapted to the types of waters the Proposed Rule would capture.

The Economic Analysis also assumes that the Proposed Rule will not affect state responsibilities to assess and report on the quality of waters under CWA § 305, and to identify, list, and develop total maximum daily loads (“TMDLs”) for impaired waters as required by § 303(d). Economic Analysis at 6-7. With respect to water quality monitoring and assessment, the Agencies recognize that the Proposed Rule could increase the number of waters to be assessed, but assume that states will “adjust sampling locations or sampling frequency without a net cost increase.” *Id.* at 6. In other words, the Agencies assume that the states will be able to rob Peter to pay Paul, reworking their monitoring programs to cover more waters by sacrificing more robust data collection at existing monitoring sites in favor of less frequent and more farflung monitoring driven by the Agencies’ expansion of jurisdiction. The Agencies provide no foundation for their assumption such adaptations are workable or beneficial, nor do they consider the cost to states of changing their programs in this fashion.

With respect to TMDLs, the Agencies make the wholly unfounded assumption that the only segments likely to be affected are those already classified as jurisdictional, and any water features newly captured by the Proposed Rule will lie upstream of segments already listed as impaired and thus will be covered by, or at least benefit from, TMDLs already required. *Id.* at 7. No data or analysis are provided to support this proposition, which is at best unexplained and, UWAG believes, wrong. Given the costs and other

burdens imposed by TMDLs, which are expensive and time-consuming to prepare²⁰² and can impose enormous costs on point and nonpoint sources if prepared incorrectly, UWAG urges the Agencies to re-evaluate this assumption in the analysis that would support a new WOTUS proposal after the Proposed Rule is withdrawn. (p. 25-27)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4. EPA does not anticipate an increased number of UAAs as a result of this rule.

11.4.1.2 Benefits

The Agencies did not identify any comments under this topic area.

11.4.2. 311 Program

Agency Summary Response

Please refer to the summary response provided at the beginning of section 11.4.

Specific Comments

Pennsylvania Grade Crude Oil Coalition (Doc. #15773)

11.2.286 **6. The Proposed Rule would cause unnecessary increased in costs and efforts regarding spills.**

The identification of additional jurisdictional waters would increase the likelihood that spills on oil and gas sites would be federally reportable, raising the costs and complexity of spill response. In particular, the reclassification of diversion ditches as jurisdictional waters would significantly increase the likelihood that a spill would reach a "water of the United States," and therefore, could require federal reporting to EPA and/or the National Response Center. When agencies, such as the EPA, become involved in spill response that is currently managed under Pennsylvania law, the cost and complexity for reporting such spills increases, even though the spill response measures generally do not change. (p. 9)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

²⁰² According to a 2001 EPA estimate, preparing a single pollutant-specific TMDL costs an average of about \$52,000, with actual costs ranging from \$26,000 to \$500,000 in 2001 dollars. See EPA, EPA 841-F-01-004, Fact Sheet on the National Costs of the Total Maximum Daily Load Program (Draft Report) (Aug. 1, 2001), available at <http://water.epa.gov/lawsregs/lawguidance/cwa/tmdl/costfact.cfm>.

Independent Petroleum Association of America (Doc. #18864)

11.2.287 Spill Prevention Control and Countermeasures ("SPCC") (CWA Section 311 and its Related Regulatory Program) - Taking into consideration new proposed emphasis upon adjacent waters, and natural or manmade ditches, the Associations assessed whether there are operations that would be required to maintain a SPCC plan which previously had no such regulatory duty. Undiked areas are required to have drainage systems flow into ponds, lagoons, or catchment basins to retain oil and return such runoff to the facility. With the proposed rule, if such catchment basins are within areas subject to periodic flooding causing those facilities now to be adjacent to an "other water," SPCC plans would be required to be implemented or renewed. Such areas impacted by rain events may be deemed a water of the United States and become a protected ephemeral stream/tributary. The agencies' Economic Analysis only references anecdotal information, but concedes that "some potentially regulated facilities believe that they are not covered by the applicable SPCC regulations because they do not have the potential to discharge to a water of the U.S. it is reasonable to assume that a broader assertion of CWA jurisdiction may affect some of those facilities." Economic Analysis, p. 29. The agencies suggest the per year incremental costs for the SPCC program changes under the proposal is approximately \$11.7 million without providing sufficient information upon which to make this claim. This anecdotal estimate is not sufficient to satisfy the agencies' duty and obligation to determine the economic impact of the rulemaking.²⁰³ (p. 5)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

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

11.2.288 Undiked areas are required to have drainage systems to flow into ponds, lagoons, or catchment basins to retain oil and return such runoff to the facility. With the proposed rule, if such catchment basins are within areas subject to periodic flooding causing those facilities now to be adjacent to an "other water," SPCC plans would be required to be implemented or renewed. Such areas impacted by rain events may be deemed a water of the United States and become a protected ephemeral stream/tributary. The agencies' Economic Analysis only references anecdotal information, but concedes that "some potentially regulated facilities believe that they are not covered by the applicable SPCC regulations because they do not have the potential to discharge to a water of the U.S.. . . . it is reasonable to assume that a broader assertion of CWA jurisdiction may affect some of those facilities." Economic Analysis, p. 29. The agencies then suggest the per year incremental costs for the SPCC program changes under the proposal is approximately \$11.7 million without providing sufficient information upon which to make this claim. This anecdotal estimate is not sufficient to satisfy the agencies' duty and obligation to

²⁰³ Executive Order, 12866, 58 Fed. Reg. 51735 (1993).

determine the economic impact of the rulemaking. The following examples explain a far more significant economic impact. The agencies are urged to revise the study and provide more appropriate economic analyses. The agencies are directed to the Report of the Government Accounting Office ("GAO") of July 2014 titled, Environmental Regulation: EPA Should Improve Adherence to Guidance for Selected Elements of Regulatory Impact Analyses in which the GAO recommended that EPA both improve adherence to OMB guidance and enhance the usefulness of its RIAs. The GAO conclusion included the following statement, "Without improvements in its estimates, EPA's RIAs may be limited in their usefulness for helping decision makers and the public understand these important effects." The following is a summary of "important effects" underestimated by the agencies.

- Western Kansas - As a result of dry conditions within the oil and gas producing areas of western Kansas, the current regulatory implementation of the SPCC program in some areas is narrowly proposed regulatory management of tributaries and their adjacent waters and the introduction of vague concepts such as "relative strength of downstream effects" could result in significantly expanded regulatory obligations. One Kansas operator has estimated an increase from the 20 SPCC plans currently in effect to an additional 3,000 new SPCC plans under the proposal. Such plans typically cost an estimated \$5,000 per plan. This proposed definition and related regulatory impact analysis does not address such significant broadening of the "waters of the United States" program.

Another Kansas operator estimates that the cost of merely updating current SPCC plans in one relatively small Kansas oil field (18 wells), would result in \$1,000 per well for a total of \$18,000.

Based upon the assessment of the proposed definition for "waters of the United States" it is estimated that for one company over 1,000 new SPCC plans (for 1,200 sites) would be required. The incremental cost for bringing those related facilities into the SPCC program would result in an expenditure of over \$11.4 million a year. Upgrading those sites would cost an estimated \$10,000 per site for a total of \$12 million. (p. 3-4)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4 and Topic 11.2.

11.4.2.1 Costs

Agency Summary Response

Please refer to the summary response provided at the beginning of section 11.4.

Specific Comments

Water Advocacy Coalition (Doc. #17921.15)

11.2.289 **3. Section 311 Oil Spill Prevention Plans**

Under section 311, inland non-transportation oil facilities of a certain size that have potential to discharge to “waters of the United States” must prepare and implement a Spill Prevention, Control, and Countermeasures (SPCC) Plan. See 40 C.F.R. § 112.1(d)(1). EPA calculated incremental costs to Section 311 oil spill prevention plans by using average annual costs from production and storage facilities, and scaling up based on an estimate of 1,000 new facilities that will need to spend money on compliance. The average annual clean-up cost is \$9,128 for production facilities and \$13,038 for storage facilities.¹⁶ Production facilities make up approximately 35% of all facilities, while storage facilities make up the remaining 65%. After adjusting for inflation, this yields approximately \$11.7 million annually in incremental costs.

The expansion of the “waters of the United States” definition will mean a significant increase in the number of facilities that could “reasonably be expected” to discharge oil to jurisdictional waters. As a result, many facilities not previously subject to the SPCC program requirements (because they did not previously have potential to discharge to “waters of the United States”) will now be required to develop and implement an SPCC plan. This is particularly true in the arid west, where companies generally do not maintain SPCC plans because their operations are not located near navigable waters. (p. 74)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

American Petroleum Institute (Doc. #15115)

11.2.290 *3.1.2.5 The Agencies’ underestimated the true costs associated with CWA 311 Oil Spill Prevention, Control, and Countermeasure Plans.*

Section 311 of the CWA requires inland non-transportation oil facilities or storage infrastructure exceeding 1,320 gallons’ capacity to prepare and implement a Spill Prevention, Control, and Countermeasure (SPCC) Plan if they are in proximity to jurisdictional waters. The Agencies estimated incremental costs using the average annual costs of \$9,128 for production facilities (35 percent of total facilities) and \$13,038 for storage facilities (65 percent of total facilities). The Agencies assumed that 1,000 new facilities would need to comply with SPCC plans at a total cost of \$11.7 million per year.

The Agencies’ estimated SPCC costs are at least 50 percent lower than the true costs in ARCADIS’s experience. Section 311 requires facilities to install (and maintain in perpetuity) secondary containment around certain facility components. These costs are difficult to estimate given the different locations and requirements of each facility, but are significantly greater than the cost of the initial SPCC plan. For the cost estimates provided above, ARCADIS assumed the following cost allocation:

- Upstream facility, midstream infrastructure project (new pipeline/temp storage or transfer facility): \$3500/site to prepare SPCC; \$20,000 in secondary containment (a berm or dike) using locally sourced earthen material, and \$5000/year in maintenance.
- Downstream facility: \$8500/site to prepare SPCC; \$45,000 in secondary containment structures, and \$5000/year in maintenance. • Cost of regularly scheduled inspections and recordkeeping should be added to the estimates previously listed.

Note that this ongoing maintenance cost is completely absent from the Economic Analysis.

Secondly, the expansion of the jurisdictional waters under the proposed rule would obviously increase the number of facilities that would require SPCC plans. This increase would be especially prevalent in the more arid regions in the west where features having only intermittent or ephemeral flow dominate, and where current facilities that are now located miles from the nearest traditional navigable water would suddenly find themselves in proximity to newly-jurisdictional features. In short, the increase in facilities has the potential to be significantly greater than the 1,000 assumed by the Agencies.

Finally, the Agencies did not consider the costs associated with additional spill reporting required by OPA-90 for facilities that require SPCC plans. The costs that were not included in the Agencies' estimate are spill response plans, spill response personnel, response equipment and infrastructure, and spill drills. These costs are difficult to estimate across the industry, but could be significant. Again, once the appropriate modifications are made, the associated costs will increase. (p. 67 -68)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

11.2.291 5.4.4 Costs for the Spill Prevention, Control, and Countermeasure Rule will increase – possibly without providing any additional environmental protection.

Under Section 311 of the Clean Water Act and EPA regulations, non-transportation related petroleum storage facilities are subject to spill prevention requirements if the facility exceeds minimal storage thresholds and there is a reasonable expectation that a spill could reach a jurisdictional water under the CWA. With more geographic features being deemed jurisdictional waters, the number of facilities subject to SPCC requirements will increase – particularly in the arid west. Facilities on lands draining to basins previously considered closed now may require cost-prohibitive significant nexus evaluations to determine whether they are jurisdictional, and receiving water bodies may be extended significantly by the inclusion of tenuous ephemeral streams. (p. 134)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

11.4.2.2 Benefits

Agency Summary Response

Please refer to the summary response provided at the beginning of section 11.4.

Specific Comments

American Petroleum Institute (Doc. #15115)

11.2.292 3.2.2 The Agencies' estimated benefits of avoiding oil spills are largely illusory due to the lack of actual referenced data.

The Agencies' Economic Analysis also estimates that the Proposed Rule would provide benefits from avoiding oil spills under CWA 311 due to increasing SPCC plans required for the newly designated WOTUS. Using National Response Corporation (NRC) data, the Economic Analysis concludes that the average oil spill from 2000-2005 was 1,290 gallons. The remainder of their analysis is purely speculative:

- No reference data is provided for the average cleanup cost, which the Agencies estimated at \$221 per gallon to arrive at an average oil spill cost of \$285,090.
- Again, without referencing the source of the data, the Economic Analysis assumes that the incremental risk associated with hypothetical inaction is 1 in 20. Dividing \$285,090 by 20 yields \$14,255 as the estimated total cost of the average oil spill.
- Without providing a basis for their assumption, the Economic Analysis assumes 1,000 facilities are non-complying each year. Multiplying 1,000 by their speculatively estimated total cost of the average oil spill produces a \$14.3 million estimate of the annual benefit for avoiding oil spills.

In short, references and/or support for 3 of the 4 major elements of this benefit estimation eliminate the possibility of replicating that estimate. Since the quantity of spilled oil and the cost of cleaning up spills vary greatly, a median estimate of the two elements is probably more appropriate than an average.

Perhaps most importantly, the incremental risk of hypothetical inaction is likely to be far smaller than 1 in 20. The correct incremental risk is the difference between the risk of a spill in the absence of a SPCC plan and the risk of a spill with a SPCC plan. All companies take steps to avoid oil spills for a variety of reasons – including complying with requirements under state law, meeting industry standards for spill prevention, avoiding damage to a company's reputation, the high cost of cleanup, various liabilities from oil spills (e.g., natural resource damages), and the resulting loss of product and/or production. Consequently, oil spills are relatively rare because of these steps. Nevertheless, it is possible that secondary containment installation as a direct consequence of SPCC plan implementation might marginally reduce spill risk. For

example, if the risk of a spill without an SPCC Plan is 1 in 1,000 and the risk of a spill with a SPCC plan is 1 in 5,000, then the incremental risk reduction from the SPCC Plan in this hypothetical example would be 4 in 5,000 – or about 0.0008. In contrast, the Economic Analysis assumes the incremental risk is 0.05, or about 2 orders of magnitude higher.

Finally, the Agencies propagate misperception by implying that the Proposed Rule in any way improves protection against oil spills (or any unregulated discharge) for waters that are not Federally-protected. The Clean Water Act already prohibits unregulated discharges of pollutants that ultimately flow into navigable waters, regardless of whether the point of discharge is a navigable water. As noted earlier, Federal protection in some cases only duplicates protection provided by State laws. And finally, for all the reasons stated above, it is in the interest of API member companies to take steps to avoid spills—and to clean them up promptly in the unlikely event of an occurrence. The EPA initially published on its website three enforcement “challenges” to illustrate the need for the Proposed Rule; one of these was an oil spill in Texas that was subsequently removed because records show there was, in fact, no enforcement “challenge”—the responsible party (an API member) cleaned up the release and mitigated under EPA supervision as soon as it was notified. (p. 82-83)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4.

The Mosaic Company (Doc. #14640)

11.2.293 **4 Benefits**

The EPA Study quantifies the incremental benefits of compensatory wetland mitigation under the proposed rule using “benefits transfer”.²⁰⁴ “Benefits transfer” refers to using valuations of benefits for other, comparable resources to value the subject resource. The method is commonly used in policy analysis as an alternative to more rigorous site/resource-specific valuations. However, while generally accepted as appropriate for policy analysis, there are well-recognized limitations to the benefits transfer methodology. The guiding principle for reliable benefits transfer is that resource values used in the primary studies relied upon must be comparable to the subject resource in terms of the types and level of services provided. Further, when valuations are elicited using stated preference surveys (SPS), the tastes and preferences of the survey respondents must be representative of the population to which benefits will accrue from the subject resource (EPA Study, p. 20).

²⁰⁴ The EPA Study recognizes other benefits including cost savings associated with enforcement of CWA jurisdiction, the burden of which EPA asserts will be reduced after the WOTUS definition is clarified. While EPA quantifies benefits associated with Section 402, the method is simply an extension of its cost estimation approach, meaning that incremental benefits are proportional to incremental costs.

Based on our review, the benefits transfer approach used in the EPA Study does not provide meaningful or reliable information about the benefits of the proposed rule. The Study acknowledges that the benefit estimates used in this case should be viewed as only “illustrative” (EPA Study, p. 20). It is not clear, however, how “illustrative” values should be used in benefit-cost analysis. For example, giving \$1 of “illustrative” benefits the same weight as \$1 of compliance costs is likely to overstate the benefit side of the equation. Rather, due to the uncertainty of “illustrative” benefits, we would expect a discount value be applied to illustrative values before making direct comparisons to actual costs.²⁰⁵

The reference studies used to develop wetland function value also overstate potential benefits because the types of wetlands and corresponding functions evaluated in those studies are vastly different than the types of wetlands EPA aims to protect under the proposed rule. The expansion of wetland jurisdiction under the proposed rule encompasses many wetlands that are only marginally considered wetlands under today’s rules, many of which could be said to add little if any incremental functional value to the wetlands already claimed under the 2008 Guidance. Further, values from the studies represent dollar amounts households stated they would be willing to pay to protect or enhance wetlands. Respondents do not actually have to pay that amount, which could result in an overstatement of wetland value, and respondents do not understand that all wetlands are not the same aesthetically or functionally, which could also influence the amount respondents would be willing to pay. Finally, the quantification assumes that all households in all states receive the same degree of ecosystem service benefits from wetland protection.

As described further below, the EPA study needs to include a discussion about the appropriate role of illustrative values in cost-benefit analysis, and how or if the uncertainty surrounding “illustrative” values can be quantified and incorporated in a meaningful way to inform decision-makers and the regulated community. (p. 51)

Agency Response: Please also refer to Agency responses in other comment summary sections that pertain more generally to benefits (11.3.2).

11.4.3. 401 Program

Agency Summary Response

²⁰⁵ The term discount is not to be confused with the financial concept of discount future streams of money. In this scenario, discount means to give less weight to the estimated benefits given the admittedly illustrative nature of the benefits estimates when comparing to costs.

Please refer to the summary response provided at the beginning of section 11.4. Please also refer to Agency responses in other comment summary sections that pertain more generally to benefits (11.3.2).

Specific Comments

Tennessee Valley Association (Doc. #17470)

11.2.294 Based upon the Economic Analysis document accompanying the Proposal the Agencies' project an increase of approximately 3 percent in overall jurisdiction under the proposed rule. This does not reflect the magnitude of potential for jurisdictional expansion which we anticipate, as described above. It is our opinion that the actual increase will be at least a double digit percentage increase and could be much higher depending upon how the Proposal is implemented in the field. Below is a summary of what we consider a more realistic estimate of cost and schedule impacts based on a recent project initiated by TVA.

TVA has reservations with the Agencies' position that the Proposal is not an expansion of jurisdictional waters under the CWA. The Agencies have stated publicly and have posted on the USEPA website that "The proposed rule does not add protection to any new types of waters that have not historically been covered by the CWA, nor does the rule in any way limit current regulatory and statutory exemptions and exclusions." Specifically, and as described above, the newly proposed definition of tributaries includes waters and features well beyond those that have been deemed jurisdictional based on current practices 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.

In our opinion, the Proposal is very likely to create not only greater numbers of regulated water features but also will inordinately increase the number of potentially regulated discharge points within any given parcel associated with an activity or project. TVA is

concerned that the increase in assertion of categorical jurisdiction will subject more projects and activities to CWA authority. As a result, some projects that otherwise should have qualified for relatively streamlined permitting processes under Nationwide or regional general permits will be required to undergo lengthier and costlier individual permit procedures. To the extent that more electric utility projects and, activities will be subject to CWA authority, these projects and activities are likely to face greater mitigation costs. TVA is especially concerned that as a result of the proposed rule electric utilities will continue to experience negative project scheduling impacts at a critical time when we are trying to meet the need to update the generating fleet to lower emission alternatives and upgrade the associated transmission infrastructure to support these ongoing changes and ensure system reliability.

Based upon the Economic Analysis document accompanying the Proposal the Agencies' project an increase of approximately 3 percent in overall jurisdiction under the proposed rule. This does not reflect the magnitude of potential for jurisdictional expansion which we anticipate, as described above. It is our opinion that the actual increase will be at least a double digit percentage increase and could be much higher depending upon how the Proposal is implemented in the field. Below is a summary of what we consider a more realistic estimate of cost and schedule impacts based on a recent project initiated by TVA.

b. Projected Consequences - TVA Specific Example

As an example of the estimated magnitude of the Proposal on the costs and timing of a typical landfill construction project, we are providing a historical summary of the Corps permitting process as it evolved over the initial stages of a TVA project in Gallatin, Tennessee. The landfill construction was necessitated by air pollution control upgrades with a definitive deadline imposed by the Mercury and Air Toxics Standards rule finalized by USEPA in December 2011. The associated Corps individual permit was one of several regulatory and permitting steps required to initiate and complete construction of the landfill unit in order to maintain the Gallatin Fossil Plant's operability and compliance with the upcoming regulatory requirements. In our opinion, TVA's experience is representative of how the current Proposal could impact the regulated community. It should be noted that the bases for jurisdictional determinations in the governing Corps District has evolved over the recent past to be more expansive and to encompass additional water features. Historically, all intermittent streams were deemed jurisdictional while most ephemeral streams and wet weather conveyances were no;- jurisdictional - with limited exceptions. TVA and other permittees have noted that in the past couple of years the jurisdictional determination process has blurred and become less predictable. Whether this development is a result of more detailed guidance, more restrictive headquarters policy, or changes in District personnel and/or management cannot be determined. Nevertheless, the changes are real and had serious implications for the landfill project schedule and costs as summarized below:

- i. **Impact on Project Timeline** - Based on longstanding permitting experience, TVA estimated a typical internal processing time of 60 days to complete the Corps permitting process with an additional 90-120 days for agency response/issuance of the permit - depending upon project complexity. This has historically been adequate for projects when wetland mitigation credits are available. Longer durations are required if no wetlands credits are available and we have to find a supplier or develop our own. In addition, state requirements have often been more sweeping than the Corps'. With changes in the Corps' interpretation of jurisdiction, management staff, and permit processes over the last couple of years, the time required to apply for and receive a permit has increased. As a result it is difficult to quantify the necessary time to procure a Corps permit now. In this specific case, the state Aquatic Resources Alteration Permit (Tennessee's equivalent to 401 Certification) permit was issued on September 10, 2013, and the Corps permit was issued on July 14, 2014. This would indicate a delay in the project timeline of nearly 10 months. This delay has resulted in unforeseeable and unanticipated additional project costs because the landfill will not be complete in time to meet the air compliance deadline.
- ii. **Impact on Costs** -Based on the Corps Aquatic Resources Spreadsheet (ARS) associated with the Preliminary Jurisdictional Determination (PJD) of the site, stream mitigation costs were \$751,080. The initial environmental assessment by a qualified hydrologic professional indicated a total of 2243 lineal feet of jurisdictional streams. This number expanded to 4364 lineal feet once the Corps elected to include ephemeral streams and other stormwater features. TVA believes that had the Corps asserted jurisdiction over only the non-ephemeral streams in accordance with a baseline of previous practice under existing regulations and the 2003/2008 EPA-Corps guidance the stream mitigation cost would have been \$420,480. However, given the uncertainties of the additional scheduling required to conduct a full Jurisdictional Determination, TVA elected the more certain, but costlier route incurring a premium of \$330,600. This additional cost is approximately 80% more than the 'normal' mitigation costs. It is our opinion that this amount is representative of what the Proposal costs would be over the 'current' jurisdictional waters for the landfill project and generally reflects the magnitude of impacts anticipated as a result of the broader assertion of jurisdiction. While this number represents the direct cost increase due to mitigation requirements, there were additional costs incurred to the project as a result of the delay in initiating landfill construction. TVA's construction contractor has estimated the additional costs to be \$975,000.

- iii. Cost/Benefit Implications -TVA recognizes and acknowledges that headwater streams and wetlands are critical aquatic resources. They serve numerous functions and help ensure the integrity of downstream waters. In this case, however, the overall environmental benefit resulting from the mitigation costs and effort associated with this project were limited at best. Based on this we believe it is likely that the benefits discussed in EPA's Economic Analysis provided in support of the Proposal are overstated and the costs of mitigation and associated impacts to project schedules are very much understated. (p. 5-7)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4, and 11.2, 11.3.1, 11.3.2, and 14.1. In addition, please refer to other responses relevant to the many points expressed above. The agencies thank TVA for providing this detailed example of the case-specific nature of implementing the rule and the difficulties of generalizing costs.

State of Iowa (Doc. #8377)

- 11.2.295 Disconnect between Content and Intent: We do not doubt the Federal government's intentions to advance water quality throughout our nation; however, the Federal government's proposed approach, and the content of the proposed rule, would seriously impair advancements in water quality in the State of Iowa. As an example, too many Iowa farmers would be forced to gain Federal permits to advance water quality infrastructure projects, which would discourage agricultural producers from undertaking the very projects that would improve water quality throughout the State. Small towns, cities and private sector entities, most with limited resources, would face similar challenges. (p. 2)

Agency Response: Please refer to the summary response provided at the beginning of section 11.4. The agencies recognize the vital role of farmers in providing the nation with food and fiber and are sensitive to their concerns. The final rule reflects the intent of the agencies to minimize potential regulatory burdens on the nation's agriculture community, and recognizes the work of farmers and landowners to protect and conserve natural resources and water quality on agricultural lands. The rule reflects this framework by clarifying the waters subject to the activities Congress exempted under CWA Section 404(f).

Florida Department of Agriculture and Consumer Services (Doc. #10260)

- 11.2.296 **Adverse Effects in Urban Watersheds**

The expansion of WOTUS has the potential to result in significant costs to urban areas. The costs will be borne primarily by Municipal Separate Storm Sewer System (MS4) permittees through MS4 and Corps dredge and fill permitting requirements. The Florida Stormwater Association (FSA) and Florida H2O Coalition developed separate estimates of these potent costs. The FSA estimate, which was based on a representative set of water

bodies in seven significantly urbanized Florida counties, concluded that potential restoration costs could range from about \$2 million to greater than \$50 million for each water body. The Florida H2O Coalition estimate, which was based on four Southwest Florida counties, concluded that potential median costs for those counties could range from hundreds of millions of dollars to greater than a billion dollars. In both cases, the costs would be incurred in an attempt to restore highly altered and sometimes wholly artificial water bodies to the same nutrient standards applicable to Florida's lakes and streams. However, there would be no environmental benefit achieved, since the biology of the water body is driven largely by the highly altered nature of the system and not by nutrient concentrations in the systems. As noted above, these estimates apply only to a subset of Florida's water bodies and counties, and statewide costs would be significantly higher. (p. 57–58)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topic 7. In addition, the analysis referred to assumes that no load reduction or stormwater BMPs would be required for land areas that surround stormwater conveyances that connect to downstream waters (as opposed to land areas that intersect rivers and streams themselves). However, loads to conveyances become loads to downstream waters (streams, lakes, estuaries, and coastal waters), and it may be necessary to pursue load reduction in areas adjacent to conveyances to meet WQS in downstream waters. Second, it assumes that these conveyances are not jurisdictional under the current rule, which may be incorrect. Finally, it assumes that the same numeric nutrient criteria that applies to Florida's natural streams will apply to the conveyances themselves, which they may not.

11.4.3.1 Costs

Agency Summary Response

Please refer to the summary response provided at the beginning of section 11.4.

Specific Comments

Water Advocacy Coalition (Doc. #17921.15)

11.2.297 1. Section 401 State Certification

Section 401 of the CWA requires any applicant for a federal license or permit to conduct any activity that will result in a discharge to waters of the United States to obtain a state water quality certification from the state where the discharge will occur. 33 U.S.C. § 1341(a)(1). With the proposed rule's expanded definition of "waters of the United States," more activities that require federal licenses (in particular, activities requiring section 404 permits) are likely to discharge into "waters of the United States" and will therefore require section 401 certification. EPA estimated that state certification under

section 401 would experience increased annual costs of \$737,100 as a result of the proposed rule. This figure is the result of a 2.7% increase in full time employees (FTE) needed to staff state permitting offices. This figure may partially account for the increased amount of state resources needed to accommodate additional state certification requests, but it does not account for the increased costs to applicants that must now obtain 401 state certification. EPA's analysis recognizes that there will be additional section 404 permits required under the proposed rule, but it does not account for the increased costs of obtaining 401 certification that are triggered by those additional section 404 permits. Nor does it address the cost of delay caused by increased Section 401 certification requirements. (p. 71)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and Topic 11.3.1.

American Petroleum Institute (Doc. #15115)

11.2.298 3.1.2.4 The Agencies' analysis underestimates the change in CWA 401 Water Quality Certification (WQC) Permitting cost by using the unrealistically low 2.7 percent increase in jurisdictional waters.

The Agencies' analysis estimated current staffing needs for 401 WQC at 312.5 full time equivalents with fully loaded average salaries of \$87,360²⁰⁶. Using these values, the Agencies estimated annual certification expenditures at \$27.3 million with increased annual costs of \$737,000 associated with the 2.7 percent increase in jurisdiction. Though ARCADIS could not verify the number of required full time employees, the Agencies underestimate the true costs – which will significantly increase when the percent increase in jurisdictional waters is accurately reflected. Additionally, many of the State agencies currently enacting the Section 401 WQC program are significantly under-funded and already lag months behind the Corps in completing the permitting process. The increase in workload does not come with a guaranteed increase in funding. This may compound staffing challenges for these agencies across their obligations, potentially exacerbating lost opportunity costs (which the Agencies did not include in their cost of the Proposed Rule [see Section 3.1.3.2) resulting from even further delays in obtaining permits. (p. 61)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and 11.3.1.

The Clean Energy Group Waters Initiative (Doc. #14616)

11.2.299 In addition to the regulatory revisions detailed above, we believe a comprehensive approach to expediting the permitting process for energy projects is necessary to ensure full and timely implementation of the Administration's clean energy and infrastructure

²⁰⁶ The fully loaded salary was based on a mix of occupations (scientists, engineers, economists, and managers) from the Bureau of Labor Statistics OES Report providing an average hourly rate of \$42/hr.

priorities. If the language in the proposed rule is not clarified for the final rule, we are concerned about the potential implications for current practices at power plants and for permitting renewables and related transmission projects, which are critical for achieving the Administration’s clean energy goals. If projects can no longer qualify for existing NWP’s due to this proposal, companies will need to obtain individual permits. While costs can vary depending on the type of project and other associated costs, based on our member companies’ experience, an individual permit may cost on average \$340,000 while on average a NWP may cost approximately \$36,000. Mitigation costs associated with projects will also increase under an individual permit process. For example, the current permit and mitigation costs associated with a pipeline project are estimated to be about \$500,000.

If WOTUS jurisdiction increases by as little as three percent over 2009-2010 field practices as indicated by the agencies, we can expect cost of compensatory mitigation to increase by at least three percent (although we would anticipate more, as there would be an increase in demand for an already-scarce resource).²⁰⁷ Current mitigation costs range by geographic location from approximately \$70,000 to \$300,000; thus, a three percent increase would be at least an additional \$2,000 to \$9,000 per acre. (p. 13-14)

Agency Response: Please refer to the summary responses provided at the beginning of section 11.4 and 11.3.1.

11.4.3.2 Benefits

There were no identified comments under this topic area.

11.4.4. 402 Program

Agency Summary Response

See summary response in section 11.4.

Specific Comments

Arizona Department of Environmental Quality, et al. (Doc. #15096)

11.2.300 As a result, if finalized, the rule could vastly expand the number of waste management units and land-based activities and point sources under the Clean Water Act, greatly increasing the workload and budget constraints of the forty-six States

²⁰⁷ EPA and US Army Corp of Engineers, Economic Analysis of Proposed Revised Definition of Waters of the United States, at 2 (March 2014,) (Available at: http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf).

implementing the permitting program.²⁰⁸ We emphatically note that the Agencies did not acknowledge the impact of this increased workload in their economic analysis of the proposed rule.²⁰⁹ (p. 6)

Agency Response: Please see essays in Topics 11.4, 12, and 7. See also Economics Analysis section 8.

Colorado Clean Water Coalition (Doc. #1231)

11.2.301 The document prepared for the proposed rule, The Economic Analysis of Proposed Revised Definition of the Waters of the United States prepared March 2014 by the USEPA and USACE Pg. 26 states -"It is unclear specifically how a broader assertion of CWA jurisdiction under this proposed rule would affect MS4 permits." Upon completion of the peer review and incorporated peer comments of this economic analysis, we would like to know the economic impacts from the proposed rule to identify objective financial measurements of impacts to MS4 permits. (p. 1)

Agency Response: See essays 11.4 and 7. The EPA considers MS4s to be systems, and in terms of jurisdiction MS4s should be thought of as component parts and not a singular entity. MS4s can include jurisdictional and non-jurisdictional features and the Agencies have committed to clarifying which are jurisdictional and which are not. The jurisdictional status of such systems involves a case-by-case assessment, taking into account the specific characteristics of each system. The agencies generally discourage using jurisdictional waters for waste treatment. However, it may be appropriate in certain circumstances where the Corps of Engineers issues a permit for the construction of such a treatment system, based on an application of the 404(b)(1) guidelines. See the preamble for further discussion of MS4s.

Butler County Pennsylvania (Doc. #6918.1)

11.2.302 Moreover, impact cost analysis on how the proposed definitional changes may impact the pesticide general permit program, including EPA and DEP spraying programs, to control weeds and vegetation around ditches, water transfer, reuse and reclamation efforts, drinking and other water delivery systems have not been considered. These issues directly impact states and local government budgets. Had the proposed rule complied with the Executive Order, an opportunity to address significant concerns over the

²⁰⁸ This increase in the universe of regulated point sources could be the straw that breaks the back of State water quality permitting programs that already are struggling to meet the workload demands of regulating pesticide spraying and implementing new regulations, while funding decreases.

²⁰⁹ The March 2014 Economic Analysis of Proposed Revised Definition of Waters of the United States fails to analyze or even consider any impacts on section 402 permitting programs and yet concludes that such impacts will be minimal.

preemption of traditional state and local government authority concerning management of state and local waters and land use would have been provided. (p. 9)

Agency Response: See essays in Topics 11.4 and 12.3. Additionally, the rule neither changes nor imposes new requirements for complying with the pesticides general permit (PGP).

Mesa County Board of County Commissioners (Doc. #12713)

11.2.303 Mesa County respectfully requests that the United States Environmental Protection Agency (EPA) and USACE:

Stay the rulemaking process until the EPA's Economic Analysis is revised and the EPA is able to conduct a complete cost-benefit study.

We request the above actions because:

The Economic Analysis of the Proposed Rule is of concern because of the discussion on Municipal Separate Stormwater Sewer Systems (MS4s). Under the Proposed Rule, many stormwater systems and features could now be classified as WOUS. The Economic Analysis does not address or quantify the increased permitting requirements for stormwater conveyances that would result from the Proposed Rule. In fact, the Economic Analysis states on Page 26 that "it is unclear specifically how a broader assertion of CWA jurisdiction under this Proposed Rule would affect MS4 permits," and "MS4 outfalls tend not to be in wetlands." Any work on the stormwater conveyances, work aimed at achieving environmental best management practices, as well as routine improvements will require section 404 permitting. (p. 1)

Agency Response: See essays 11.4 and 7.4.4, as well as Section 8 of the Economics Analysis.

11.2.304 Mesa County uses herbicide and pesticides in a number of ways including treatment of weeds in ditches on the side of the road and treatment of mosquitoes and other pests. The increased time and expenses to reduce noxious weeds required by weed control programs under the Colorado Noxious Weed Act Title 35, Article 5.5 is unclear at this time, and we request the EPA to research and document additional United States regional specific impacts to the proposed rule to clarify these additional new programs for required herbicide and pesticide use prior to the finalization of the proposed rule. (p. 4)

Agency Response: See essays 11.4 and 12.3. Additionally, the rule neither changes nor imposes new requirements for complying with the pesticides general permit (PGP).

Board of Douglas County Commissioners, Castle Rock, Colorado (Doc. #8145)

11.2.305 The Economic Analysis is of particular concern to Douglas County because of the discussion on Municipal Separate Storm Sewer Systems (MS4s). Under the Proposed

Rule, many stormwater systems and features themselves could now be classified as WOUS. The Economic Analysis does not address or quantify the increased permitting requirements for stormwater conveyances that would result from the proposed rule. In fact, the Economic Analysis states on Page 26 that “[i]t is unclear specifically how a broader assertion of CWA jurisdiction under this Proposed Rule would affect MS4 permits,” and “...MS4 outfalls tend not to be in wetlands”. MS4s may, at time, develop manmade wetlands for water quality features and also may need to remove features in order to protect the infrastructure’s functional purpose, such as controlled release for water quality. Any work on the stormwater conveyances, work aimed at achieving environmental best management practices, as well as routine improvements required by stormwater permits, will trigger section 404 permitting requirements under the Proposed Rule. The 404 permitting process is a time consuming and expensive process. As local offices are inundated with the 404 permit process state wide, Douglas County is concerned about the immediate associated construction delays for projects after the Proposed Rule is final.

Additionally, if stormwater conveyances are deemed WOUS, they will be subject to water quality standards. The costs of complying with water quality standards may also be exponential. These issues are troubling to Douglas County because maintaining compliance with MS4 permit requirements, and any potential associated penalties, are substantial budget line items. If permitting costs for MS4 maintenance and construction activities increase due to expanded jurisdiction of the CWA, these budgets will need to similarly increase. Under EO 13563, these potential costs need to be evaluated by the Agencies prior to adoption of the Proposed Rule. (p. 6)

Agency Response: See essays in 11.4 and 7.

Georgia Municipal Association (Doc. #14527)

11.2.306 Potential implications if the rule is implemented as written include:

1. Increased costs: Polluted stormwater runoff is commonly transported through Municipal Separate Storm Sewer Systems (MS4s), from which it may be discharged untreated into local water bodies. To prevent harmful pollutants from being washed or dumped into an MS4, operators must obtain a NPDES permit. Each regulated MS4 is also required to develop and implement a stormwater management program (SWMP) to reduce the contamination of stormwater runoff and prohibit illicit discharges. GMA is concerned that the proposed rule could bring MS4s infrastructure and other stormwater system under regulation including drains, roads, pipes, curbs, gutters, ditches, and other components that channel runoff, resulting in tremendous direct and indirect costs for cities, including:

(a) Added permit application costs (ranging from tens of thousands of dollars to much higher, per EPA estimates).

(b) Wetlands and stream mitigation costs (EPA has indicated that these costs vary widely, with average costs nationwide ranging from \$24,989 to \$49,207 per acre of wetlands mitigated and from \$177 to \$265 per linear foot of stream mitigation).

(c) If ditches, curbs, gutters, and other system components throughout Georgia are jurisdictional, GMA is concerned that the Corps simply does not have enough manpower to review and make a determination for these facilities throughout the state. Significant delays are inevitable. Appendix A that accompanies this letter outlines local examples from the City of Griffin, Georgia, that illustrate the time and costs currently involved with a typical local project.

The potential costs of redesign, relocation and litigation would be significant, especially since they will be borne by taxpayers and ratepayers.

2. The potential impact to the state and local economy if the rule is implemented is unknown. According to the EPA and Army Corps, the full economic impact of the proposed rule is largely unknown because the findings are "incomplete" due to the "many data and methodological limitations, as well as the inherent assumptions in each component of the analysis." The National League of Cities reports that the EPA has not analyzed the cost of the proposed rule on all Clean Water Act programs beyond the 404 program, including NPDES, Water Quality Standards, TMDLs, stormwater, and green infrastructure.

Recommendations:

(...)EPA should either withdraw the proposed rule or issue a revised proposed rule with an additional comment period pending completion of the economic impact analysis. It is important that EPA and the Corps engage the states in this process and listen to local government experts who are on the front lines. (p. 3-4)

Agency Response: Please see essays 11.4, 12.3, and 7.4.4. See also section 8 of the Economics Analysis.

Colorado Clean Water Coalition (Doc. #3533)

11.2.307 The document prepared for the proposed rule, The Economic Analysis of Proposed Revised Definition of the Waters of the United States, prepared March 2014 by the USEPA and USACE, states on Pg. 26 - "It is unclear specifically how a broader assertion of CWA jurisdiction under this proposed rule would affect MS4 permits." Upon completion of the peer review and incorporated peer comments of this economic analysis, we would like to know the economic impacts from the proposed rule to identify objective financial measurements of impacts to MS4 permits. (p. 2)

Agency Response: Please see essays 11.4, 12.3, and 7.4.4. See also section 8 of the Economics Analysis.

American Society of Civil Engineers (Doc. #19572)

11.2.308 **ASCE Recommends Improvement to the Economic Analysis**

Simply stated, the Economic Analysis provided by EPA and USACE does not sufficiently address the potential economic impacts on MS4's. In fact the Economic Analysis explicitly states that the agencies do not know what the economic impact is: "It is unclear specifically how a broader assertion of CWA jurisdiction under this proposed rule would affect MS4 permits."²¹⁰ Considering the proposed rule affects all sections of the Clean Water Act, and the potential impact on municipalities operating MS4's is significant, we urge EPA and USACE to revise the Economic Analysis and take a hard look at the costs on MS4 operators. (p. 10)

Agency Response: Please see essays 11.4, 12.3, and 7.4.4. See also section 8 of the Economics Analysis.

North Carolina Aggregates Association (Doc. #6989)

11.2.309 We believe the projected cost-benefit analysis is fatally flawed. It is incomprehensible to project a mere 3% increase in permitting workload. However, regardless of the percentage increase in total permitting, the proposal has no accounting for the decrease in the utility of Nationwide Permits and the migration of projects to Individual Permits. While the increased costs incurred to secure an Individual Permit should be factored in to the cost-the agencies must also realize the time required to secure Individual Permits will substantially stymie real estate development. Should EPA and the Corps move forward with this proposed rule in its current form, many development projects would become cost prohibitive. The process to obtain a permit would become so that many projects will never get off the-ground. Additionally, the rule would place a significantly increased burden on the municipalities that are required to maintain and improve the drainage system on a consistent basis. There will be so many more waters that become regulated that the backlog in the Corps' permitting offices will increase ten-fold. Development and regular ongoing maintenance could come to a screeching halt. (p. 3)

Agency Response: See Summary Responses 11.2, 11.3.1, 11.4, and 12.4.

The Mosaic Company (Doc. #14640)

11.2.310 **3.2 Section 402**

Section 402 of the CWA requires proponents to obtain NPDES permits to discharge to jurisdictional waters. Aside from the development of pollutant discharge management plans, the specifics of NPDES permit requirements vary for different types of point and

²¹⁰ Economic Analysis of the Proposed Revised Definition of Waters of the United States. U.S Environmental Protection Agency, March 2014, pg. 26.

non-point sources. The EPA Study develops an estimate of administrative and implementation costs associated with NPDES permits for three types of point sources on which the proposed expansion of CWA jurisdiction may impose incremental costs: a) polluted storm water runoff from construction sites, b) runoff from Concentrated Animal Feeding Operations (CAFOs), and c) runoff containing pesticides generated by biological and pesticide applicators that obtain Pesticide General Permits (PGPs). EPA's estimate of incremental costs associated with Section 402 compliance total \$37.7 million, which is 21 percent of the estimated incremental costs associated with Section 404 compliance (EPA Study, Exhibit 16). Below we describe our concerns with the EPA's estimation procedure and suggest ways in which the accuracy and reliability of the estimates may be improved.

3.2.1 EPA's Projected Jurisdictional Increase in NPDES Permitting

The EPA Study estimates incremental cost increases in NPDES permits for all three categories of point source discharges by applying the 2.7 percent projected increase in CWA jurisdiction under Section 404 permitting, to a historical measure of NPDES costs or permitting activity specific to point source activity. Due to the difference in the purpose of Section 404 and 402, however, there is no relationship or basis for using the same increment of increase. Further, the EPA study does not provide examples or data. Rather, the Study states: "a portion of these entities may be subject to an assertion of jurisdiction to a similar extent of those seeking 404 permits" because their activities "likely occur in similar locations as CWA 404 dredge and fill discharge with respect to proximity to "isolated waters," small streams, and their adjacent wetlands" (EPA Study, p.6). This approach, however, is too important to stakeholder outcomes to handle so lightly, and additional data or analysis is needed to determine the validity of this claim.

3.2.2 Costs of Incremental Stormwater NPDES Permits

The EPA Study method of estimating incremental stormwater NPDES permit related costs begins with cost estimates from 1998, then applying the same estimated 2.7 percent incremental increase in CWA jurisdiction. These 1998 costs are adjusted based on the percentage increase of stormwater NPDES permits issued in 1994 compared against the number of stormwater NPDES permits issued in 2011. The resulting incremental costs are converted to 2010 dollars. This method likely underestimates actual "program growth." Both 1994 and 2011 were recession years, when construction activity would be depressed relative to other periods in the NPDES permitting program. This is evidenced by the data presented in Figure 1. Further, the limited data set is not conducive to the use of best methodological practices, but rather defaults to historical stormwater NPDES permit and construction costs for a given year, based merely on availability.

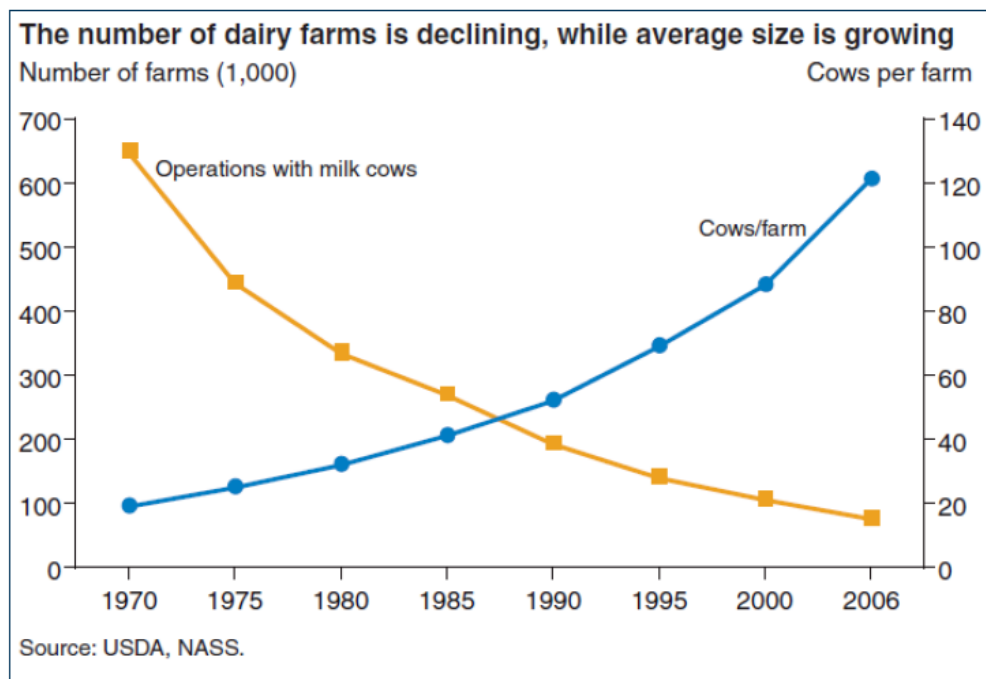
A more reliable approach would be to: 1) use the average number of annual stormwater NPDES permits over a historical period, 2) compute the actual Section 402 permit rate, 3) project the expected number of applications, 3) apply the appropriate percent incremental increase based on expected increase in CWA jurisdiction, and 4) use "per permit" processing and construction costs from more recent permits. This approach has the

advantage of both accounting for variability in construction activity, an industry well-recognized as highly cyclical, and the use cost data from more recent plans that better reflect the nature of stormwater plans and associated costs, than would construction sites from the mid-1990s.

3.2.3 Costs of Incremental CAFO NPDES Permits

The EPA Study estimates incremental CAFO NPDES permit implementation costs starting with 2001 cost estimates, and applying the estimated 2.7 percent incremental increase in CWA jurisdiction. This is adjusted to reflect the decrease in permit holders that occurred between 2001 and 2011. The resulting incremental costs are then converted to 2010 dollars. While the number of CAFOs has declined over the period considered, the consolidation in the U.S. livestock industry has led to fewer, but much larger operations. Figure 2 contains data published in a study by the United States Department of Agriculture Economic Research Service on the U.S. Dairy Industry illustrating this trend (MacDonald et al. 2007). As shown in Figure 2, the sharpest increase in the average size of dairy operations occurred between 2000 and 2006.²¹¹ By using program costs from 2001, the cost of current CAFO NPDES permits associated with larger operations may be understated. We recommend that EPA investigate whether the average cost of CAFO NPDES permits has increased over the period in which the number of CAFOs and corresponding permits decreased. (p. 47-49)

²¹¹ Of note is that increases in the size of dairy farms have been the most dramatic in the Western and Southwestern United States relative to the United States as a whole.



Note: Figure is presented as published in *Profits, Costs, and the Changing Structure of Dairy Farming*, Economic Research Report No. 47, Available online at: <http://www.ers.usda.gov/publications/err-economic-research-report/err47.aspx>

Number of dairy farms is declining, while average size is growing

(p. 47-49)

Agency Response: See essay 11.4 above. See also essay 12.3, explaining that the final rule does not change or impose new requirements for complying with section 402/NPDES, including CAFO and pesticides general permit (PGP) permitting requirements. With regard to the final rule’s policy on stormwater control features, see essay 7.4.4. See Economics Analysis Section 8 regarding costs and benefits for the NPDES program, including individual and general NPDES permits, CAFOs, pesticides, and stormwater.

Golf Course Superintendent’s Association of America, et al. (Doc. #14902)

11.2.311 If almost all water bodies on a golf course are deemed a WOTUS, many routine golf course maintenance activities (such as fertilizer and pesticide applications) will be deemed to result in a “discharge” to those so called WOTUS. Activities that result in a “discharge” cannot legally go forward without a required Section 402 National Pollutant Discharge Elimination System (NPDES) permit. Most important, there is no legal right to a permit to “discharge” into WOTUS, or any deadline on EPA’s process to issue a permit. Permitting could take months or even years, or permits may simply be unavailable.

Golf facilities could be required to get permits for all activities in or near WOTUS and that will mean a substantial increase in costs to our small businesses for permits,

mitigation, monitoring and assessments as well as increased costs for permit review and issuance to be borne by state governments. It also increases our liability to manage the property due to the threat of citizen action lawsuits. This rule could be a significant vehicle for lawsuits on golf courses because it presumes that all waters are subject to federal jurisdiction. (p. 9-10)

Agency Response: Please see essays 11.2, 11.4, and 12.3. The final rule does not change or impose new requirements for complying with the pesticides general permit (PGP). See also section 8 of the Economics Analysis.

11.4.4.1 Costs

Agency Summary Response

Please refer to the summary response provided at the beginning of Topic 11.4.

Specific Comments

St. Johns County Board of County Commissioners (Doc. #5598)

11.2.312 In St. Johns County the stormwater management is funded by the county general fund. If stormwater costs significantly increase due to the proposed rule, not only will it potentially impact our ability to focus available resources on real, priority water quality issues, but it may also require that funds be diverted from other government services such as education, police, fire, etc. (p. 2)

Agency Response: See Summary Responses to Topics 11.4 and 7.4.4.

Natural Resources (Doc. #14426.1)

11.2.313 The County owns and operates 149 wet detention pond facilities, each of which discharges into the MS4 and eventually to WOTUS or directly into a WOTUS. Assuming the cost to comply with water quality standards and TMDLs in Joe's Creek Detention Pond #1 represents an average for all County ponds, the proposed definition of WOTUS could cost the County TMDL and NPDES programs and additional \$85 million. This estimate does not include complying with water quality standards in ditches or other similar stormwater conveyances. (p. 4)

Agency Response: See Summary Responses to Topics 11.4, 12.3, and 7.4.4, and section 8 of the Economics Analysis.

11.2.314 PERMITTING REQUIREMENTS FOR MS4 MAINTENANCE

The County currently utilizes the services of consultants to prepare permit applications and requests for permit exemptions to conduct maintenance activities on the MS4 system that may have impacts to WOTUS under current rules. The costs associated with preparing these permit applications or exemption requests do not differ significantly per

linear foot due the fact that the permitting agencies require, in most cases, the same information be submitted for application for permit or exemptions. Examples of these applications are attached for reference. The current costs that the County incurs in these applications range from \$16 to \$23 per linear foot and only include the cost for preparing the application and do not include survey costs. The two recent examples below include projects from the higher and lower range of these estimates.

Site 1: B7 Ch. B Hanby

This site received an exemption from the FDEP. The total linear foot (LF) of aintenance sediment removal is 450 LF. The cost to collect the data necessary for the permit application for this location was \$10,331. This resulted in a cost of approximately \$23/LF.

Site 2: Ch. R – South Creek – Steeplechase

This site received an exemption from the FDEP. The total linear feet of maintenance sediment removal is 673 LF. The cost to collect the data necessary for the permit application for this location was \$10,238. This resulted in a cost of approximately \$16/LF.

Based on the sites listed above and other similar sites that the County is currently obtaining maintenance related permits, below are the anticipated costs that would result from the proposed changes to the WOTUS rule. The costs presented below do NOT include the survey costs associated with the permit or exemption request and use the lower estimate of \$16/LF.

Ditches:

- Total mapped (not including major channels) within our MS4 = 1,318,867 LF (250 miles)
- Average cost to compile permit applications or exemptions is approx. \$16/LF resulting in total cost of \$21,101,872 every five years.
- Total mapped (not including major channels) in FEMA floodplains = 440,648 LF (83 miles) which is 33% of all the ditches in our MS4
- Average cost to compile permit applications or exemptions is approx. \$16/LF resulting in total cost of \$7,050,368.

Pipes:

- Total mapped within our MS4 = 3,563,411 LF (675 miles)
- Average cost to compile permit applications or exemptions is approx. \$16/LF resulting in total cost of \$57,014,576.
- Total mapped in FEMA floodplains = 833,023 LF (158 miles) which is 23% of all pipes in our MS4

- Average cost to compile permit applications or exemptions is approx. \$16/LF resulting in total cost of \$13,328,368.

The County has costs associated with compliance with the current WOTUS rules primarily in areas designated as Major Channels. These existing costs are expected to increase since only some of the Major Channels require permits for maintenance related activities. Under the proposed rule, all of the County's Major Drainage channels will be expected to go through some level of permitting. The numbers presented below are the anticipated costs associated with this effort and do not include survey costs.

Major Channels within our MS4:

- Total mapped within our MS4 = 849,946 LF (161 miles)
- Average cost to compile permit applications or exemptions is approx. \$16/LF resulting in total cost of \$13,599,136.
- Total in FEMA floodplains = 667,516 LF (126 miles) which is 78% of all Major Channels in our MS4
- Average cost to compile permit application is approx. \$16/LF resulting in total cost of \$10,680,256.

Presented below is a list of sample projects that are in the design and permitting phase or that have been completed by Pinellas County that would require permitting under the proposed rule, but are exempt under the current rule. Maps showing the project limits are attached.

Please note this list is not all inclusive, and the intent is to demonstrate the types of projects the County implements to improve water quality and natural systems, and to provide flood protection, that will most likely require an USACE permit if the proposed rule is promulgated.

Crystal Bay Mobile Home Park (Exhibit B)

The Crystal Bay mobile home park project involves removing sediment and invasive species of plants from an existing manmade drainage system. Currently, the site will qualify for an exemption from federal permitting through authority delegated to the FDEP. Under the proposed rule, the site would likely be determined to have a significant nexus as it is within the floodplain of a jurisdictional water and has a normal connection at high tide through a series of culverts.

The anticipated additional cost for work to be completed at Crystal Bay Mobile Home Park as a result of the proposed rule is approximately \$25,920 based on similar current projects.

Joe's Creek Pond 3 (Exhibit C)

This existing stormwater pond was constructed in the late 1980's to provide flood protection within the Joe's Creek watershed. This existing pond received a permit from

the SWFWMD. The pond is currently being maintained to be in compliance with the approved SWFWMD permit. Current maintenance activities consist of spraying for nuisance vegetation and mechanical removal of nuisance aquatic vegetation. Sediment removal activities are anticipated in the near future. Under the proposed rule, this site will be considered a WOTUS because it is directly connected to Joe's Creek, which is currently a WOTUS.

The anticipated additional cost for maintenance of Joe's Creek Pond 3 as a result of the proposed rule is approximately \$21,000 based on similar current projects.

Lake Seminole Bypass Canal Tributaries (Exhibit D and E)

The County regularly inspects and removes sediment or excessive vegetation in ditches to maintain conveyance capacity and reduce flood risks in the area. The Bypass Canal tributary ditches flow into the Lake Seminole Bypass Canal, which was constructed in 1976 to divert flows around Lake Seminole for flood control. The Bypass canal discharges into Long Bayou, a current WOTUS, thus the Bypass Canal tributaries will also be considered WOTUS under the proposed rule.

The anticipated additional cost of maintaining these canals as a result of the proposed rule is approximately \$51,840 based on the \$16/LF estimate described above.

Lake Seminole Ditches and Tributaries (Exhibits D, F and G)

The County regularly inspects and removes sediment or excessive vegetation in ditches to maintain conveyance capacity and reduce flood risks in the area. Ditches that discharge to Lake Seminole will be considered WOTUS under the proposed rule because they are directly connected to Lake Seminole which is currently a WOTUS.

The anticipated additional cost for maintaining these ditches as a result of the proposed rule is approximately \$35,200 based on the \$16/LF estimate described above.

Tanglewood Trail Sidewalk and Drainage Improvements (Exhibit H)

This project modified an existing stormwater management system. The work included improvements to upland cut roadside ditches that are located within a floodplain and that discharge into Brooker Creek. This project was permitted by SWFWMD, but the USACE did not respond to the application.

The anticipated additional cost of this project as a result of the proposed rule is approximately \$46,864 based on the \$16/LF estimate described above. (p. 5-7)

Agency Response: See Summary Responses to Topics 11.4, 12.3, 14.1 and 7.4.4, and section 8 of the Economics Analysis. While the agencies cannot speculate about the jurisdictional nature and permitting needs for specific waters and projects, essay 7.4.4. and the responses thereunder describe the final rule's policy on stormwater conveyances. See also Compendium 6 regarding the jurisdictional policies for ditches.

Florida Stormwater Association (Doc. #14613)

11.2.315 Fiscal Impacts - Contrary to the conclusions reached in EPA’s Economic Analysis of the Proposed Regulations, FSA has determined that there will be very profound negative fiscal impacts on MS4 permit holders in Florida. Please see the attached documents, which are incorporated by reference herein.

Our analysis concludes that the cost of implementing the provisions of the proposed regulations would easily exceed \$1 million per mile of roadside ditch and that the cumulative impact on selected county geographic areas would exceed several hundred million dollars each, and in some cases more than \$1 billion. (p. 5)

Agency Response: Please see Summary Responses to Topics 11.4. See also Summary Response to Topic 7.4.4 regarding the final rule’s policy on stormwater conveyance features, and Compendium 6 regarding the final rule’s policy on ditches.

City of Golden Public Works (Doc. #14617)

11.2.316 The proposed rule making should be delayed until a revised cost benefit analysis which accurately captures the cost to MS4 regulated agencies is produced and published, and time is afforded to impacted entities to review and comment. (p. 3)

Agency Response: Please see Summary Responses to Topics 11.4. See also Summary Response to Topic 7.4.4 regarding the final rule’s policy on stormwater conveyance features, and Compendium 6 regarding the final rule’s policy on ditches.

Water Advocacy Coalition (Doc. #17921.15)

11.2.317 **2. Section 402 NPDES Permits**

The CWA section 402 National Pollutant Discharge Elimination System (NPDES) permit program controls water pollution by regulating point sources that discharge pollutants into “waters of the United States.” As discussed in further detail below, EPA states that the proposed rule would be cost-neutral or minimal with respect to traditional section 402 discharge permits such as those for municipal wastewater treatment facilities or industrial operations.

To calculate the incremental costs of the rule with respect to section 402 construction stormwater permitting, EPA used the October 1999 Economic Analysis of Final Phase II Storm Water Rule. EPA then adjusted for a 2.7% increase in jurisdictional waters and a 30% increase in program size.²¹² Accounting for inflation, this yields costs of \$25.6 to

²¹² 30% program growth is derived from 130,000 “construction starts” in 1994 (from 1999 Economic Analysis) to 169,000 construction sites with permit coverage in 2011 (from EPA’s GPRA management measures tracking).

\$31.9 million per year. EPA concluded that the cost impacts for Municipal Separate Storm Sewer Systems (MS4s) would be negligible. However, under the agencies' proposed rule, which, for the first time, includes a regulatory definition of "tributary" that explicitly includes ditches and extends jurisdiction to "adjacent waters," including adjacent non-wetlands, many of the stormwater systems and features themselves could now be classified as "waters of the United States." EPA's economic analysis does not address or quantify the increased permitting requirements for stormwater conveyances that would result from the proposed rule. For example, work on the stormwater conveyances, including work aimed at achieving environmental best management practices (BMPs) as well as routine improvements required by stormwater permits, will trigger section 404 permitting requirements. Additionally, if stormwater conveyances are deemed "waters of the United States," then they will be subject to water quality standards. The costs of complying with water quality standards are discussed in more detail below.

EPA calculated incremental costs from section 402 Concentrated Animal Feeding Operations (CAFO) permitting in a manner similar to EPA's calculations for construction stormwater costs. It scaled up values from a 2003 rulemaking by 2.7% to account for increase in jurisdictional waters, but reduced them by 50% to account for a reduction in program size.²¹³ After converting to 2010 dollars, the incremental costs totaled approximately \$5.5 million per year.

EPA calculated costs associated with increased numbers of Pesticide General Permits (PGP) to be between \$2.9 and \$3.2 million annually for operators, but made no attempt to calculate the increased impact on government entities. Growth in PGP permitting was determined to be almost 1000%, from 35,376 affected entities where EPA administers permits to a potential group of 365,000 entities where states administer permits.

EPA claims that a definitional change will have little to no effect on traditional Section 402 NPDES discharge permits such as those for municipal wastewater treatment facilities or industrial operations. The exclusion of potential section 402 costs associated with the NPDES permitting is troubling. EPA provides several possible explanations for its observation that discharging entities are likely to acquire permits regardless of the jurisdictional status of the receiving water, and will not be impacted by a definitional change. One explanation is that EPA has authorized 46 states to administer section 402 permitting. Because state-level jurisdictional waters must be at least as inclusive as "waters of the United States," many states already have implemented the sort of programmatic changes being proposed in this analysis. However, this explanation has limited merit, given EPA's assertion that "approximately two-thirds of all states place

²¹³ Benefit values taken from Federal Register volume 68 number 29. 50% decrease in program growth derived from ~15,000 CAFOs considered in 2003 analysis to 7,318 permit holders in 2011 (from EPA's GPRA management measures tracking).

some legal constraint on the authority of state and local government officials to adopt aquatic resource protections beyond waters of the U.S.” Either way, all states will need to revisit their programs and EPA will need to reassess whether states comply with the definitional changes. As a result, both federal and state agencies will incur additional costs. Moreover, EPA completely fails to acknowledge or account for the fact that the proposed rule could affect compliance feasibility and costs for facilities that already have NPDES permits, by classifying as jurisdictional ditches, ponds, and other water features on facility sites, that facilities use for plant operations and/or compliance, and for which no discharge permit has been required previously. EPA does not account for additional costs that facilities will incur to comply with effluent limits and implement BMPs for these newly jurisdictional features. Nor does EPA’s analysis account for the fact that work done to comply with NPDES permits for these newly jurisdictional ditches, ponds, and other water features (e.g., installation of structures for sediment removal) will trigger costly section 404 permitting requirements and requirements to comply with water quality standards. (p. 71-73)

Agency Response: See Summary Responses to Topics 11.4 and 12.3. See also economics analysis section 8.

Texas Mining and Reclamation Association (Doc. #10750)

11.2.318 (...) If not, the Agencies should specify that outfall and receiving water designations in previously issued NPDES permits cannot be modified based on the new rule. If so, the Agencies have not considered these costs in their economic analysis, and must do so. (p. 12)

Agency Response: See Summary Responses to Topics 11.4 and 12.3. See also economics analysis section 8.

American Petroleum Institute (Doc. #15115)

11.2.319 3.1.2.3 The Agencies’ analysis underestimates the change in CWA 402 Stormwater Permitting compliance cost by using the unrealistically low 2.7 percent increase in jurisdictional waters.

The Agencies used the Economic Analysis of the Final Phase II Stormwater Rule to estimate the potential incremental increase in construction stormwater permits under the Proposed Rule.²¹⁴ The Agencies used the 1998 costs for construction, the aforementioned 2.7 percent estimated increase in jurisdictional waters, and 30 percent increase in program growth²¹⁵ to determine an overall annual cost for construction of \$25.6 to 31.9 million. The actual costs are expected to be significantly higher than what was presented

²¹⁴ EPA, October 1999.

²¹⁵ 30% program growth is the increase from the number of construction starts in 1994 (130,000, EPA 1999 Economic Analysis) to 2011 (169,000 EPA’s GPRA Data).

when the percentage increase in jurisdictional waters is correctly estimated (i.e., the Agencies' estimate of percent increase of 2.7 percent in jurisdictional waters is much lower than what is expected to result from the Proposed Rule [see Section 4]). (p. 66)

Agency Response: See Summary Responses to Topics 11.2 11.4, 12.3, and 7.4.4, and see Section 8 of the economics analysis.

City of Goose Creek, South Carolina (Doc. #18827)

11.2.320 Due to the significant potential fiscal impact of the proposed new definition of Waters of the United States on MS4 communities with no clear demonstration of environmental benefits, the City of Goose Creek would like to go on record as objecting to the proposed rule and definition as currently proposed. (p. 2)

Agency Response: See Summary Responses to Topics 11.4 and 7.4.4.

11.4.4.2 Benefits

There were no identified comments under this topic area.

11.4.5. Other

There were no identified comments under this topic area.

11.5. SUPPLEMENTAL COMMENTS ON COSTS AND BENEFITS

Specific Comments

11.2.321 Medina County Commissioners (Doc. #2718) is our contention that the increase financial costs associated with this expansion of regulatory compliance with Clean Water Act regulations will provide little or no corresponding improvement in water quality in our county. We believe that regulation of the nation's waterways must be done in a manner that responsibly protects the environment. However, it should not involve the unnecessary and costly expansion of the federal government to the detriment of the nation's economy, the imposition of massive costs on local governments, nor the abrogation of private property rights that are rooted within the proposed rule changes. (p. 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis.

W. V. Giniecki (Doc. #4262)

11.2.322 The costs to municipalities and their highway departments, economic development projects in Upstate New York and a multitude of businesses will be high in order to comply with a significantly expanded CWA. One Upstate county estimated that its highway department alone would need an additional \$1 million from taxpayers just to keep up its current maintenance protocols: How do our communities begin to afford this type of overregulation? (p. 1)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis.

Council of the Borough of Ferndale, Cambria County (Doc. #4825)

11.2.323 (...) WHEREAS, the financial impact of the proposed regulation to the Town will create significant ongoing maintenance costs and delays to Town citizens due to the need for jurisdictional determinations and expanded jurisdictional authority of the EPA and Corp; and (...) (p. 1)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis.

Nevada County Resource Conservation District (Doc. #4830)

11.2.324 More importantly, the agencies' cost-benefits analysis-Economic Analysis of Proposed Revised Definition of Waters of the U.S. (March 20 1 3), acknowledges the data used and assumptions made to craft the analysis may be flawed. A review of the proposed rule entitled *'Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the United States'* by Economist David Sunding, Ph.D. with The Brattle Group notes that "*The errors, omissions, and lack of transparency in EPA~ study are so severe as to render It virtually meaningless.*" (p. 2)

Agency Response: The agencies have improved their economic analysis in response to comments. See summary response to Topic 11 and the Economic Analysis, as well as additional responses under Topics 11.2, 11.3, and 11.4.

Bonner County Board of Commissioners (Doc. #4879.1)

11.2.325 Counties, communities and private landowners will continue to be financially burdened to greater extents if the expansion of the rules is approved as written. All these entities deserve the right to timely decisive actions by federal agencies, which have not been provided for decades, to proceed with land rights, management of local properties development and public right-of-ways. Local agencies will suffer tremendous addition costs and public disputes because of increased federal management. (p. 3)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis.

11.2.326 Counties and local landowners could suffer more than a 25% increase in management expenses if the proposed expansion of the definition is approved. There are decades of evidence that local agencies have effectively managed current non-navigable waterways and wetlands efficiently without the need for federal agency expansion or permits. Most property owners would agree that "Waters of the U.S." should be only those waters leaving state boundaries that flow continuously the entire year. (p. 3)

Agency Response: Members of Congress, developers, farmers, state and local governments, energy companies, and many others requested new regulations to make the process of identifying waters protected under the CWA clearer, simpler, and faster. In this final rule, the agencies are responding to those 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.

The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. See summary responses to Topic 11 and the Economic Analysis.

Kansas Senate Committee on Natural Resources (Doc. #4904)

11.2.327 The Regulatory Flexibility²¹⁶ Act requires proposed Major Federal Actions to be based upon adequate information, a good understanding of downstream consequences, and demonstration that the least net cost alternative to local governments has been selected. (p. 2)

Agency Response: See also summary response to Topic 11.1 RFA/SBREFA.

Congress of the United States (Doc. #4983)

11.2.328 The Chesapeake Bay is an economic engine for our region, with an estimated value in the tens of billions of dollars range, based on the fishing and shipping industries, real estate, recreation, and tourism. (p. 1)

Agency Response: Protecting the long-term health of our nation's waters is essential. The Clean Water Rule strengthens the protection of waters for the health of our families, our communities, and our businesses. Our nation's businesses depend on clean water to operate. Streams and wetlands are economic drivers because they support fishing, hunting, agriculture, recreation, energy, and manufacturing. Pollution threatens these economic drivers and we all know the dangers of pollution upstream: water flows downstream and carries pollutants with it. Right now, many streams and wetlands lack clear protection from pollution and destruction. One in 3 Americans, 117 million of us, get our drinking water from streams that are vulnerable. Sixty percent of the nation's stream miles – the vital headwaters that flow downstream after rain or in certain seasons – aren't clearly protected. Millions of acres of wetlands that trap floodwaters, remove pollution, and provide habitat for fish and wildlife are at risk.

L. Banks (Doc. #5554.1)

11.2.329 3. I attended an EPA meeting in Winnsboro in which Mr. Curry, the Region 6 Administrator was present. I want to extend appreciation on behalf of our local farmers for Mr. Curry taking time to personally hear our concerns and trust that minutes of the meeting were documented to reflect that most all in attendance seemed to be against the new rule being approved. I have also read the EPA website which defines the impacts of the new rule. Some of the statements on impacts are:

(...) B. The EPA contends that the new rule 'doesn't broaden coverage under the CWA'— THIS IS NOT CORRECT! The new rule's extension of jurisdiction will exponentially expand EPA jurisdictional authority. Proof of this is reflected even in EPA's projected additional costs for additional permitting activity (up to \$279,000,000.00/yr). Also- who

²¹⁶ 40 CFR §1501 - 1502

will pay this-has to be us cash-strapped farmers and folks out in the rural areas where most of the newly ruled jurisdictional ditches will be! (p. 1)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis. The Rule retains exemptions for certain agricultural uses and practices [see for instance, Topic 7.2 on Prior Converted Cropland] and clarifies excluded waters.

11.2.330 (...) F. The EPA contends that the new rule 'saves business time and money'—HOW CAN THIS BE TRUE? Just look at EPA's own annual cost of additional \$279,000,000.00 which will be paid by landowners. Doesn't sound like savings to me. (p. 1)

Agency Response: The agencies believe the rule will expedite the permit review process in the long-term by clarifying jurisdictional matters that have been time-consuming and cumbersome for field staff and the regulated community for certain waters in light of the 2001 and 2006 Supreme Court cases. See Summary Response to Topics 11, 11.2, 11.3, 11.3.1, and 11.4 on costs.

11.2.331 (...) G. The EPA contends that the new rule provides more benefits than costs.' While this is what the Economic Analysis states, I would argue that the CWA 404 Wetlands Mitigation benefits of up to \$345,000,000.00 annually should also have been considered as a cost since most of the costs for this mitigation benefit would have to be borne by the owners of the additional 1332 acres which will be impacted by this rule change. I believe all these cost numbers are extremely low if EPA interprets the new rule to extend up ditches and drainage waterways on the farm. The remainder of the benefits are supposedly cost savings for Government Agencies who will be able to save money by not having to think and consider what their regulatory jurisdiction limits will be under the new rule? (p. 1 – 2)

Agency Response: See the Economic Analysis and summary responses to Topics 11.3, 11.3.1, and 11.3.2 on wetlands mitigation costs and benefits.

L. Banks (Doc. #5554.2)

11.2.332 6. Has the Corps/EPA/NRCS and other Fed and state agencies determined the impact of the proposed rule on future flood control, highway construction and infrastructure improvements, erosion control or other ag conservation projects? I believe that with extended jurisdiction(supported by the added \$279,000,000.00 annually to evaluate permits), the mitigation requirements for the added jurisdictional areas of impact

will be of such magnitude that it will render the benefits/costs of any of the new improvements as infeasible. (p. 1)

Agency Response: See the Economic Analysis and summary responses to Topics 11.3, 11.3.1, and 11.3.2 on wetlands mitigation costs and benefits. City and Regional Planning, University of North Carolina at Chapel Hill (Doc. #7006)

11.2.333 I am very supportive of the proposed expansion of the Clean Water Act's definition of waters of the United States. I have attached peer-reviewed research - both my own and from colleagues - showing that unified and stable ecological restoration requirements under the Clean Water Act's definition of Waters of the United States (WOTUS) actually increase certainty in the development industry and ecological quality. The attached Robertson/Hayden (2008) article reveals the damages of eliminating Clean Water Act jurisdiction in 2001 SWANCC case. Here, we see the direct, negative impacts on the development and mitigation banking industries due to reductions in the coverage of the CWA. In the attached BenDor et al. (2001) paper, we explore the impacts of uncertainty on these industries; we learn that uncertainty is the enemy of jobs and economic growth (both for development and ecological restoration), not regulations themselves. Creating uniform federal jurisdiction simplifies market activity. (p. 1)

Agency Response: Thank you for the comment and additional information. See summary responses under Topic 11 and subsections, as well as the Economic Analysis.

11.2.334 Ecological restoration is not a dead weight economic loss. I have attached a final paper ("Estimating the Size and Impact of the Ecological Restoration Economy" + technical appendices), which is currently in peer review at a scholarly journal, demonstrating that ecological restoration actually produces \$25.4 billion in economic output (\$9.5 billion direct, and \$15.5 billion induced effect on other industries). Increases in required ecological restoration will increase the economic **benefits** of enhanced ecological landscapes, as well as produce larger economic impacts (i.e. increased jobs) in a unique industry that hires a large number of workers in a highly educated workforce. Restoration ecology represents the fastest growing area of ecology largely because ecological restoration has become a for-profit enterprise. (p. 1 – 2)

Agency Response: Thank you for the comment and additional information. See the Economic Analysis and summary responses to Topic 11.3.2 and the Technical Science Report.

Iowa State University (Doc. #7975)

11.2.335 **Economic analysis:** The EPA's economic analysis states the proposed rule will result in jurisdictional waters of the United States increasing by 3.2 percent. Numerous questions have been raised about this economic analysis- for example, how it was conducted, what methodology was used, what will be the specific impact in each state

and whether it is representative of the actual situation in each state. The methodology does not produce the true measure of the actual impact of the proposed rule.

Action: We ask that a thorough analysis of the impact of the proposed rule be conducted, with specific information provided by state that includes the number and location of new jurisdictional acres. Also, we ask that clarification be provided on the assumed marginal impact on costs and revenue of these acres. Are these acres that are taken out of production, or acres that will have higher costs due to requiring permits and changes in practices, or both? (p. 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis. See Summary Response to Topics 11, 11.2, 11.3, 11.3.1, and 11.4 on costs.

Pike County (IL) Republican Central Committee, Pike County Republican Party, Illinois (Doc. #7984)

11.2.336 Ordinary activities of small businesses would immediately become subject to a wide variety of federal regulations, including permitting requirements, notifications and recordkeeping, modeling and monitoring, and use approvals. These requirements would impose direct costs, delays, and uncertainty in planning. (p. 1)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis. See Summary Response to Topics 11, 11.2, 11.3, 11.3.1, and 11.4 on costs. See also summary responses to Topic 11 and 11.1 RFA/SBREFA.

Home Builders Association of Michigan (Doc. #7994)

11.2.337 The Agencies, by understating the economic impact on small businesses particularly construction and development firms, have erroneously claimed the proposed rule will not impose a significant economic burden on small businesses.

Using inadequate data and improper baselines to assess the costs of the rule, however, the Agencies have wrongfully certified the rule wd not impose a significant economic burden on small businesses as the Agencies' own extremely limited economic analysis clearly indicates that this rule is likely to have a significant economic effect on small businesses.

In their analysis, the agencies examine the anticipated changes to permitting under CWA Section 404 (development projects that discharge dredge or fill materials into waters of the U.S.). They find that in current practice 98 percent of streams and 98.5 percent of wetlands meet the definition of waters of the U.S. Under the revised definition these figures rise to 100 percent.

They find zero percent of "other waters" (the seventh category in the revised definition) to be covered in current practice, but the revised definition would cover 17 percent of this category.

The agencies have stated this increase in jurisdiction will lead to greater costs for both regulators and regulated entities. *"A change in assertion of CWA jurisdiction could result in indirect costs of implementation of the CWA 404 program: a greater share of development projects would intersect with jurisdictional waters, thus requiring the sponsors of those additional projects to obtain and comply with CWA 404 permits."*

The agencies estimated CWA 404 permit costs would increase between \$19.8 million and \$52.0 million dollars annually, and they estimate that section 404 mitigation costs would rise between \$59.7 million and \$113.5 million annually. These amounts do not reflect additional possible cost increases associated with other Clean Water Act programs, such as Section 402 permitting or Section 311 oil spill prevention plans.

The agencies further stated the economic analysis done with respect to the 404 program increase is likely not representative of the changes that may occur with respect to 402 and 311 permitting, leaving regulators and the regulated community without a clear idea of the additional costs they are likely to incur for these Clean Water Act programs.

Many of these underestimated and unconsidered costs, including those associated with increased permitting, mitigation, and regulatory uncertainty, d be borne by home builders and other small businesses. (p. 3 – 4)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis. See Summary Response to Topics 11, 11.2, 11.3, 11.3.1, and 11.4 on costs.

Eddy County Board of Commissioners (Doc. #9693)

11.2.338 Proposed regulations would have a large impact by increasing cost direct or indirect. EPA's cost benefit analysis of assumptions and methodologies are poorly done. Agencies just added 3.2 percent of waters will be jurisdictional. This analysis is misleading when EPA did not attempt to determine the new numbers of acres of watersheds, ephemeral drains, ditches, and isolated wetlands that will be regulated under the new rule. EPA should have done a full blown analysis of the increased areas and a cost benefit analysis to the county, but also the federal government. If EPA had done this, the numbers would have increased all factors dramatically. Proposed regulations will not only affect the county, but our economic drivers such as oil and gas, farming and ranching. (p. 1 – 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis. See Summary Response to Topics 11, 11.2, 11.3, 11.3.1, and 11.4 on costs.

11.2.339 EPA needs to comply with the Regulatory Flexibility Act. EPA should address entities affected by the proposed rule, including but not limited to, local counties, cities, towns and villages. The act, Section 553, Title 5 USC, requires the federal agency to analyze the degree of impact. EPA should also re-analyze the degree of impact of regulations. Agencies' study of the cost and impact is misleading and arbitrary and capricious, not only on cost, but a regulatory burden for the people and business. EPA has asserted that this will clarify the jurisdiction of the "Waters of the US" but the proposed definitions are inadequately explained and raises important concerns and questions, if not answered will result in further legal challenges. (p. 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis. See Summary Response to Topics 11, 11.2, 11.3, 11.3.1, and 11.4 on costs. See also summary response to Topic 11.1 RFA/SBREFA.

United States Senate (Doc. #10625)

11.2.340 I strongly support the intent of the CWA and its longstanding role in protecting our water resources. Montanans rely on access to clean water for agriculture and outdoor tourism, both of which generate billions of dollars of economic activity in my state. I continue to hear from Montanans, from sportsmen to producers and businesswomen to those who work in our tourism industry, that the proposed Waters of the United States rule goes a long way in protecting our clean water. However, some have raised legitimate questions about how pieces of the proposed rule would be implemented. Any final rule must be practically implemented on the ground and should reflect the constructive comments you receive during this rulemaking process. (p. 1)

Agency Response: EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.” None of the existing procedures, permitting mechanisms, efficient permitting tools such as general permits, or activity exemptions under Section 404(f) of the Clean Water Act, will be modified as a result of this rulemaking; therefore, existing procedures should not be further complicated by this rule. For more discussion, see summary essay for Topic 11.2 and Compendium #12 on implementation issues.

Anonymous (Doc. #11304)

11.2.341 Though I am not thoroughly convinced that the Small Business Administration's Office of Advocacy fairly conducted a round table discussion to assess the EPA's proposed rules, or portrayed the rules in a productively critical way, I think that perhaps completing an IRFA and a SBAR panel could only further help their case. Many small and large businesses are in support of cleaner water and clearer regulation jurisdiction, such as those who have a clearer conscience about what they dump or use on their land near bodies of water. The proposed rule would benefit from engaging their voices in the discussion more, especially those businesses in the agricultural sector. (p. 2)

Agency Response: See Summary Response for Topic 11.1 RFA/SBREFA.

Anonymous (Doc. #11481)

11.2.342 The new rule does not promote reduction in transaction costs for either the regulated community and the agencies because it promotes evaluation of jurisdictionality on a case-specific basis even more than the current rules do. This benefits neither the agencies which are already operating on a threadbare budget, nor the regulated community because it ties their hands and limits their decision making abilities. (p. 1)

Agency Response: EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.” The final rule includes several changes to provide the additional clarity requested. The changes include identifying the specific functions to be assessed 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. See summary responses to Topic 11 and the Economic Analysis. See summary responses to Topic 11.3, 11.3.1 and 11.4 on costs.

Board of County Commissioners, El Paso County, Colorado (Doc. #11487)

11.2.343 (...) WHEREAS, the "Waters of the United States" rule, as currently proposed will impose additional regulatory burdens on local communities and economies without any demonstrated long-term environmental benefits; and

WHEREAS, the proposed rule should it become effective, will hamper beneficial development, increase cost of infrastructure and maintenance, and exacerbate the current unacceptable level of uncertainty in the permitting process; and

WHEREAS, the proposed rule would further complicate the permitting and approval process, negatively impacting the ability of local jurisdictions to timely and cost effectively respond to the significant challenges noted above; and

WHEREAS, the proposed rule change, if adopted, will cause significant impact on public safety and economic prosperity and will harm local farmers, ranchers, and business and will negatively impact County owned and maintained infrastructure and the cost to our taxpayers will be enormous; and (...) (p. 2)

Agency Response: In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis.

Board of County Commissioners, County of El Paso, State of Colorado (Doc. #11587)

11.2.344 (...) WHEREAS, the "Waters of the United States" rule, as currently proposed will impose additional regulatory burdens on local communities and economies without any demonstrated long-term environmental benefits; and

WHEREAS, the proposed rule should it become effective, will hamper beneficial development, increase cost of infrastructure and maintenance, and exacerbate the current unacceptable level of uncertainty in the permitting process; and

WHEREAS, the proposed rule would further complicate the permitting and approval process, negatively impacting the ability of local jurisdictions to timely and cost effectively respond to the significant challenges noted above; and

WHEREAS, the proposed rule change, if adopted, will cause significant impact on public safety and economic prosperity and will harm local farmers, ranchers, and business and will negatively impact County owned and maintained infrastructure and the cost to our taxpayers will be enormous; and (...) (p. 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis.

Commissioner's Court, Collin County, Texas (Doc. #11989)

11.2.345 Furthermore, stormwater management is not funded as a water utility in Collin County, but rather through the county general fund. If stormwater costs significantly increase due to the proposed rule, not only will it potentially impact our ability to focus available resources on real, priority water quality issues, but it may also require that funds be diverted from other government services such as transportation, police, justice, etc. Collin County cannot assume additional unnecessary or unintended costs. (p. 2)

Agency Response: See summary response to Topic 11.4 on costs, and Topic 7 on Features and waters not jurisdictional.

Office of the Board Attorney, Board of Supervisors Jackson County, Mississippi (Doc. #12262)

11.2.346 III. The economic analysis supporting the study is riddled with errors and omissions, making it an unsound basis for expanding the CWA's jurisdictional scope.

The EPA's March 2014 Economic Analysis presents the Agency's estimates of the probable costs and benefits associated with a definitional change to the term "waters of the United States." U.S. EPA & U.S. ARMY CORPS OF ENGINEERS, ECONOMIC ANALYSIS OF PROPOSED REVISED DEFINITION OF THE WATERS OF THE UNITED STATES (2014) ("Economic Analysis." Unfortunately, the Agencies' study relies on a flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of a definitional change. This failing is compounded by the exclusion of several important types of costs. See generally DAVID SUNDING, THE BRATTLE GROUP, REVIEW OF 2014 EPA ECONOMIC ANALYSIS OF PROPOSED REVISED DEFINITIONS OF WATERS OF THE

UNITED STATES (2014) ("Review"). The agencies should re-consider carrying out this major change in the considered jurisdictional, and four others ruled that only "relatively permanent waters" are jurisdictional. *Rapanos v. United States*, 547 U.S. 715, 757, 787 (2006). Justice Kennedy, in the middle, split the difference and rejected both tests—stating that waters are jurisdictional if they have a "significant nexus" to navigable waters. *Id.* at 759. His opinion is the prevailing view of the Supreme Court on what wetlands are jurisdictional under the Act and serves as the basis for the proposed rule. 79 Fed. Reg. at 22192. (p. 4 – 5)

Agency Response: The agencies have improved their economic analysis in response to comments. The improved illustrative economic analysis compares the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis. See also the Technical Support Document for a discussion of the legal basis for the rule. California Central Valley Flood Control Association (Doc. #12858)

11.2.347 Currently, the Economic Analysis for this rule states, "Any incremental costs for routine maintenance of waterways (such as drainage ditches that might newly meet the definition of tributary as proposed in this rule) incurred by local, state, or federal authorities would likely be minimal because of the general permits that the Corps issues to reduce the regulatory requirements for these minor activities." Simply, this is not true. The Association in this letter has identified multiple additional costs incurred by the likely increase in landside levee permitting. Additionally, there are likely to be economic, public safety, and public health costs associated with the proposal that have not been recognized or explored in the analysis.

The Association also begs that perspective be applied to considerations of cost. An increase of project costs by \$1 million may seem minor, in the scheme of public works projects. However, recall that flood control agencies may have maintenance budgets of \$50,000 or less. Flood control agencies must borrow the money for special projects from commercial banks. An additional \$1 million could mean the difference between loan approval and loan denial.

It is not clear from the rule package as proposed that the Corps will be issuing new general permits or a Regulatory Guidance Letters for local governments working on public safety projects. The economic impacts analysis states that coverage by general permits is "routine"; however, that has not been the experience of the local agencies that operate and maintain California's flood control efforts. Particularly for "special projects," such as plant remediation, project-specific permits are nearly always required. In

combination, these rules mean that levee projects will more often require permitting, and costs will not be minimal.

As stated earlier, the Association objects to this rule, which will expand the Corps' and EPA's jurisdiction to the entirety of California's Central Valley and Delta. The economic analysis provided by EPA simply fails to capture the full costs, and fails to provide perspective as to the impacts of these costs on flood control and reclamation districts. Minimally, the Association requests and requires that the rule be withdrawn and re-promulgated alongside more permitting assistance and more general permits, as well as additional, helpful guidance from the Corps that is specific to drainage ditches in California's Central Valley and Delta. (p. 7 – 8)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science.

The agencies believe the rule will expedite the permit review process in the long-term by clarifying jurisdictional matters that have been time-consuming and cumbersome for field staff and the regulated community for certain waters in light of the 2001 and 2006 Supreme Court cases. The Corps' Nationwide Permit program, which authorizes Clean Water Act Section 404 discharges that would have no more than minimal adverse impacts to aquatic resources, is available for activities that qualify. See summary responses to Topic 11 and the Economic Analysis. See also summary responses to Topics 6 and 6.2 on ditches.

Family Farm Alliance (Doc. #12983)

11.2.348 **2. The agencies have not provided an adequate or comprehensive economic analysis, and must undertake a more complete economic analysis prior to promulgating the rule.**

The EPA's Economic Analysis for the proposed "waters of the United States" rule fails to provide a reasonable assessment of the proposed rule's costs and benefits. The Economic Analysis suggests that the proposed rule will increase overall jurisdiction under the CWA by only about three percent. But the EPA arrives at this percentage using a questionable methodology that only accounts for the Section 404 program, relies on figures extrapolated from statistics from FY 2009-2010 (a period of extremely low construction activity during one of our nation's greatest economic recessions), and fails to account for the universe of waters and features for which landowners have not previously sought CWA permits. Even the agencies note that "there is uncertainty and limitations associated with the results," due to data and information gaps, as well as analytic challenges. The analysis does not quantify all possible costs and benefits, and values are meant to be

illustrative, not definitive.²¹⁷ Relying on this percentage throughout the Economic Analysis, the EPA systematically and hugely underestimates the economic impact of the proposed rule's new definition of "waters of the U.S."

The EPA's calculations of incremental costs and benefits are also deficient. The EPA's cost analysis is focused on costs associated with the Section 404 program and largely ignores the cost impact of the changes to other CWA regulatory programs due to lack of data. Moreover, the benefit calculation is based on a problematic methodology that relies on studies that are largely irrelevant, do not provide accurate estimates of benefits, and were conducted between 10 and 30 years ago.

As a result of the incompleteness and inaccuracies of the EPA's Economic Report, we believe it is necessary to recalculate the economic analyses to more accurately project the impacts of the proposed rule, and identify effects that the EPA failed to consider the first time. A rule of this magnitude deserves a much more accurate and defensible analyses and accounting of future costs and benefits. (p. 5)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis.

Duncan Valley Electric Cooperative, Inc. (Doc. #13033)

11.2.349 In support of the Proposed Rule, the Agencies rely on the Economic Analysis of Proposed Revised Definition of Waters of the United States (March 2014; Analysis), which suggests that the total jurisdiction of the Agencies would only be expanded by 2.7 percent with the promulgation of the Proposed Rule. While the expansion of federal jurisdiction nationally is in question, the expansion in Arizona will be substantially greater than that.

To demonstrate how much the Agencies have underestimated the degree to which the Proposed Rule will expand federal jurisdiction, DVEC's member owned generation and transmission entity Arizona's G&T Cooperative (AzGT) reviewed the most recent 24 Approved Jurisdictional Delineations (AJD) in the state of Arizona (2013 and 2014) posted on the U.S. Army Corps of Engineers Los Angeles District's webpage (<http://www.spl.usace.army.mil/Missions/Regulatory/FinalRegulatoryActions.aspx>).

²¹⁷ Congressional Research Service (CRS), "EPA and the Army Corps' Proposed Rule to Define 'Waters of the United States'", September 10, 2014 p. 11

Of the 24 Arizona AJDs that were completed in 2013 and 2014 (and that have been posted to the U.S. Army Corps of Engineers website), the U.S. Army Corps of Engineers asserted jurisdiction over surface water features in only 7 of them (or 29%). Therefore, 17 of the 24 JDs had negative determinations for waters of the U.S., i.e. no surface water features were identified.

Of the 7 JDs that had positive determinations, 6 had jurisdiction asserted only over relatively permanent waters (RPWs, which refer only to intermittent or perennial waters). As such, in only 1 of 24 (or 4%) of approved JDs for Arizona, completed in 2013 or 2014, did the U.S. Army Corps of Engineers assert jurisdiction over ephemeral washes.

This is in contrast with the Proposed Rule, wherein the Environmental Protection Agency states that most ephemeral streams will likely be considered tributaries, i.e. waters of the U.S. It is reasonable to conclude therefore that most or all of the 17 negative determinations described above would have some degree of federal jurisdiction under the new rule. Based on the number of recently approved JDs alone, the extent of federal jurisdiction could increase by as much as 240% in Arizona.

This analysis is based on readily available public information and clearly illustrates that, at least regionally, the increase in the extent of waters of the U.S. under the Proposed Rule would be much larger than that assumed by the Agencies in their Analysis. The Agencies expansion of authority is woefully underestimated in the Analysis.

If the Proposed Rule were to be implemented, any activity that will result in the discharge of fill material to an ephemeral wash, no matter how small, will require a Clean Water Act Section 404 permit. This includes activities ranging from the construction of a substation to maintenance of an unpaved road. The cost of securing a Section 404 permit can be substantial, even if a general permit (such as a Nationwide Permit) is available. A 2002 article in the Natural Resource Journal estimated that “the cost of preparing a nationwide permit application averages \$28,915” nationwide. This cost, escalated at 3% per year for inflation, equates to \$41,000 in 2014 dollars. This substantial cost can impact the viability of many small projects. Securing an individual permit is a considerably more onerous, and expensive, task. (P. 1 -2)

Agency Response: The agencies had access to JD records for over 1,000 streams in Arizona for the baseline period, and indeed the percent negative JD was the highest for the nation (about two-thirds negative). However, the baseline mitigation levels in Arizona are also quite low (i.e., even where JD are positive in Arizona, not much if any mitigation is required), so the relatively larger percent increase in assertion of jurisdiction did not result in much larger total stream mitigation costs compared to other states (between \$185 and \$344 thousand per year). The agencies also estimated costs for obtaining additional permits. See summary responses under Topic 11 and the Economic Analysis. See also Topic 14.1 on site-specific examples.

Sitka Economic Development Association (Doc. #13023)

11.2.350 WHEREAS, additional federal permitting and regulations resulting from the proposed rule will create substantial direct and indirect costs for compliance that will burden the already fiscally challenged communities of SEAK, including CBS; and

WHEREAS, any additional permitting regulations and their associated costs will impede the development of residential and commercial property and further restrict the ability of communities to build housing that is affordable to their residents and workforce; and

WHEREAS, the proposed rule would adversely affect the ability of CBS to market and sell its raw water resource for bulk export; and (...) (p. 1)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies’ recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses to Topic 11 and the Economic Analysis.

Todd Wilkinson (Doc. #13443)

11.2.351 The Agencies improperly certified the WOTUS proposal under the Regulatory Flexibility Act. The rule will clearly result in a significant economic impact on a substantial number of small entities. The Agencies must investigate the impact the revised definition would directly impose on small entities and consider less burdensome regulatory alternatives. The U.S. Small Business Administration office of Advocacy agreed with this conclusion. Because the Agencies certification is not valid they are obligated to comply with the RFA. (p. 2)

Agency Response: See summary response for Topic 11.1 RFA/SBREFA.

Legislative Council on River Governance (Doc. #14791)

11.2.352 (...) WHEREAS, the U.S. Environmental Protection Agency (EPA) and U.S. Army Corps of Engineers (Corps) have a proposed rule to redefine “Waters of the U.S,” that could significantly increase the cost and regulatory requirements for state and local governments; and

WHEREAS, when conducting the economic analysis, the EPA evaluated data records from FY 2009-2010 in the Corps’ ORM2 (Operation and Maintenance Business Information Link, Regulatory Module) database; and

WHEREAS, the EPA’s use of the ORM2 numbers to calculate how much the draft rule will increase CWA jurisdiction is problematic because the ORM2 database was not designed for this purpose and its data does not fit this exercise; and

WHEREAS, the EPA cannot accurately quantify increases in jurisdiction by relying solely on the Corps' ORM2 database because the categories of ORM2 records do not correspond with the draft rule's categories of jurisdictional waters; and

WHEREAS, the EPA's use of the ORM2 data throughout its economic analysis to quantify the increase in jurisdiction has resulted in inaccurate projections, and (...) (p. 1 – 2)

Agency Response: See summary response to Topic 11.2 and the Economic Analysis on how the agencies use the ORM2 database for the final rule.

Clean Water Action (Doc. #15015)

11.2.353 **In closing, we urge the agencies to swiftly finalize a strong rule that will take us back closer to the original intent of the Clean Water Act, by restoring protections to all of our small streams and wetlands.** Millions of small streams and wetlands provide most of the flow to our most treasured rivers. If we do not protect these streams and wetlands, we cannot protect and restore the lakes, rivers and bays on which communities and local economies depend. Leaving critical water resources vulnerable jeopardizes jobs and revenue for businesses that depend on clean water, including outdoor activities like angling and water-based recreation. 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. 12)

Agency Response: See Preamble and Technical Support Document for details on the Final Rule. See the Economic Analysis and summary responses under Topic 11 on costs and benefits.

The Heritage Foundation (Doc. #15055)

11.2.354 **Economic Development.** The cost and time required to secure more permits will create disincentives for economic development. The compliance costs and the confusion regarding compliance will create additional barriers. Major projects may be foregone if the regulations were to become law, and this will have harmful and costly impacts on jobs and the economy. (p. 8)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

Destin Water Users, Inc. (Doc. #15357)

11.2.355 The cost to upgrade the plant from making high quality effluent to NPDES quality effluent is pretty high. Approximately \$6,000,000 will be needed for that upgrade. The cost could be higher but it will not be any lower. That is a significant adverse impact on an otherwise well run and financially sound utility. (p. 1)

Agency Response: See summary responses to Topics 11 and 11.4 on costs.

Missouri and Associated Rivers Coalition (Doc. #15528)

11.2.356 The costs of implementing the proposed rule are extensive and will be mostly born by local entities.

In estimating the proposed cost of implementing the rule the Agencies have failed to perform a full accounting of its impacts. The methods and data sets used for estimating the increased costs of Section 404 permitting are not reflective of what may be reasonably anticipated to occur in the future. Perhaps more importantly, the cost estimates fail to consider the true impact across all of the programs derived from the authority of the CWA. In past years the question of CWA jurisdiction as determined by the definition of "waters of the U.S." has most often arisen with respect to Section 404 permitting actions. The proposed rule replaces the definition of "navigable waters" and "waters of the U.S." for all CWA programs, including: Sec. 404 - Dredge and Fill Permits, Sec. 402 - NPDES (stormwater) permitting, Sec. 311 - Spill Prevention Control and Countermeasure Plans (SPCC), and Sec. 303 - Water Quality Standards and Total Maximum Daily Loads (TMDL's.) Of specific concern with respect to costs are those increases to stormwater permitting, including TMDLs. EPA has encouraged states to enhance water quality by implementing TMDLs through MS4 permits and other means, including for non-point source pollution. States presently have some authority to determine how to achieve this and can, and should, take into consideration the costs and benefits to their subdivisions of governments and businesses when deciding how to proceed. Under the proposed rule it is not clear that states will retain that authority or if unfunded mandates for enhancing water quality will be imposed. By not clarifying in the proposed rule that CWA programs beyond Section 404 would not be impacted by the new definition, the Agencies have left open that possibility. Then not addressing potential cost impacts to those programs consistent with how the Agencies have described them evolving, especially implementation of TMDLs, leaves the Agencies negligent and at best inaccurate in their estimation of the financial impact of the proposed rule on local entities and businesses. (p. 5-6)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and

2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

Countrymark Cooperative Holding Corporation, LLC; Countrymark Refining and Logistics, LLC (Doc. #15656)

11.2.357 In addition to the impact on CountryMark's oil and gas operations, the Proposed Rule would likely impact CountryMark's pipeline operations. Finished petroleum products are delivered to customers via pipeline and CountryMark also utilizes crude oil gathering pipelines. The delivery of finished petroleum products requires the building, operation, and maintenance of pipelines and the rights-of-ways in which they are located. The construction, operation, and maintenance of pipelines often require permits under section 404 of the CWA for crossing streams or wetland areas. If, however, entire floodplains are considered waters of the United States, a new pipeline may in its entirety require permits, with ensuing costly permitting and mitigation requirements. These costs could reduce or eliminate the economic viability of many projects. (p. 3)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science. The agencies note that under final the rule, the only floodplain waters that are specifically identified as being jurisdictional as adjacent are those located in whole or in part within the 100-year floodplain and not more than 1,500 feet of the ordinary high water mark of jurisdictional waters. See the Economic Analysis and summary responses to Topics 11, 11.3, and 11.3.1 on costs. See also Topic 3.2.1 on floodplains.

11.2.358 If the new definition of "waters of the United States" is finalized as proposed, it is possible that any land disturbance activity would require a section 404 permit. And, it is likely that activities that currently are either exempt or covered by a Nationwide Permit will exceed the acreage limit and will require an individual permit. According to a 2002 study by David Sunding, professor at UC Berkeley, the average applicant for an individual permit spends 788 days and \$271,596 in completing the process, and the average applicant for a nationwide permit spends 313 days and \$28,915 - not counting costs of mitigation or design changes. Sunding & Ziberman, The Economics of Environmental Regulation by Licensing: An Assessment of Recent Changes to the Wetland Permitting Process, 42 Natural Resources UJ. 59, 74-76 (2002). Updated to 2011 dollars a nationwide cost \$35,954 and an individual permit would cost \$337,577.

The costs and delays that the Proposed Rule would impose are significant. In addition, it would seem highly likely that these additional costs and delays would force many small producers out of business. Many decisions of small producers are dynamic, shifting, and time sensitive. Adding months and years to the permitting process would inhibit and prohibit many projects, and the additional cost burdens would likely not be absorbable. (p. 8-9)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies’ recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science. Along with a narrowing of jurisdiction, the final 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. See the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

City of Jackson, Mississippi (Doc. #15766)

11.2.359 **III. The Agencies’ economic analysis is flawed, providing an inadequate basis for expanding CWA jurisdiction.**

The Agencies present their estimates of probable costs and benefits associated with a definitional change to the term "waters of the United States" in their March 2014 ECONOMIC ANALYSIS OF PROPOSED REVISED DEFINITION OF THE WATERS OF THE UNITED STATES (2014) (“Economic Analysis”). However, the Agencies’ analysis relies on a flawed methodology for estimating the extent of newly jurisdictional waters that systematically underestimates the impact of a definitional change. This defect is exacerbated by a failure to adequately consider several important types of costs. See generally DAVID SUNDING, THE BRATTLE GROUP, REVIEW OF 2014 EPA ECONOMIC ANALYSIS OF PROPOSED REVISED DEFINITIONS OF WATERS OF THE UNITED STATES (2014) (“Review”). The agencies should not finalize this major change in the implementation of the CWA, at least until after the Agencies have prepared, and responded to public comments on, an adequate cost-benefit analysis.

A major shortcoming in the Agencies’ analysis is that it deals only with "other waters" of CWA jurisdiction. Economic Analysis, at 11. Specifically, the analysis focuses on how jurisdiction might change for “isolated waters” that are not jurisdictional under the current CWA framework but are likely to become jurisdictional under the expanded definition of "other waters”). *Id.* at 12. The Agencies failed to conduct a similar analysis to determine how jurisdiction might change for other categories of waters (e.g., newly-defined "tributaries" and "adjacent waters"). *Id.*, at 11. As a result of this failure, the

Economic Analysis fails to consider the universe of areas and features that could become jurisdictional under the proposed rule. Review at 4. In fact, the Agencies' draft rule does much more than expand the scope of the "other waters" category-it also includes several new categories and definitions of regulatory terms, which could result in regulation of new features and areas that are not jurisdictional under the current CWA framework. *Id.* As a result of this shortcoming, the Economic Analysis does not adequately support the proposed rule.

The Agencies' Economic Analysis accounts only for situations where regulated entities seek a Section 404 permit, approved jurisdictional determination, or wetland determination. *Id.* at 7. The Economic Analysis does not recognize or take into account instances where landowners do not engage in the permitting process, either because they have not sought to fill areas of their land and/or because their property is not jurisdictional. *Id.* at 8. The Economic Analysis assumes without justification that the only waters without permits are so isolated that they would not be jurisdictional regardless of the proposed rule. However, the proposed rule, by capturing ditches, intermittent streams, and adjacent waters, would affect many waters that no reasonable person ever previously would think of as jurisdictional. *Id.* For this reason also, the Economic Analysis is fatally flawed.

In addition to these errors in methodology, the Economic Analysis also includes other errors in the calculation of incremental costs. For example, the analysis do not sufficiently account for the incremental costs and delays associated with a rapid increase in permit applications and related paperwork. *Id.* at 17. In addition, the Agencies' estimates of application costs are nearly 20 years old and unadjusted for inflation. These substantial underestimations are intensified by the exclusion of other costs, such as out-of-pocket expenses associated with avoidance and delay. *Id.*

The Economic Analysis systematically underestimates the costs of the proposed rule, creating a downward bias in the study's estimates. Further, there are errors in the Agencies' benefit calculations. For example, the errors associated with Section 404 represent approximately 40% of the total cost and 85% of the total benefits. *Id.*, at 3 1-32. This suggests the entire analysis is fraught with enough uncertainty as to render it insufficient evaluating programmatic impacts of this scale. (p. 6)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2, and 11.4.

Martin Marietta (Doc. #16356)

11.2.360 As a member of the National Stone, Sand and Gravel Association, Martin Marietta has participated in numerous high-level meetings with representatives of the current administration to discuss our concerns over this proposal. Steve Whitt, Martin Marietta Director of Environmental Services, met with Deputy Assistant Administrator Nancy Stoner, EPA Office of Water, on April 4, 2013 and presented information concerning a 1,600-acre site Martin Marietta is developing in North Carolina that highlights the time and effort that it now takes to obtain jurisdictional determinations and 404 Permits for impacts.²¹⁸

For this project, the effort required to obtain the jurisdictional determination included 4 years of site work and 2,100 man-hours of consultant time at a cost of \$250,000. In total, seven field visits were made to the site by local Corps representatives and another five meetings were held in their offices. All of h s effort was for an impact that totals less than 7 acres of wetlands. This process began in early 2004 and more than 10 years later we are still waiting for our permit to be issued. Under this proposal, every step in this process will become more difficult, more costly and the delays will increase as USACOE field offices get further and further behind in their reviews. (p. 1-2)

Agency Response: Thank you for sharing your particular experience. In this final rule, the agencies are making the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science. The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. See the Economic Analysis and summary responses to Topics 11, 11.3, and 11.3.1 on 404 costs. See also Topic 14.1 on site-specific examples.

L. L. Hughes (Doc. #16687)

11.2.361 The proposed rule has no prescribed limits to federal jurisdiction and does not clearly define what waters are to be regulated by the federal government and these regulations will place burdensome new regulations on farmers and industries causing farmers to incur considerable expense to obtain permits to conduct farming activities in these newly defined areas as water. The proposed changes do not include the provision of federal funds to offset the additional cost to local governments and thus, would divert resources from other essential public services. (p. 1 – 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in

²¹⁸ This paragraph was included to provide context to the second paragraph, already included in the final #11 Compendium.

making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

- 11.2.362 More importantly, the agencies cost-benefits analysis Economic Analysis of Proposed Revised Definition of Waters of the U.S. (March 2013), acknowledges the data used and assumptions made to craft the analysis may be flawed. This is of supreme concern to local governments who may serve as both the regulator and the regulated under Clean Water Act. If costs and implications of the changes are not recognized ahead of time, it will have a negative impact on local governments. (p. 2)

Agency Response: The agencies have improved their Economic Analysis in response to comments. The illustrative economic analysis compares the scope of this new regulation to the agencies’ recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

D. Gillham (Doc. #16906)

- 11.2.363 (...) D. Sound economic analysis across all affected communities, industries, and states (including rural, agricultural communities in the West) is especially vital in this challenging time of attempting to rebuild America’s economy and infrastructure. The new rule should not be applied in any form until the economic impacts are fully understood. (p. 2)

Agency Response: The Clean Water Rule clarify that the Clean Water Act protects certain streams and wetlands. Protection for approximately 60 percent of the nation’s streams and millions of acres of wetlands has been confusing and complex as the result of Supreme Court decisions in 2001 and 2006. For nearly a decade, EPA and the Corps have received numerous requests for a rulemaking to provide clarity on protections under the Clean Water Act from members of Congress, state and local officials, industry, agriculture, environmental groups, scientists, and the public.

The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies’ recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

Shasta County Farm Bureau (Doc. #16924)

11.2.364 By expanding the number of waters deemed jurisdictional, activities on farms and ranches may require Clean Water Act permits. Getting a permit to plant grapes, build a fence, or clear out brush is not a simple task. It could require consultation with state and federal agencies, hiring consultants, and waiting for approvals. If the permit is obtained, it often includes paperwork and reporting requirements in addition to any requirements aimed at protecting water quality. Violations of these paperwork or reporting obligations carry potential penalties up to \$37,500 per violation per day-and may be enforced by EPA, the state, or even interested citizens groups. Farmers just want to continue to farm and be stewards of the land, leaving it in better shape for future generations. (p. 2)

Agency Response: The Clean Water Rule will clarify that the Clean Water Act protects certain streams and wetlands. Protection for approximately 60 percent of the nation’s streams and millions of acres of wetlands has been confusing and complex as the result of Supreme Court decisions in 2001 and 2006. For nearly a decade, EPA and the Corps have received numerous requests for a rulemaking to provide clarity on protections under the Clean Water Act from members of Congress, state and local officials, industry, agriculture, environmental groups, scientists, and the public.

The Rule retains exemptions for certain agricultural uses and practices [see for instance, Topic 7.2 on Prior Converted Cropland] and clarifies excluded waters. See the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4. See also responses related to which types of activities generally need a permit and which do not.

11.2.365 Full consideration has not been given to the impacts and burdens farmers and ranchers will face, including increased permitting requirements, farming delays that may be encountered when implementing the Proposed Rule, and the costs of new land use restrictions resulting from this Proposed Rule. (p. 2)

Agency Response: The agencies recognize the vital role of farmers in providing the nation with food and fiber and are sensitive to their concerns. The final rule reflects the intent of the agencies to minimize potential regulatory burdens on the nation’s agriculture community, and recognizes the work of farmers and landowners to protect and conserve natural resources and water quality on agricultural lands. The rule reflects this framework by clarifying the waters subject to the activities Congress exempted under CWA Section 404(f). The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies’ recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this

rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science. The Rule retains exemptions for certain agricultural uses and practices [see for instance, Topic 7.2 on Prior Converted Cropland] and clarifies excluded waters. See the summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

Colusa County Board of Supervisors (Doc. #17002)

11.2.366 Cost Benefit Analysis: CSAC believes the Economic Analysis for the proposed rule is insufficient because it only accounts for federal agency costs, The Economic Analysis did not account for increased federal agency costs associated with the need to increase the agencies' staffing levels to handle the increased workload resulting from the potential we see for expanding CWA authority. The Economic Analysis also did not account for the likelihood that the agencies' staffs will not be increased to handle the increase⁴ workload, resulting in costs on counties associated with delays caused by permit processing. The analysis contends that the new definition of WOUS would have minimal costs to MS4 permittees and agriculture, but they did not take into account various costs and activities. CSAC believes at a minimum the Economic Analysis should be amended to account for the following additional costs at the state, regional and local levels due to the expanded definition of WOUS: increased federal, state and local agency staffing levels to process the increased number of permits; lost capacity and/or function of infrastructure due to delays caused by additional permit processing times and the likelihood of federal, state and local agencies being unable to get the funding needed to handle the increased permit load; increased permit compliance tasks, such as monitoring, assessment, program realignment, training and outreach, and BMPs reporting; and permitting costs, including, compensatory mitigation. (p. 4)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

Cook County, Minnesota, Board of Commissioners (Doc. #17004)

11.2.367 (...) WHEREAS, additional regulatory costs associated with changes in jurisdiction and increases in permits will erect bureaucratic barriers to economic growth; negatively impacting rural roads, road construction, loggers, farms, ranches, small businesses, real estate agents, commercial development, and energy production, to name a few; and

WHEREAS, the Agencies' estimate of the costs and benefits associated with the regulatory redefinition of "waters of the United States" has not been adequately addressed in the proposed rule and cannot be substantiated, the analysis suffers from a lack of transparency; and

According to a May 15, 2014 report by David Sunding, Ph.D. of the Waters Advocacy Coalition, the numerous errors, omissions, and lack of transparency render the analysis virtually meaningless. Estimates of economic impact to other programs rely on an incremental jurisdictional determination that is deeply flawed. The systematic exclusion of various costs and benefits ignores important impact to permit applicants and permitting agencies. The analysis suffers from a lack of transparency. Explanations of calculations, basic assumptions, and discrepancies between various EPA analyses are rarely provided; the entire report is based on records from the Corps' internal ORM2 database, which is unavailable to the public, and thus the validity of the underlying data cannot be determined due to lack of requisite transparency; and

WHEREAS, the language in the proposed rule alleges, "Because fewer waters will be subject to the CWA under the proposed rule than are subject to regulation under the existing regulations, this action will not affect small entities to a greater degree than the existing regulations," it is seen as patently self-contradictory. Expansion of the scope of the EPA and Corps' jurisdictional authority to include practically any and all surface waters of the territorial United States will obviously impact many more small businesses that are already impacted, not fewer. The impact of regulatory overreach of these agencies on small businesses cannot simply be dismissed by pretending that more is less through twisting language and doublespeak; and

WHEREAS, The EPA and Corps' bid for increased jurisdictional authority would have exponentially expanding impacts on small businesses, and these impacts will have significant adverse economic impacts on the general public, including but not limited to reduced land value and, increased costs of doing business due to regulatory burdens (e.g. having to hire consultants to prepare permits, costs of permits, project delays, restrictions on land use and the cost of complying with permitting requirements, including mitigation and failure of projects to make a profit); and

WHEREAS, property owners, particularly loggers, farmers, ranchers and citizens in rural areas, count their land as their principal asset—their land often used as collateral for loans and other capital purchases needed for business operation or capital improvements—the tremendous direct and indirect adverse impacts and cumulative impacts of this proposed rule on small businesses cannot simply be dismissed as the EPA and Corps have decided to do; and (...) (p. 4 – 6)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA

programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2, and 11.4. See also Topic 11.1 on RFA/SBREFA.

Arizona Rock Products Association (Doc. #17055)

11.2.368 The proposed rule is so expansive that it will trigger numerous additional environmental reviews to address such issues as endangered species and historic preservation, which will make it even more difficult and costly for ARPA member companies to ensure timely supply of aggregates for public works projects essential to economic recovery. (p. 3)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4. See Topic 13 on ESA and other questions about requirements.

11.2.369 **The Economic Impacts of the Proposed Rule Will be Significant.**

Speaking of costs, while we pride ourselves as being environmentally responsible, the broadened scope of the rule would directly impact member operations, with little environmental benefit. These impacts would increase costs on public works projects, so these increased costs are borne by the taxpayer. The ability of our member companies to efficiently provide needed materials for critical infrastructure such as roads, bridges and flood control projects essential to protect public health and safety will be greatly impaired. It is also a great concern that EPA will have a dramatic increase in permitting and applications for jurisdictional delineations further delaying key projects.

Jurisdictional determinations cost member companies between \$25,000 and \$50,000 per site and moving forward to obtain a Corps 404 permit can cost as much as \$500,000. Now, under the proposed revisions, many previously non-jurisdictional areas like floodplains, wet weather conveyances, upland headwaters, ephemeral streams, dry washes or riparian areas could be considered jurisdictional. As a result, nearly any area companies try to access will now be regulated and require additional permits. These areas will now be subject to jurisdiction either by rule or via the vague significant nexus determination. In either case, navigating the process to obtaining a Corps 404 permit or a jurisdictional determination through a significant nexus study is cumbersome, time-consuming, and financially burdensome to companies.

EPA should undertake a full evaluation of the effects this rule will have on businesses. The proposed rule will put even small businesses at risk of fines of up to \$37,500 per day if a permit is required and not obtained. This could wipe out a business that did not realize a permit was needed for work far from "navigable" water. As stated previously, this is especially true in the arid West, where ephemeral streams and "other waters" can be a considerable distance from traditionally navigable waters.

EPA is also required to comply with the Regulatory Flexibility Act and must seek input from small businesses before proposing this rule.

EPA's economic analysis of this rule does not accurately show what businesses like those of our members will end up paying if this rule is finalized. It is not even close. One industry member calculated that to conduct the additional mitigation of a stream required under this rule could cost more than \$100,000 for a single site. This exceeds EPA's estimated stream mitigation costs for entire states in its economic analysis. For our industry, time is money. Any new requirements lead to a long learning curve for both the regulators and the regulated. Just getting a jurisdictional determination can take months. Permits can take years. It remains unclear how much longer it will take to break ground with the many vague and undefined terms in this proposed rule.

These additional regulatory steps also take significant time and prevent the timely and cost efficient production of construction materials. The increased time and cost will, in turn, raise the cost of construction materials and consequently raise construction costs for private and public entities. The economic analysis does not analyze the cost of reducing the supply of construction materials would have with respect to private and public entities attempting to purchase construct materials, and thus on the end-users of such materials. (p. 7)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses under Topic 11 on costs, and Topic 11.1 on RFA/SBREFA.

Walsh Centennial, LLC (Doc. #17056)

11.2.370 Under the vague and undefined terms of the proposed rules, traditional farming and ranching activities which have never been subject to regulation under the CWA will become "jurisdictional." Common features on our ranch such as on-farm ponds, retention basins, water courses, ditches, streams, potholes and wetlands may all become subject to federal regulation under the CWA. We represent one of many small family-run farms and ranches which cannot withstand the expense and delay associated with CWA permits or fines for non-compliance while performing traditional farming practices such as the

application of fertilizer, pesticides, herbicides, or even performing such common tasks as ditch cleaning, earth moving, plowing and fencing. Nor can we economically engage in water conservation and irrigation improvement projects on the ranch if we must endure the cost and delay of finding our way through the labyrinth of the EPA's or the Corps' various permit requirements. The CWA was never intended to regulate such typical and traditional farming and ranching activities where water from such work does not flow directly into navigable streams or which does not otherwise have a significant nexus to waters already under the CWA's jurisdiction. (p. 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science. The Rule retains exemptions for certain agricultural uses and practices [see for instance, Topic 7.2 on Prior Converted Cropland] and clarifies excluded waters. See the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4. See also Topic 7 on Features and waters not jurisdictional, including prior converted cropland (7.2).

Atlantic Legal Foundation (Doc. #17361)

11.2.371 4. Economic Report

The economic report relied upon for the proposed rule states that the revised definition of "waters of the United States" will only increase federal jurisdiction by three (3%) percent.²¹⁹ Furthermore, the rulemaking documents assert that the proposed rule will impose few indirect costs and that those costs are easily outweighed by the potential benefits. The evidence supporting these claims is scant. Moreover, the economic report repeatedly stresses that its cost/benefit estimates are incomplete.²²⁰ Nowhere is there any meaningful attempt to capture the potential costs of expanded jurisdiction. Instead, the report mainly focuses on possible benefits including "ecosystem services" such as biodiversity, wildlife habitat, and recreational use.²²¹ Most of these alleged economic

²¹⁹ U.S. ENVIRONMENTAL PROTECTION AGENCY & U.S. ARMY CORPS OF ENGINEERS, ECONOMIC ANALYSIS OF PROPOSED REVISED DEFINITION OF WATERS OF THE UNITED STATES 12 (2014) (hereafter "Economic Analysis").

²²⁰ See id at 2 ("The economic analysis is necessarily based on readily available information and the resulting cost and benefit estimates are incomplete." (emphasis added)); id at 17 ("The Corps also provided an estimate of 43,000 acres of wetland mitigation and 530 miles of stream mitigation period . . . This total may be incomplete." (emphasis added)); see also, id at 14 ("The agencies recognize that time and impact avoidance and minimization costs can be significant for some share of permit applicants. However . . . the agencies did not estimate compliance costs for these categories as part of the economic analysis.").

²²¹ See id at 8.

benefits are vague and difficult to monetize, as the report concedes²²², and provide little to justify the potentially unlimited jurisdictional authority the agencies propose. We believe any proposed regulation should be supported by a rigorous cost/benefit analysis. The economic report for the proposed rule is unpersuasive. (p. 5 – 6)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2, and 11.4.

11.2.372 a. Increase in Jurisdictional Waters.

The three (3%) percent increase in jurisdictional wetlands estimated by the agencies was based on a limited study; however, that study fails to account for (1) the proposed rule's expanded definition of "waters of the United States" and (2) the agencies' enhanced incentives to increase substantially the number of "other waters."²²³

Jurisdiction was considered for three separate categories of water bodies: streams, wetlands, and "other waters." According to the report, "other waters" are defined as non-navigable waters that lack a direct surface connection to other waterways.²²⁴ During the two-year period none of the "other waters" were considered jurisdictional, as opposed to nearly 100% of streams and wetlands. The economic report's authors then measured 1,000 individual "other waters" during the two-year period and found 17% of them to be jurisdictional.²²⁵

It is highly probable that the baseline data during the two-year period contains an artificially low number of reported "other waters." Under the original framework no "other waters" could be determined to be jurisdictional; thus, neither the agencies, landowners, nor developers felt compelled to seek permit determinations because during the study period this form of "reporting" was deemed unnecessary, and this would explain the relatively low number of "other waters" recorded.²²⁶

²²² See id ("The ecosystem services identified ... have no market values. Some are closely related to market goods, which may facilitate valuation, whereas others are far removed from the end product of market value.").

²²³ The baseline data supporting the economic report is derived from a two-year period (2009-2010), which was the most economically depressed since the Great Depression of the 1930s and was characterized by extremely low construction activity. Using period that as a baseline to estimate may skew the incremental acreage impacted by the proposed rule.

²²⁴ See Economic Analysis. at 11.

²²⁵ See id at 12.

²²⁶ Total reported agency records showing jurisdictional status of aquatic resources: 95,476 streams; 38,280 wetlands;

The authors of the report concede that the category of "other waters" may be unrepresentative, stating, "if a significant amount of the [other] waters are not included in the FY 2009-2010 data because of presumed non-jurisdiction on the part of landowners and developers, then the overall percent increase in [other] waters that become jurisdictional would be somewhat greater" (emphasis added).²²⁷ This is an understatement. Even a modest increase in the amount of "other waters" recorded would result in a significant expansion of jurisdiction. The small number of reported "other waters" reflects a previously understood standard that property owners could rely upon. The proposed framework for determining jurisdiction may call into question the categorization of almost any body of water and thus landowners will have an incentive to seek permit determinations to reduce the uncertainty regarding the status of their property. The two-fold increase in "other waters" the EPA estimated does not capture the severity of this problem. If the number of "other waters" reported were to approach that of streams and wetlands (which is plausible), expansion of jurisdiction would be considerable. (p. 6 – 7)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 to Topic 11.2 on change in jurisdiction.

11.2.373 b. Estimated Costs

Under the proposed rule, estimated permit application costs are projected to impact only 1,332 additional acres. The agencies derived this number by manipulating and excluding several potential sources of permit costs and acreage. First, this estimate is based upon the artificially low projected three (3%) percent increase in jurisdiction. Thus, if the amount of "other waters" rises, the quantity of impacted acreage would likewise increase. Second, the acreage estimation only takes into account section 404 permits, ignoring any permits issued under other sections that may be impacted by the proposed rule, such as section 402.²²⁸ Finally, this estimate only pertains to permits issued for permanent impacts and excludes "ecological restoration and conversion activities, as well as temporary impacts."²²⁹ We believe all of these additional sources or permit jurisdiction

8,209 "other waters." See *id.*

²²⁷ Economic Analysis at 43.

²²⁸ See *id.* at 6 ("Permitting for construction and development stormwater, concentrated animal feeding operations (CAFOs), and pesticide application are three areas of CWA 402 implementation where there may be potential new costs.").

²²⁹ *Id.* at 14.

should be included in the calculation in order to make an accurate projection of the impact of the proposed rule. (p. 7)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 responses in Topic 11, 11.3, 11.3.1, and 11.4 on costs.

11.2.374 c. Estimated Benefits

To calculate "benefits" of the proposed rule, the report took a benefits transfer approach that combined data from ten different studies that had attempted to "assess the value of waters expected to provide services similar to the waters incrementally protected under the proposed rule."²³⁰ These studies employed the contingent valuation method (CVM), where "willingness to pay" (WTP) per household was measured via surveys that assessed respondents' stated WTP to preserve certain wetlands.²³¹ Based on these studies, the agencies determined that the annual WTP for all regional acres ranged from \$0.36 to \$3.86 depending on the region, with a mean of \$2.30.²³² Extrapolating from these figures, the agencies claimed that, "on a per acre basis, benefits vary by region, ranging from approximately \$26,000 to \$287,000 per year with an overall average of \$ 193,000."²³³

This method is fundamentally flawed. First, the studies relied upon are outdated: the most recent study used was published in 2000 with the rest were published from 1986 to 1999.²³⁴ Next, many in the scientific community find CVM to be both inaccurate and improper for large scale evaluations?²³⁵ These studies often suffer from hypothetical response biases which lead to inflated values, strategic questioning, large disparities between willingness to pay and willingness to avoid, and difficulties in verifying data.²³⁶

²³⁰ *Id* at 21.

²³¹ *See id.* at 20.

²³² *See id.* at 29.

²³³ *Id*

²³⁴ *See id.*, app. B at 54-58.

²³⁵ *See*, e.g., Jerry Hausman, *Contingent Valuation: From Dubious to Hopeless*, 26 J. OF ECON. PERSPECT. 43,44 (2012) ("Responses to contingent valuation surveys for a single environmental issue are typically based on little information, given the limited time involved for each survey respondent. Thus, the results of such surveys are unlikely to be accurate predictors of informed opinion. . . . Contingent valuation does not provide a good basis for either informed policymaking or accurate damage assessments in judicial proceedings."); *see also* David W. Eberle & Gregory F. Hayden, *Critique of Contingent Valuation and Travel Cost Methods for Valuing Natural Resources and Ecosystems*, J. ECON. ISSUES 649, 683 (1991) ("The CV [contingent valuation] and TC approaches lack methodological, theoretical, and empirical grounding. Their continued use will mislead valuation attempts and frustrate policy intended to restore a viable environment.").

²³⁶ *See* Hausman, *supra*, at 43.

Finally, even the agencies acknowledge that in general, CVM "elicits 'stated preferences' rather than revealed (or actual) preferences, which is not ideal for quantifying benefits"²³⁷ and that "it is important to recognize up front that there is uncertainty and limitations associated with the [report's] results."²³⁸ Furthermore, the report concedes that WTP may be incomparable between the respondents from the older studies and the individuals who actually use the services in areas potentially affected by increased assertion of jurisdiction.²³⁹ Aggregating household WTP from a few outdated sources to arrive at a nationwide average ignores these methodological flaws, allowing the agencies to arrive at a convenient number that may bear little resemblance to the actual value of an acre of mitigated land. We believe basing a broad expansion in federal jurisdiction on such a flawed analysis is unsound. (p. 7 – 8)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.3.2, and 11.4 on benefits.

Vermilion Parish Police Jury (Doc. #17362)

11.2.375 The proposal would create vast amounts of undue hardship on local government entities, to include increases to the cost of infrastructure construction and maintenance, increased uncertainty in the permitting process, and inevitable project delays due to additional procedures required. The effects would also be felt throughout the local economy. The broadening of the Waters of the U. S. definition would adversely impact state and local governments, farmers, businesses, and land owners. (p. 1)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

²³⁷ Economic Analysis at 20.

²³⁸ *Id* at 21.

²³⁹ *See id.* at 20.

W. Stevens (Doc. #17663)

11.2.376 Burdens to small producer/operators and marginal production would be substantial. The expanded geographic jurisdiction of the definition would require SPCC plans on some existing and future production and facilities unnecessarily with little environmental benefit. The cost (\$500 - \$10,000 per lease location) is unwarranted and would lead to premature plugging of marginal production. It also carries a cost of increased reporting and annual renewals. The cumulative effect in the aggregate could cost the industry in Texas, alone, millions of dollars annually in filings, loss of time, construction and premature pluggings. (p. 2)

Agency Response: In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11 and 11.4.

L. Schlothauer (Doc. #17946)

11.2.377 Though designed with good intentions overregulation of producers will financially cripple operations. No one in the agriculture community can afford to spend over \$39,000 per regulation violation that even with prevention and planning can occur due to the volatility of the environment. To ensure producers remain able to operate it is essential to inform you of the negative implications the CWA and other bills like it will have upon agriculture from an economic standpoint. In addition to this producers make decisions on a daily basis and do not have time to wait for a permit for something as simple as to build a ditch or move cattle. These permits are also extra costs out of the producer's pocket which will in turn drive up food prices. I am asking you to withdraw the proposed rule. Not only are there negative implications this bill would have upon agriculture from a national standpoint, but if passed this will dramatically impair producers in the Southwest. (p. 2)

Agency Response: In this final rule, the agencies are making the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science. The agencies recognize the vital role of farmers in providing the nation with food and fiber and are sensitive to their concerns. The final rule reflects the intent of the agencies to minimize potential regulatory burdens on the nation's agriculture community, and recognizes the work of farmers and landowners to protect and conserve natural resources and water quality on agricultural lands. The rule reflects this framework by clarifying the waters subject to the activities Congress exempted under CWA Section 404(f). See the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

Anonymous (Doc. #18801)

11.2.378 (...) 2) Given the confusion and concerns listed by many sectors of the public and private sectors, convening a Small Business Advisory Review Panel (SBREFA panel) would seem to be prudent. Although EPA, through review by other federal entities, has determined that a SBREFA is not required, the broad based concerns regarding lack of clarity of the proposed rule, would be very helpful in solving the concerns. (...) (p. 1)

Agency Response: See summary response to Topic 11.1.

11.2.379 (...) 3) The proposed rule has been discussed in many forums on a large scale thanks to the hard work of EPA and the USACE. The rule, with the help of a SBREFA, can be modified to address most of the concerns and proceed forward as a rule that can assist, not hinder, economic development, protect small businesses, and protect the environment. (...) (p. 1)

Agency Response: See summary response to Topic 11.1.

11.2.380 (...) 4) Revision of the rule to address specific business sectors would help with clarification. EPA has taken this approach with other rulemaking in the past with the Multi-Sector Storm Water Permit (MSGP) being a good example. (...) (p. 1)

Agency Response: See summary response to Topic 11.1 and 11.3.

Donald Shawcroft (Doc. #18569)

11.2.381 As noted in comments filed by the Small Business Administration's Office of Advocacy, EPA and the Corps have failed to take into account small business impacts, including impacts on small business farmers. See, October 1, 2014 letter to Administrator McCarthy and Major General Peabody from Winslow Sargeant, Chief Counsel for Advocacy. Due to this failure, SBA recommends that EPA and the Corps withdraw the rule. (p. 3)

Agency Response: See summary response to Topic 11.1.

Independent Petroleum Association of America, et al (Doc. #18864)

11.2.382 **Affected Acreage.** EPA's analysis uses FY 2009/2010 as the baseline year to estimate impacts, which was a period of significant contraction in the market due to the financial crisis. EPA makes an assumption that the new rule will not affect the agency's overall workload. Under the new rules, jurisdiction will increase and more projects will likely be seeking permits. EPA assumes the incremental impacts to Section 404 permitting can be applied to other CW A programs. EPA's analysis ignores important state and size-specific variations in permit applications. (p. 33)

Agency Response: See summary response to Topic 11.2 and the Economic Analysis.

Anonymous (Doc. #18943)

11.2.383 3. As the above two comments illustrate, the proposed redefinition will significantly expand the coverage of waters, contrary to the unsupported assertion in the Regulatory Flexibility portion of the preamble. This will add significant costs to small entities, because all waters and water structures in the U.S. will now be covered under the definition aside from the few listed exceptions. This will require costly immediate reporting of contained spills having no environmental impact, as well as costly modification of spill prevention, control and countermeasure (SPCC) plans and/or industrial stormwater permits. These additional costs cannot be justified by any demonstrable reduction in environmental impact. We therefore suggest that a cost analysis of the inclusion of private drainage structures and private rainwater puddles be explicitly included in the Regulatory Flexibility portion of the preamble. (p. 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making the process of identifying waters protected under the CWA easier to understand, more predictable, and more consistent with the law and peer-reviewed science. The rule has expanded the section on waters that are not considered waters of the United States, including many of the features listed in the comments, such as artificial lakes and ponds created in dry land, water-filled depressions incidental to mining or construction, constructed grassed waterways and non-wetland swales, and stormwater and wastewater detention basins constructed in dry land. In addition, the final rule adds an exclusion for puddles. See the Economic Analysis and summary responses to Topics 11, 11.1 and 11.4. See also Topic 7.

Kevin and Nicole Keegan (Doc. #19128)

11.2.384 (...) While the proposed rule is intended to relate to polluting the Waters of the United States, as presently written, it is excessive and would unnecessarily curtail economic activity. (...) (p. 3)

Agency Response: Protecting the long-term health of our nation's waters is essential. The Clean Water Rule strengthens the protection of waters for the health of our families, our communities, and our businesses. Our nation's businesses depend on clean water to operate. Streams and wetlands are economic drivers because they support fishing, hunting, agriculture, recreation, energy, and manufacturing. Pollution threatens these economic drivers and we all know the dangers of pollution upstream: water flows downstream and carries pollutants with it. Right now, many streams and wetlands lack clear protection from pollution and destruction. One in 3 Americans, 117 million of us, get our drinking water from streams that are vulnerable. Sixty percent of the nation's stream miles – the vital

headwaters that flow downstream after rain or in certain seasons – aren’t clearly protected. Millions of acres of wetlands that trap floodwaters, remove pollution, and provide habitat for fish and wildlife are at risk. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

United States Senate (Doc. #19309)

11.2.385 Practically speaking, this rule would have a devastating impact on job creators across the nation, among them farmers, ranchers, and small businesses. In fact, on October 1, 2014, the Small Business Administration Office of Advocacy wrote to the EPA and the Corps to recommend that, “the agencies withdraw the rule and that the EPA conduct a Small Business Advocacy Review panel before proceeding any further with this rulemaking,” due to the significant impact this rule would have on small businesses. The Office of Advocacy went on to note that the certification by the Corps and EPA that this rule would have no small business impact was inappropriate. (p. 1)

Agency Response: See summary response for Topic 11.1 RFA/SBREFA.

Jil Tracy, State Representative 94th District (Doc. #19518)

11.2.386 There is significant concern that additional federal revenue or assistance in the future to help meet the cost of this rule will not be forthcoming. Expansion of federal jurisdiction under the Clean Water Act will in fact be an unfunded mandate on the public and private sectors. Much of the anticipated cost of this rule would be financed from state and municipal resources and will divert limited resources from other essential public services.

Your analysis stating the rule would subject an additional three percent of U.S. waters and wetlands to CWA jurisdiction and that the rule would create an economic benefit of at least \$100 million annually. This calculation is seriously flawed. Expanding CWA jurisdiction would subject communities, property owners, farmers, and businesses to stringent new permitting requirements and use restrictions. The process of obtaining permits and approvals under the CWA is very costly and time-consuming. Historically, obtaining a permit to develop in jurisdictional area can take longer than a year and cost hundreds of thousands of dollars. (p. 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies’ recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and

summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4. See also Topic 13.2.4 on unfunded mandates.

M. Sedlock (Doc. #19524)

11.2.387 8: Improper dismissal of negative impact (small business)

FR page 22220, columns 1-2: *The Regulatory Flexibility Act (RFA) generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice-and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions....*

Because fewer waters will be subject to the CWA under the proposed rule than are subject to regulation under the existing regulations, this action will not affect small entities to a greater degree than the existing regulations

Discussion: The above statement in the rule is patently self-contradictory. Expansion of the scope of the Agencies' jurisdictional authority to include practically any and all surface waters of the territorial United States will obviously impact many more small businesses than are already impacted, not fewer. The impact of regulatory overreach of the Agencies on small businesses cannot simply be dismissed by pretending that more is less through twisting language and doublespeak.

Apparently the Agencies expect the public (particularly farmers, ranchers and the no doubt millions of other small business owners that would be impacted by this propose rule) to believe that increasing the scope of jurisdiction, i.e. defining all waters as "waters of the United States", somehow means that fewer individual waters would be involved. This would be like saying that a bushel of apples is a smaller amount of apples than the 125 apples in the bushel basket, just because a bushel is one unit whereas the second description includes many units.

The Agencies' bid for increased jurisdictional authority would have exponentially expanding impacts on small businesses, and these impacts will have significant adverse economic impacts on the general public, including but not limited to reduced land value and, increased costs of doing business due to regulatory burdens (e.g. having to hire consultants to prepare permits, cost of permits, project delays, restrictions on land use and the cost of complying with permitting requirements, including mitigation and failure of projects to make a profit).

Property owners, particularly farmers and ranchers and citizens in rural areas, count their land as their principal asset. Land is often used as collateral for loans and other capital purchases needed for business operations or capital improvements.

The tremendous direct and indirect adverse impacts and cumulative impacts of this proposed rule on small businesses cannot simply be dismissed as the Agencies have decided to do.

Recommendation: Withdraw the proposed rule. Should the Agencies put forth another proposed rule, the true impacts of expansion of waters under the CWA on small businesses must be fully disclosed for the public to analyze and evaluate. (p. 14 – 15)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11 and 11.1.

11.2.388 **9: Failure to address economic impact**

FR page 22220, column 1: *[The Agencies] prepared an analysis of the potential costs and benefits associated with this action. This analysis is contained in "Economic Analysis of Proposed Revised Definition of Waters of the United States."*

Discussion: The Agencies' estimate of the costs and benefits associated with the regulatory redefinition of "waters of the United States" has not been adequately addressed in the proposed rule or in the associated document cited above. The inclusion of categories of non-navigable waters that were previously never regulated by the Agencies under CWA, such as waters in floodplains, riparian areas, and certain ditches, will broaden the jurisdictional authority of the Agencies and will significantly increase the costs associated with each program; however the above cited document severely underestimates the impact of the definitional changes, excludes important costs, and uses a flawed benefits transfer methodology to estimate the benefits of expanding jurisdiction.

According to a May 15, 2014 report by David Sunding, Ph.D. of the Waters Advocacy Coalition, the numerous errors, omissions, and lack of transparency render the analysis virtually meaningless. Estimates of economic impacts to other programs rely on an incremental jurisdiction determination that is deeply flawed. The systematic exclusion of various costs and benefits ignores important impacts to permit applicants and permitting agencies. The analysis suffers from a lack of transparency. Explanations of calculations, basic assumptions, and discrepancies between various EPA analyses are rarely provided; the entire report is based on records from the Corps' internal ORM2 database, which is unavailable to the public, and thus the validity of the underlying data cannot be determined due to lack of requisite transparency.

Recommendation: Withdraw the proposed rule. Withdraw the economic analysis. If the Agencies wish to resubmit a proposed rule, it must be based on an adequate economic analysis. (p. 15)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses under Topic 11 and related subtopics.

Spring City, Utah (Doc. #19662)

11.2.389 Your proposed regulations, however, broaden the accepted definition to also include waters in floodplains, riparian areas, and certain ditches. Federal control over these categories could severely limit or restrict current usage; especially on our local economy among those working in farming and livestock maintenance. This, of course, could have far reaching effects in other aspects of our economy as well. (p. 1)

Agency Response: EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as "waters of the United States." See Topic 6 on ditches, Topic 3.2.1 on floodplains, and Topic 7 on features and waters not jurisdictional.

Alpine County Board of Supervisors, County of Alpine, California (Doc. #20492)

11.2.390 The rulemaking should not have been initiated before the issuance of the draft science report. Your agencies have stated that the draft science report, "Connectivity of Streams and Wetlands to Downstream Waters: A Review and Synthesis of the Scientific Evidence" is informing the proposed rule. However, you are moving forward with the rulemaking before the report has been finalized and released, making it impossible to truly use the conclusions from the report to inform this proposal. Moving forward with the proposed rule before the science report is finalized is bad public policy and premature at best, particularly when the proposal has the far-reaching impact that this one does. (p. 2 – 3)

Agency Response: See Compendium #9, the rule preamble, and Technical Support document, for discussion of the role of science in rule development.

Mayor and Hannibal City Council, City of Hannibal, Missouri (Doc. #20495)

11.2.391 WHEREAS, the draft rule would significantly increase cost to the city and its citizens to maintain ground structures without any additional compensation to the city. (p. 1)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

Highlands Ranch Metropolitan District, Highlands Ranch, Colorado (Doc. #20499)

11.2.392 The District is also supportive of the Proposed Rule having a scientific foundation and therefore requests that the timeline allow for consideration of the Connectivity Report. This will allow a clear basis for defining WOUS in the Proposed Rule. The 25-day extension to the comment period is appreciated, however, it is inadequate for the District and other stakeholders to thoroughly review the SAB peer review report and provide meaningful comments. Please extend the comment time 60 days following the publication and acceptance of the Science Advisory Board's peer review of the Connectivity Report. (p. 1)

Agency Response: The agencies are committed to a rulemaking built on the best-available, peer-reviewed science, and the agencies recognized the importance of ensuring that this supporting science was available to the public as they reviewed and commented on the Proposed Rule. In order to afford the public greater opportunity to review the SAB's reports on the Proposed Rule and on the EPA's draft Science Report, and to respond to requests from the public for additional time to provide comments on the Proposed Rule, the agencies extended the public comment deadline on the Proposed Rule from July 21, 2014 to November 14, 2014. The SAB completed its review of the scientific basis of the Proposed Rule on September 30, and the SAB completed its review of the EPA's draft Science Report on October 17, 2014. The process for developing the Science Report also included many opportunities for the public to provide comments and input. In September 2013, EPA released a draft of the Science Report for an independent SAB review and invited submissions of public comments for consideration by the SAB panel. Over 133,000 public comments were submitted for the SAB panel's consideration. In October 2014, after several public meetings, the SAB completed its peer review of the draft Science Report. EPA revised the draft Science Report based on comments from the public and recommendations from the SAB panel. The final peer review report is available in the docket for this rulemaking, as well as on the SAB website (available at: [http://yosemite.epa.gov/sab/sabproduct.nsf/AF1A28537854F8AB85257D74005003D2/\\$File/EPA-SAB-15-001+unsigned.pdf](http://yosemite.epa.gov/sab/sabproduct.nsf/AF1A28537854F8AB85257D74005003D2/$File/EPA-SAB-15-001+unsigned.pdf)). For more discussion, see Compendium #9.

Empire District Electric Company (Doc. #20501)

11.2.393 Though EPA and the Corps have said they are seeking to provide clarity and certainty and to reduce litigation in implementation of the act through the proposed rule, EDE believes the proposed rule in its current form actually reduces clarity, increases uncertainty, and will potentially increase the cost to provide services to our customers. (p. 2)

Agency Response: EPA and the Corps have used stakeholder input received during public outreach events during the public comment period in combination with the written comments received during the public comment period to modify the terms and the definitions included in the final rule, ultimately with the goal of providing increased clarity for regulators, stakeholders, and the regulated public to assist them in identifying waters as “waters of the United States.” See Topic 6 on ditches, Topic 3.2.1 on floodplains, and Topic 7 on features and waters not jurisdictional. See the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, 11.3.2, and 11.4.

11.2.394 The delivery of electricity requires the construction, operation, and maintenance of transmission and distribution lines and the rights-of-ways in which they are located. The construction, operation, and maintenance of transmission lines often require permits under section 404 of the CWA for crossing streams or wetland areas. If, however, entire floodplains are considered waters of the United States, a new transmission route may in its entirety require individual section 404 permit(s) rather than less burdensome nationwide permits, with ensuing increases in cost and time associated with permitting and mitigation requirements. These proposed expansions of the rule could reduce or eliminate the economic viability of many energy projects. (p. 4 – 5)

Agency Response: The agencies believe the rule will expedite the permit review process in the long-term by clarifying jurisdictional matters that have been time-consuming and cumbersome for field staff and the regulated community for certain waters in light of the 2001 and 2006 Supreme Court cases. The Corps’ Nationwide Permit program, which authorizes Clean Water Act Section 404 discharges that would have no more than minimal adverse impacts to aquatic resources, is available for activities that qualify. In this final rule, the agencies are making 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 Technical Support Document I.B, and Topic 3.2.1 on floodplains.

Michigan House of Representatives (Doc. #20504)

11.2.395 (...) WHEREAS, The proposed rule would actually expand federal jurisdiction to more waters and wetlands, rather than limiting or simply clarifying jurisdiction as outlined by the U.S. Supreme Court. The EPA's economic analysis estimates that the proposed rule would increase jurisdiction by 3 percent, potentially leading to 1,400 more permits required and nearly \$220 million in additional costs to farmers, businesses, and

homeowners. Furthermore, the economic analysis' assumptions and methodology significantly underestimate the potential jurisdictional expansion; and (...) (p. 2)

Agency Response: The agencies prepared an illustrative economic analysis comparing the scope of this new regulation to the agencies' recent field practices in making jurisdictional determinations after the Supreme Court decisions of 2001 and 2006 to see how this rule may affect the costs and benefits of specific CWA programs. In this final rule, the agencies are making 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 the Economic Analysis and summary responses to Topics 11, 11.2, 11.3, 11.3.1, and 11.4.

REFERENCES/ATTACHMENTS

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:

Utility Water Group Act, *Further Information About Cost Estimation*. (Doc. # 15016.2, p. 13)

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.

5 U.S.C. §§ 601(3)-(5). (Doc. #14115, p. 38)

5 U.S.C. 609(a) (Panel comprised of representatives of EPA and the SBA's Office of Chief Counsel for Advocacy as well as a representative from OMB). (Doc. #14412, p. 48)

33 CFR § 320.4(a) (2004). (Doc. #14068, p. 7)

Applied Technology & Management, Inc., *Estimated Fiscal Impacts on Selected Municipal Separate Storm Sewer System Permittees* (Aug. 29, 2014). The four counties include Manatee, Pinellas, Sarasota and Seminole counties. (Doc. #10193, p. 9; #14466, p. 2)

American Trucking Associations v. EPA, 175 F.3d 1027 (D.C. Cir. 1999) (Doc. #14115, p. 38; #14763, p. 10; #7958, p. 5)

Breedlove, Dennis & Associates. *Evaluation of the proposed definition of Waters of the United States under the Clean Water Act*, submitted to EPA on behalf of FDACS, 50 pages, October 31, 2014. (Doc. #16446)

- Carver, E. 2008. Economic impact of waterfowl hunting in the United States. Addendum to the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. U.S. Fish and Wildlife Service, Report 2006-2, 13pp. (Doc. #11014, p. 69)
- Carver, E. 2009. Birding in the United States: A Demographic and Economic Analysis. Addendum to the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation. U.S. Fish and Wildlife Service, Report 2006-4, 15pp. (Doc. #11014, p. 69)
- Cement Kiln Recycling Coalition v. EPA*, 255 F.3d 855 (D.C. Cir. 2001) (Doc. #14115, p. 38; #14763, p. 10)
- 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, <http://water.epa.gov/lawsregs/guidance/wetlands/CWAwaters.cfm>. (Doc. #7958, p. 5)
- Colorado River Outfitter’s Association, *Commercial River Use in the State of Colorado, 1988-2013: 2013 Year End Report*, available at <http://www.croa.org/wp-content/uploads/2014/05/2013-Commercial-Rafting-Use-Report.pdf>. (Doc. #15020, p. 105)
- Colorado Whitewater Competition, <http://www.coloradowhitewater.org/racing-competition>. (last visited on Oct. 1, 2014). (Doc. #15020, p. 105)
- Comments of Gina McCarthy, EPA Administrator, reported in *The Hill* online (July 8, 2014), available at: www.thehill.com/policy/energy-environment/211548-epa-promoting-water-rule-to-farmers-in-mo. (Doc. #14115, p. 39)
- Comments of the Portland Cement Association to Proposed Rule: Definition of “Waters of the United States” Under the Clean Water Act; Docket No. EPA-HQ-OW-2011-0880 (Doc. #13956, p. 12)
- Congressional Research Service (CRS), “EPA and the Army Corps’ Proposed Rule to Define ‘Waters of the United States’”, September 10, 2014 p. 11 (Doc. #15017, p. 1)
- Costanza, R., R. De Groot, P. Sutton, S. Van Der Ploeg, S.J. Anderson, I. Kubiszewski, S. Farber, and R.K. Turner. 2014. Changes in the global value of ecosystem services. *Global Environmental Change* 26:152-158. (Doc. #11014, p. 69)
- Dahl, T.E. 2011. Status and trends of wetlands in the conterminous United States 2004 to 2009. U.S. Department of the Interior; Fish and Wildlife Service, Washington, D.C. 108 pp. (doc. #15115, p. 57, 84)
- Dahl, T.E. 2006. Status and trends of wetlands in the conterminous United States 1998 to 2004. U.S. Department of the Interior, Fish and Wildlife Service, Washington, D.C. p. 112 (doc. #15115, p. 84)
- Dailey, G.C., S. Alexander, P. R. Ehrlich, L. Goulder, J. Lubchenco, P.A. Matson, H.A. Mooney, S. Postel, S. H. Schneider, D. Tilman, and G. M. Woodwell. 1999. Ecosystems services: benefits supplied to human societies by natural ecosystems. *Issues in Ecology*. Ecological Society of America.

http://www.hillcountryalliance.org/uploads/HCA/Ecosystem_Services_Daily.pdf (Doc. #11014, p. 70)

Dr. Winslow Sargeant, Chief Counsel for Advocacy, Small Business Administration. October 1, 2014. <http://www.sba.gov/advocacy/1012014-definition-waters-united-states-under-clean-water-act> (Doc. #11552, p. 2; #14308, p. 2)

Dodds, W.F., W.W. Bouska, J.L. Eitzmann, T.J. Pilger, K.L. Pitts, A.J. Riley, J.T. Schloesser, and D.J. Thornbrugh. 2009. Eutrophication of U.S. freshwaters: Analysis of potential economic damages. *Environmental Science and Technology* 43:12-19. (Doc. #11014, p. 70)

Energy Information Administration (EIA) – Monthly Energy Review available at https://www.eia.gov/totalenergy/data/monthly/pdf/sec3_3.pdf (Doc. #15115, p. 125)

Facts About the Waters of the U.S. Proposal at 3 (July 2014), available at <http://www2.epa.gov/uswaters/facts-about-waters-us-proposal-pdf> (Doc. #15016, p. 20)

Fairbank, Maslin, Maulin, Metz and Assoc. Public Opinion Strategies. Why invest in conserving natural areas? Minnesota Environmental Partnership. 2pp. (Doc. #11014, p. 71)

Florida H2O Coalition. *Estimated Fiscal Impacts on Selected Municipal Separate Storm Sewer System Permittees*, August 29, 2014. (Doc. #16584, p. 6)

Frayer, W.E., T.J. Monahan, D.C.Bowden, and F.A. Graybill. 1983. Status and trends of wetlands and deepwater habitats in the conterminous United States, 1950's to 1970's. Colorado State University, Fort Collins, CO. p. 31 (doc. #15115, p. 84)

Gale, Barry, “Six Years After Rapanos: What’s Changed” (Answer: Not Much), “*Federal Regulation of Cultural Resources, Wildlife, and Waters of the U.S.*,” Paper No. 13, Page No. 13-18 (Rocky Mt. Min. L. Fdn. 2012) (Doc. #14916, p. 5)

Gauvin, Pete, & Wendy Lautner, *California’s Dearth of Whitewater Parks*, CALIFORNIA’S ADVENTURE SPORTS JOURNAL, May 4, 2010, available at http://adventuresportsjournal.com/water_sports/kayaking/california%E2%80%99s-dearth-of-whitewater-parks. (Doc. #15020, p. 105)

Hanousek v. United States, 528 U.S. 1102, 1103, 120 S. Ct. 860, 145 L.Ed.2d 710 (2000) (Doc. #14068, p. 7)

Heimlich, R.E., R. Claassen, K.D. Wiebe, D. Gadsby, and R.M. House. 1998. Wetlands and Agriculture: Private Interests and Public Benefits. AER-765, U.S. Dept. Agr. Econ. Res. Serv., Aug. (Doc. #17921.15, p. 77)

Hodges, Alan W., Mohammad Rahmani, and Thomas J. Stevens, 2014. Economic Contributions of Agriculture, Natural Resources, and Related Food Industries in Florida in 2012, available at <http://edis.ifas.ufl.edu/pdf/FE/FE95400.pdf> (Doc. #16446)

IHS, “Oil and Natural Gas Transportation & Storage Infrastructure: Status, Trends, & Economic Benefits,” 2013. (Doc. #15115, p. 125)

IMPLAN Group, LLC. IMPLAN impact analysis and social accounting software (version 3.1) and Florida state/county data for 2012. Huntersville, NC, available at <http://www.implan.com> (Doc. #16446)

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 6. (Doc. #15346, p. 6)

Letter from Larry Naake, Exec. Dir., Nat'l Ass'n of Counties to Lisa Jackson, Adm'r, EPA & Jo Ellen Darcy, Assistant Sec'y for Civil Works, U.S. Dep't of the Army, "Waters of the U.S." Guidance (July 29, 2011) *available at* <http://www.naco.org/legislation/policies/Documents/Energy,Environment,Land%20Use/Waters%20US%20Draft%20guidance%20NACo%20Comments%20Final.pdf>. (Doc. #15081, p. 4)

Letter from Larry Naake, Exec. Dir., Nat'l Ass'n of Counties to Lisa Jackson, Adm'r, EPA, Federalism Consultation Exec..Order 13132: "Waters of the U.S." Definitional Change (Dec. 15, 2011) *available at* http://www.naco.org/legislation/policies/Documents/Energy,Environment,Land%20Use/Waters%20US%20Draft%20guidance%20NACo%20Comments%20Dec%2015%202011_final.pdf. (Doc. #15081, p. 4)

Letter from Leo J. Alderman, EPA Director, Waters, Wetlands, and Pesticides Division, to Roderick L. Bremby, Secretary, Kansas Department of Health and Environment (Nov. 3, 2003). (Doc. #15115, p. 71)

Letter from members of the Senate Committee on Environment and Public Works to the President. April 9, 2014 (Exhibit E). (Doc. #14420, p. 8)

Letter from SBA to the Hon. Gina McCarthy and Maj. Gen. John Peabody re: Definition of "Waters of the United States" Under the Clean Water Act (October 1, 2014), available at http://www.sba.gov/sites/default/files/Final_WOTUS%20Comment%20Letter.pdf. (Doc. #19305, p. 2)

Letter from Tom Cochran, CEO and Exec. Dir., U.S. Conf. of Mayors, Clarence E. Anthony, Exec. Dir., Nat'l League of Cities, & Matthew D. Chase, Exec. Dir., Nat'l Ass'n of Counties to Howard Shelanski, Adm'r, Office of Info. & Regulatory Affairs, Office of Mgmt. and Budget, EPA's Definition of "Waters of the U.S." Under the Clean Water Act Proposed Rule & Connectivity Report (November 8, 2013) *available at* <http://www.naco.org/legislation/policies/Documents/Energy,Environment,Land%20Use/NACo%20NLC%20USCM%20Waters%20of%20the%20US%20Connectivity%20Response%20letter.pdf>. (Doc. #15081, p. 4)

Letter from Winslow Sargeant, Chief Counsel for Advocacy, to Gina McCarthy, Administrator, EPA and General John Peabody, Deputy Commanding General, Corps of Engineers, on Definition of "Waters of the United States" Under the Clean Water Act (October 1, 2014) at 4. (Doc. #14115, p. 39; #13956, p. 13; #14412, p. 48; #15064, p.4)

- Mid-Tex Elec. Co-op, Inc. v. FERC*, 773 F.2d 327 (D.C. Cir. 1985) (Doc. #14115, p. 38; #14763, p. 10; #7958, p. 5)
- Miller, R.E. and P.D. Blair. *Input-Output Analysis: Foundations and Extensions*, Second Edition, Cambridge University Press, Cambridge, UK, 2009. (Doc. #16446)
- National Association of Home Builders, “State and Metro Area House Prices: the “Priced Out” Effect” (August 2014). (Doc. #14115, p. 21)
- National Association of Home Builders. *Housing’s Contribution to Gross Domestic Product*, National Association of Home Builders Web Page, last accessed Nov. 14, 2014, available at www.nahb.org/generic.aspx?sectionID=784&genericContentID=66226&print=true (Doc. #19540, p. 139)
- National Association of Home Builders. *Impact of Home Building and Remodeling on the U.S. Economy*, National Association of Home Builders Web Page, last accessed Nov. 14, 2014, available at <http://www.nahb.org/energy.aspx?sectionID=784&genericContentID=66226&print=true> (Doc. #19540, p. 140)
- National Federation of Independent Business, *Letter Asking the OMB to Return a Clean Water Act Rule to the EPA* (Sept. 24, 2013), <http://www.nfib.com/article/letter-asking-the-omb-to-return-a-clean-water-act-rule-to-the-epa-63895/>. (Doc. #15057, p. 4)
- National Mitigation Banking Association website and members list available at <http://www.mitigationbanking.org/index.html> (last visited November 14, 2014). (Doc. #15020, p. 104)
- Northwest Mining Ass’n v. Babbitt*, 5 F. Supp. 2d 9 (D.D.C. 1998). (Doc. #14115, p. 39)
- Ogden’s Kayak Park – Ogden City, http://www.ogdencity.com/en/community/parks/kayak_park.aspx (last visited Oct. 3, 2014). (Doc. #15020, p. 105)
- Office of Management and Budget, Circular A-4, Subject: Regulatory Analysis (September 17, 2003) at 15, available at http://www.whitehouse.gov/sites/default/files/omb/assets/regulatory_matters_pdf/a-4.pdf (Doc. #19540, p. 137; #7958, p. 5)
- Personal Communication. Chris Reichard, Tri-State Generation and Transmission Association, Inc., with Riverdale Mitigation Bank and Middle South Platte Mitigation Bank, September 2014 (Doc. #16392, p. 3)
- Polasky, S. and B. Ren. 2010. Minnesota water sustainability framework water valuation technical work team report. http://wrc.umn.edu/prod/groups/cfans/@pub/@cfans/@wrc/documents/asset/cfans_asset_224665.pdf (Doc. #11014, p. 70)
- Presentation of Mike Tate and Tom Stiles, Kansas Department of Health and Environment, Waters of the U.S. (May 2, 2014). (Doc. #15115, p. 71)

Profits, Costs, and the Changing Structure of Dairy Farming, Economic Research Report No. 47, Available online at: <http://www.ers.usda.gov/publications/err-economic-research-report/err47.aspx> (Doc. #14640, p. 49)

Rapanos v. United States, 547 U.S. 715, 720-22 (2006) (Doc. #17348, p. 7)

Responsive Management. 1994. Idaho residents' opinions and attitudes toward the Idaho Department of Fish and Game. Report prepared for the Idaho Department of Fish and Game. Responsive Management, Harrisonburg, VA, USA. (Doc. #11014, p. 70)

Responsive Management. 1998a. A needs assessment for environmental education in Florida: final report: phase V of a 5 phase environmental education needs assessment. Report prepared for the Florida Advisory Council on Environmental Education. Responsive Management, Harrisonburg, VA, USA (Doc. #11014, p. 70)

Responsive Management. 1998b. Public attitudes toward fish and wildlife management in Indiana. Report prepared for the Indiana Division of Fish and Wildlife. Responsive Management, Harrisonburg, VA, USA. (Doc. #11014, p. 70)

Responsive Management. 1998c. West Virginia residents' attitudes toward the land acquisition program and fish and wildlife management. Report prepared for the West Virginia Division of Natural Resources. Responsive Management, Harrisonburg, VA, USA. (Doc. #11014, p. 70)

Responsive Management. 2001. Public awareness of, attitudes toward, and propensity to become a member of Ducks Unlimited in the United States. Report prepared for Ducks Unlimited. Responsive Management, Harrisonburg, VA, USA. (Doc. #11014, p. 70)

Sackett v. EPA, 566 U.S. ___, 132 S. Ct. 994 (2012) (Doc. #14115, p. 20)

SBA Office of Advocacy, A Guide for Government Agencies: How to Comply with the Regulatory Flexibility Act (May 2003) ("SBA RFA Guidance") at 8-10. (Doc. #19540, p. 156)

Seelinger, Marc Jr., An Analysis of the USEPA's Economic Analysis of Proposed Revised Definition of Waters of the United States, (Doc. #13271, p. 40)

Small Business Administration, RFA Guide for Government Agencies, at 52 (May 2012), available at http://www.sba.gov/sites/default/files/rfaguide_0512_0.pdf. (Doc. #17921, p. 93)

Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers (SWANCC), 531 U.S. 159, 174 (2001); *Rapanos v. United States*, 547 U.S. 715, 729 (2006). (Doc. #7958, p. 5)

Southern Offshore Fishing Ass'n v. Daley, 27 F. Supp. 2d 650 (E.D. Va. 1998) (Doc. #14115, p. 39; #19540, P. 169)

Sunding, David L. and Zilberman, David, The Economics of Environmental Regulation by Licensing: An Assessment of Recent Changes to the Wetland Permitting Process. Natural

- Resources Journal, Vol. 42, No. 1, Winter 2002. Available online:
<http://are.berkeley.edu/~sunding/Economcs%20of%20Environmental%20Regulation.pdf>
(Doc. #14115, p. 20; 14068, p.7; #13271, p.40; #12754, p.2; #16534, p.13)
- Sunding, D. and D. Zilberman. 2000. *Analysis of the Army Corps of Engineers' NWP 26 Replacement Permit Proposal*. Prepared for the National Association of Counties and the Foundation for Environmental and Economic Progress. (January). (Doc. #15115, p. 61, 68; #15115, p. 112)
- The Brattle Group. "Review of 2014 EPA Economic Analysis of Proposed Revised Definition of Waters of the U.S." May 15, 2014. Available at: <http://www.brattle.com/news-and-knowledge/publications/archives/2014>. (Doc. #13024, p. 20; #14412, p.48; #19465, p.19; #10952, p.4; #16392, p.4; #15162, p.7)
- United States v. Rapanos*, 235 F.3d 256, 260 (C.A.6 2000) (Doc. #14068, p. 7)
- U.S. Army Corps of Engineers, Regulatory Guidance Letter 08-02 (June 26, 2006). (Doc. #17921.15, p. 57)
- U.S. Census Bureau, Construction Spending: Annual Rate for Total Construction: U.S. Total—Seasonally Adjusted Total Construction [Millions of Dollars], Period: 2006 to 2014, Data Extracted on: May 14, 2014. (Doc. #19488, p. 10)
- U.S. Chamber of Commerce. "Waters Advocacy Coalition (WAC) Letter on Definition of Waters of the U.S." June 10, 2014. <https://www.uschamber.com/letter/waters-advocacy-coalition-wac-letter-definition-waters-us>. (Doc. #13024, p. 20)
- U.S. Department of Agriculture, National Agricultural Statistics Service, 2012 Census of Agriculture, Volume 1, Chapter 2: County Level, available at
http://www.agcensus.usda.gov/Publications/2012/Full_Report/Volume_1,_Chapter_2_County_Level/Florida/ (Doc. #16446)
- U.S. Environmental Protection Agency, 2011. Potential Indirect Economic Impacts and Benefits Associated with Guidance Clarifying the Scope of Clean Water Act Jurisdiction. (Doc. #17921.15, p. 68)
- U.S. Environmental Protection Agency. "Ditch the Myth," September 26, 2014.
<http://www2.epa.gov/uswaters/ditch-the-myth>. (Doc. #13024, p. 20)
- U.S. Environmental Protection Agency, Economic Analysis of the Final Phase II Stormwater Rules ES-4 (1999) (Doc. #13956, p. 13)
- U.S. Environmental Protection Agency and U.S. Army Corps of Engineers, "Economic Analysis of Proposed Revised Definition of Waters of the U.S.," March 2014.
http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf. (Doc. #13024, p.19, 20; #14412, p.13; #14115, p.20; #19572, p.10; #16392, p.3; #14616, p. 14; #15208, p.3;

#10193, p.10; #15208, p.3; #15624, p.14; #16433, p. 2; #15115, p. 57; #16353, p. 7; #15253, p. 5; #7958, p. 8)

U.S. Environmental Protection Agency. "Fact Sheet: How the Proposed Waters of the U.S. Rule Benefits Agriculture." Available at: <http://www2.epa.gov/waters/fact-sheet-how-proposed-waters-us-rule-benefits-agriculture> (Doc. #13024, p. 20)

U. S. Environmental Protection Agency and U.S. Army Corps of Engineers, *Compensatory Mitigation Rule: Improving, Restoring, and Protecting the Nation's Wetlands and Streams* 6 (2008), available at http://water.epa.gov/lawsregs/guidance/wetlands/upload/2008_03_28_wetlands_Mit_rule_QA.pdf. (Doc. #15208, p. 4)

U.S. Fish & Wildlife Service, *2011 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation: Missouri* (revised Dec. 2013), available at <http://www.census.gov/prod/2013pubs/fhw11-mo.pdf>. (Doc. #16372, p. 14)

U. S. Fish and Wildlife Service. *Economic Impact of Waterfowl Hunting in the United States, Addendum to the 2006 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation*, November 2008. (Doc. #15020, p. 104)

U.S. Government Accountability Office, "National Environmental Policy Act: Little Information Exists on NEPA Analyses," GAO- 14-37 0, at 14 (April 20 14), available at <http://gao.gov/assets/670/662546.pdf> (accessed 11 /10/201 4). (Doc. #16534,p. 13)

Vanden Berg, Micheal, Utah Geo logic Survey, "Utah's Energy Landscape," 3'd Edit ion; 20 14 at 9, available at <http://energy.utah.gov/wp-content/uploads/Utahs-Energy- Landscape-3rd-Edition.pdf> (accessed 11II 0/ 14). (Doc. #16534, p. 12)

Wong, Melanie, *GoPro Mountain Games in Vail Draw Record Crowds*, VAIL DAILY, June 13, 2014, available at <http://www.vaildaily.com/news/sports/11810089-113/games-vail-gopro-crowds>. (2011) (Doc. #15020, p. 105)

Xu, Conglin, "E&P Spending to Rebound in North America", Oil & Gas Journal, March 3, 2014. Table 1. \$229 billion spent for Drilling Exploration in 2013 / 44,992 wells drilled in 2013 equals \$5.0 million per well. (Doc. #15115, p. 140)

<http://www.sba.gov/advocacy/1012014-definition-waters-united-states-under-clean-water-act> (Doc. #15389, p. 8)

http://www2.epa.gov/sites/production/files/2014-03/documents/wus_proposed_rule_economic_analysis.pdf (Doc. #14068, p.6)

http://www.natureserve.org/sites/default/files/projects/files/isolated_wetlands.pdf. (Doc. #15016, p. 99)

<http://www.eenews.net/stories/1060007241> (Doc. #14285, p. 51)

http://water.epa.gov/lawsregs/guidance/cwa/305b/upload/2000_06_28_305b_98report_appenda.pdf (Doc. #15096, p. 8)

<http://science.house.gov/epa-maps-state-2013>. (Doc. #14607, p. 13)

Supplemental Reference:

Congressional Research Service (CRS), “EPA and the Army Corps’ Proposed Rule to Define ‘Waters of the United States’”, September 10, 2014 p. 11 (Doc. #12983, p. 5)