

US EPA ARCHIVE DOCUMENT

vi. Provide specific examples to illustrate your concerns and suggest alternatives.

vii. Explain your views as clearly as possible, avoiding the use of profanity or personal threats.

viii. Make sure to submit your comments by the comment period deadline identified.

## II. What Action is the Agency Taking?

EPA is printing notice of the filing of a pesticide petition received under section 408 of the Federal Food, Drug, and Cosmetic Act (FFDCA), 21 U.S.C. 346a, proposing the establishment or modification of regulations in 40 CFR part 180 for residues of pesticide chemicals in or on various food commodities. EPA has determined that the pesticide petition described in this notice contains data or information regarding the elements set forth in FFDCA section 408(d)(2); however, EPA has not fully evaluated the sufficiency of the submitted data at this time or whether the data supports granting of the pesticide petition. Additional data may be needed before EPA rules on this pesticide petition.

Pursuant to 40 CFR 180.7(f), a summary of the petition included in this notice, prepared by the petitioner, is included in a docket EPA has created for this rulemaking. The docket for this petition is available on-line at <http://www.regulations.gov>.

### *New Exemption from Tolerance*

PP 8F7317. Stratacor Inc., 1315 South 46th Street, Bldg. 154, Richmond, CA 94804, proposes to establish an exemption from the requirement of a tolerance for residues of the insect repellent, [C8–C10 n-carboxylic acids (octanoic acid, nonanoic acid, and decanoic acid)], in or on food commodity beef and dairy cattle, and horses. Because this petition is a request for an exemption from the requirement of a tolerance without numerical limitations, no analytical method is required.

### List of Subjects

Environmental protection, Agricultural commodities, Feed additives, Food additives, Pesticides and pests, Reporting and recordkeeping requirements.

Dated: March 7, 2008.

### Janet L. Andersen,

Director, Biopesticides and Pollution Prevention Division, Office of Pesticide Programs.

[FR Doc. E8–5555 Filed 3–18–08; 8:45 am]

BILLING CODE 6560–50–S

## ENVIRONMENTAL PROTECTION AGENCY

[EPA–R04–OW–2008–0179; FRL–8543–7]

### Proposed Determination To Prohibit, Restrict, or Deny the Specification, of an Area as a Disposal Site; Yazoo River Basin, Issaquena County, MS

**AGENCY:** Environmental Protection Agency (EPA).

**ACTION:** Notice.

**SUMMARY:** Section 404(c) of the Clean Water Act (CWA) authorizes the Environmental Protection Agency (EPA) to prohibit, restrict, or deny the discharge of dredged or fill material at defined sites in waters of the United States (including wetlands) whenever it determines, after notice and opportunity for public hearing, that use of such sites for disposal would have an unacceptable adverse impact on various resources, including fisheries, wildlife, municipal water supplies, and recreational areas. Pursuant to section 404(c), EPA Region 4 is today requesting public comments on its proposal to prohibit or restrict the use of certain waters in the Yazoo River Basin in Issaquena County, Mississippi as disposal sites for dredged or fill material in connection with the construction of the proposed Yazoo Backwater Area Project (the project). As the primary component of this project, the U.S. Army Corps of Engineers, Vicksburg District (the Corps) and the Board of Mississippi Levee Commissioners (project sponsor) propose to construct a 14,000 cubic feet per second (cfs) pumping station at Steele Bayou with a pump-on operation elevation of 87.0 feet, National Geodetic Vertical Datum (NGVD). The construction and operation of the proposed pumps would degrade the critical functions and values of approximately 67,000 acres of wetland resources in the Yazoo River Basin. Of this total, approximately 26,300 acres would be hydrologically modified to the extent that they would no longer be defined as wetlands and would lose CWA regulatory protection. The natural timing, frequency, and duration of water reaching the remaining approximately 40,700 acres of wetlands would be impacted by the proposed pumping, altering the wetlands' ecological characteristics and significantly reducing their functions. EPA Region 4 believes that these extensive hydrological modifications of wetlands in the Yazoo River Basin could have an unacceptable adverse effect on fisheries and wildlife resources.

EPA seeks comment on this proposed 404(c) determination to prohibit or restrict the discharge of dredged or fill material in wetlands and other waters in the Yazoo River Basin in connection with the construction of the project or any pumping proposal in the Yazoo Backwater Area that would involve significant adverse impacts on waters of the United States. See Solicitation of Comments, at the end of the public notice, for further details.

**DATES:** Comments must be received on or before May 5, 2008.

**ADDRESSES:** Submit your comments, identified by Docket ID No. EPA–R04–OW–2008–0179, by one of the following methods:

1. *Federal eRulemaking Portal (recommended method of comment submission):* <http://www.regulations.gov>. Follow the online instructions for submitting comments.
2. *E-mail:* [ow-docket@epamail.epa.gov](mailto:ow-docket@epamail.epa.gov). Include the docket number, EPA–R04–OW–2008–0179 in the subject line of the message.
3. *Mail:* “EPA–R04–OW–2008–0179, Yazoo Pumps,” Wetlands, Coastal and Nonpoint Source Branch; Water Management Division; U.S. Environmental Protection Agency, Region 4; 61 Forsyth Street, SW; Atlanta, Georgia 30303–8960.
4. *Hand Delivery or Courier:* Mr. Ronald J. Mikulak, Wetlands Regulatory Section; Wetlands, Coastal and Nonpoint Source Branch; Water Management Division; U.S. Environmental Protection Agency, Region 4; 61 Forsyth Street, SW; Atlanta, Georgia 30303–8960. Such deliveries are only accepted during the Regional Office's normal hours of operation, which are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding federal holidays.
5. *Submit at Public Hearing:* see PUBLIC HEARING section below. *Instructions:* Direct your comments to Docket ID No. EPA–R04–OW–2008–0179.

EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit through <http://www.regulations.gov> or e-mail, information that you consider to be CBI or otherwise protected. The <http://www.regulations.gov> Web site is an “anonymous access” system, which

means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an e-mail comment directly to EPA without going through <http://www.regulations.gov>, your e-mail address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD-ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment.

Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses. For additional information about EPA's public docket visit the EPA Docket Center homepage at <http://www.epa.gov/epahome/dockets.htm>.

**Docket:** All documents in the electronic docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in <http://www.regulations.gov> or in hard copy at the Wetlands Regulatory Section; Wetlands, Coastal and Nonpoint Source Branch; Water Management Division; U.S. Environmental Protection Agency, Region 4; 61 Forsyth Street, SW; Atlanta, Georgia 30303-8960. EPA requests that if at all possible, you contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding federal holidays.

**Public Hearing:** In accordance with EPA regulations at 40 CFR 231.4, the Regional Administrator may decide that a public hearing on a proposed 404(c) determination would be in the public interest. Mr. Lawrence E. Starfield, Deputy Regional Administrator for EPA Region 6, has been appointed by the Administrator as the Regional Decision Officer for purposes of any EPA Regional action on the Yazoo Backwater Area Project pursuant to section 404(c); since Mr. Starfield has been designated to exercise all such authority for the Regional Administrator for the Yazoo Backwater Area Project, any reference to

authority of the Regional Administrator in this notice are the responsibility of Mr. Starfield for the purposes of this action. In that capacity, Mr. Starfield has decided that a public hearing on this proposed 404(c) determination would be in the public interest.

EPA will hold a public hearing on April 17, 2008, at 7 p.m. at the Vicksburg Convention Center and Auditorium (Exhibit Hall A), located at 1600 Mulberry Street, Vicksburg, MS 39180, seeking comments on its Proposed Determination. See Solicitation of Comments, at the end of this public notice for further details.

The Regional Administrator will designate the official who will preside at the public hearing. Any person may appear at the hearing and submit oral and/or written statements or data and may be represented by counsel or other authorized representatives. The Presiding Officer will establish reasonable limits on the nature and length of time for oral presentation. There will be no cross examination of any hearing participant, although the Presiding Officer may make appropriate inquiries of any such participant.

**FOR FURTHER INFORMATION CONTACT:** For information regarding this notice of proposed 404(c) determination contact Mr. Ronald J. Mikulak, Wetlands Regulatory Section; Wetlands, Coastal and Nonpoint Source Branch; Water Management Division; U.S. Environmental Protection Agency, Region 4; 61 Forsyth Street, SW., Atlanta, Georgia 30303-8960. The telephone number is 404-562-9233. Mr. Mikulak can also be reached via electronic mail at [mikulak.ronald@epa.gov](mailto:mikulak.ronald@epa.gov) or Mr. William Ainslie, Wetlands Regulatory Section, at the same address above. The telephone number is (404) 562-9400. Mr. Ainslie can also be reached via electronic mail at [ainslie.william@epa.gov](mailto:ainslie.william@epa.gov).

**SUPPLEMENTARY INFORMATION:** Throughout this document, references to "EPA," "we," "us," or "our," are intended to mean the Environmental Protection Agency. The supplementary information is arranged as follows:

- I. Section 404(c) Procedure
- II. Project Description and Background
- III. Characteristics and Functions of the Site
- IV. Basis of the Proposed Determination
  - A. Section 404(c) Standards
  - B. Adverse Impacts of the Proposed Project
    1. Significant Degradation and Adverse Effects
    2. Underestimation of Adverse Effects
      - a. Underestimation of the Spatial Extent of Adverse Effects.
      - b. Underestimation of the Degree and Nature of Adverse Effects
    3. Overestimation of Environmental Benefits

- C. Mitigation
- D. Uncertainty of the Proposed Reforestation
- E. Project Alternatives
- F. Recreation
- V. Proposed Determination
- VI. Other Considerations
- VII. Solicitation of Comments

### I. Section 404(c) Procedure

The Clean Water Act (CWA), 33 U.S.C. 1251 *et seq.*, prohibits the discharge of pollutants, including dredged or fill material, into waters of the United States (including wetlands) except in compliance with, among other provisions, section 404 of the CWA, 33 U.S.C. 1344. Section 404 authorizes the Secretary of the Army (Secretary), acting through the Chief of Engineers, to authorize the discharge of dredged or fill material at specified disposal sites. This authorization is conducted, in part, through the application of environmental guidelines developed by EPA, in conjunction with the Secretary, under section 404(b) of the CWA, 33 U.S.C. 1344(b). Section 404(c) of the CWA authorizes EPA to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site and it is authorized to restrict or deny the use of any defined area for specification (including the withdrawal of specification) as a disposal site, whenever it determines, after notice and opportunity for public hearing, that the discharge of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas.

The procedures for implementation of section 404(c) are set forth in 40 CFR part 231. Under those procedures, if the Regional Administrator has reason to believe that use of a site for the discharge of dredged or fill material may have an unacceptable adverse effect on one or more of the aforementioned resources, he may initiate the section 404(c) process by notifying the Corps and the applicant (and/or project proponent) that he intends to issue a proposed determination. Each of those parties then has 15 days to demonstrate to the satisfaction of the Regional Administrator that no unacceptable adverse effects will occur, or that corrective action to prevent an unacceptable adverse effect will be taken. If no such information is provided to the Regional Administrator, or if the Regional Administrator is not satisfied that no unacceptable adverse effect will occur, the Regional Administrator will publish a notice in

the **Federal Register** of his proposed determination, soliciting public comment and offering an opportunity for a public hearing. Today's notice represents this step in the process.

Following the public hearing and the close of the comment period, the Regional Administrator will decide whether to withdraw his proposed determination or prepare a recommended determination. A decision to withdraw may be reviewed at the discretion of the Assistant Administrator for Water at EPA Headquarters. If the Regional Administrator prepares a recommended determination, he then forwards it and the complete administrative record compiled in the Regional Office to the Assistant Administrator for Water. The Assistant Administrator makes the final determination affirming, modifying, or rescinding the recommended determination.

## II. Project Description and Background

The Yazoo River Basin's backwater area (Yazoo Backwater Area) is located in west-central Mississippi, just north of Vicksburg, Mississippi. The portion of this area relevant to the Yazoo Backwater Area Project is located between the east bank mainline Mississippi River levee and the west bank levees of the Will M. Whittington Auxiliary Channel, and comprises about 926,000 acres. Of particular focus are the approximately 630,000 acres inundated by the 100-year flood event which lie in parts of Humphreys, Issaquena, Sharkey, Warren, Washington, and Yazoo Counties in Mississippi and part of Madison Parish in Louisiana. The Big Sunflower River, Little Sunflower River, Deer Creek, and Steele Bayou flow through this area. The high ground along Deer Creek forms a natural divide between Steele Bayou and the Sunflower River Basins.

The Yazoo Backwater Area has historically been subject to extensive backwater flooding from the Mississippi and Yazoo Rivers. When the Mississippi River reached a certain stage, water would back up into the Yazoo River Basin, causing flooding, while preventing the Yazoo River Basin from draining. With the implementation of the Mississippi River and Tributaries Project, which began in 1928, the Steele Bayou flood gate was installed to prevent Mississippi River water from flowing into the Yazoo Backwater Area. The gate feature, combined with other levees, has greatly decreased backwater flooding in the Yazoo River Basin. However, when the Steele Bayou flood gate is closed, precipitation in the Yazoo River Basin becomes trapped and backs

up behind the gate causing flooding. The primary purpose of the Yazoo Backwater Area Project is to reduce the flood damages in the Yazoo Backwater Area caused by this internal flooding. As stated in the FSEIS, a principal objective of the project is to reduce flood damages "to urban and rural structures, as well as agricultural properties." To achieve this objective, the Corps and the Board of Mississippi Levee Commissioners (project sponsor) have proposed a flood damage reduction project with "structural" and "nonstructural" components.

The structural component entails the construction of a 14,000 cfs pumping station at Steele Bayou with a pump-on operation elevation of 87.0 feet, NGVD. When floodwaters at the Steele Bayou structure reach (or are anticipated to reach) an elevation of 87.0 feet, NGVD, the pumps will be turned on and will move water from behind the gate into the Mississippi River. The effects of the pumping will be to reduce the amount of land within the Yazoo Backwater Area that floods, as well as to remove water faster from those areas that still experience flooding. The nonstructural component includes reforestation of up to 40,571 acres of agricultural lands through the purchase of perpetual conservation easements from willing sellers and operation of the Steele Bayou control gates to maintain water elevations between 70.0 and 73.0 feet, NGVD, in the Yazoo Backwater Area waterways during low-water periods when practical. Construction of the proposed pumps involves the discharge of dredged or fill material into approximately 52.6 acres of forested wetlands and other waters of the United States in Issaquena County, Mississippi. The estimated Federal cost of the proposed action is \$220.1 million, with an annual operational cost of \$15.1 million.

This project was authorized by the Flood Control Act of 1941, which envisioned a plan to reduce backwater flooding in the Yazoo River Basin through a combination of levees, drainage structures, and pumping plants fully funded by the Federal government. This act also designated Yazoo Backwater Area lands located below 90 feet in elevation to serve as a sump area for floodwater storage.

Over the next 37 years, the Corps planned and executed key flood control projects in the Yazoo Backwater Area, including: construction of the Will Whittington Auxiliary Channel and Levees in 1962; construction of the Steele Bayou and Little Sunflower flood control gates, which were completed in 1969 and 1975, respectively;

construction of the Yazoo Backwater Levee completed in 1978; and construction of the Sunflower River to Steele Bayou Connecting Channel also completed in 1978.

In April 1982, EPA provided comments on the Draft Environmental Impact Statement (DEIS) for the 1982 version of the proposed project. In our comments on the DEIS we highlighted our concerns regarding the proposed project's potentially extensive impacts on wetlands and associated fish and wildlife habitat and our belief that a less environmentally damaging design would meet the project's objectives. We stressed the importance of the flood water storage and water quality enhancement functions provided by area wetlands and expressed our concerns that the proposed project would degrade these critical functions. We also expressed concerns that the project would stimulate agricultural intensification in flood-prone areas, potentially increasing suspended solids, pesticides, and fertilizers in the water column, and exacerbate existing water quality problems. Additionally, we expressed concerns that the proposed mitigation would not adequately minimize and offset the extensive adverse environmental impacts associated with the proposed project.

In our May 1983 comments on the Final Environmental Impact Statement (FEIS), we expressed similar concerns. Our review of the FEIS concluded that the project would likely "decrease water quality in the area through increases in suspended solids, pesticides and fertilizers; reduce natural overbank flooding and decrease nutrients assimilation by wetland vegetation; transfer flood peaks downstream; serve as a precedent to similarly convert other bottomland hardwood remnants in the lower Mississippi River Valley; and greatly diminish a fish and wildlife resource, which, due to previous clearing elsewhere, has become nationally valuable."

The U.S. Fish and Wildlife Service (FWS) also raised similar concerns regarding the proposed project. According to FWS, its first report on the Yazoo Backwater Area Project and related flood control projects in the Yazoo River Basin was issued in 1956. This report concluded that losses of fish and wildlife resources as a result of the construction of the Yazoo Headwater Project and Yazoo Backwater Project would be large, and that the proposed pumps would promote large scale clearing of forests and intensification of agriculture in wetlands. In February 1978, FWS provided a Fish and Wildlife Coordination Act report to the Corps

which concluded that the pumping plant was environmentally unsound, and that the Service was opposed to the project as planned. A subsequent Fish and Wildlife Coordination Act report submitted in June 1982 noted continued concerns with the proposed project and indicated that it may consider the project a candidate for referral to the Council on Environmental Quality (CEQ).

The Water Resources Development Act (WRDA) of 1986 modified the funding for the project by requiring a local-cost share. Under this new provision, the local project sponsor would provide the lands, easements, rights-of-way, relocations, and disposal areas for the project, or 25 percent of the construction cost, whichever was greater. Work on the project effectively halted. The reauthorization of WRDA ten years later in 1996 reversed the cost-sharing provisions established in 1986 and restored the project to full Federal funding and work on the project began once again.

In 1997, EPA initiated an ecosystem restoration prioritization analysis with the U.S. Geological Survey (USGS). This work evolved into ecological and economic model development for nonstructural floodplain management alternatives in the Yazoo Backwater Area. Between 1998 and 2000, EPA participated in a series of interagency and stakeholder meetings with the Corps, USGS, FWS, the Virginia Polytechnic Institute, and representatives of the Board of Mississippi Levee Commissioners to discuss concerns regarding the proposed project and potentially less environmentally damaging alternatives.

In 2000, EPA also participated in multiple meetings with a group composed of the Mississippi Department of Environmental Quality, Mississippi Department of Wildlife, Fisheries and Parks, the Corps, FWS, Board of Mississippi Levee Commissioners and Yazoo Backwater Area landowners in which we discussed our concerns with the proposed project. EPA also voiced its concerns with the proposed project in meetings with the Office of Management and Budget (OMB), CEQ and representatives from Corps Headquarters in February and March of 2000.

In September 2000, the Corps released the project's Draft Supplemental Environmental Impact Statement (DSEIS). One of the purposes of this reformulation of the project's 1982 FEIS was to respond to a 1991 directive from OMB to evaluate a broader suite of alternatives to the proposed project that would provide: (1) Greater levels of

flood protection for urban areas; (2) reduced levels of agricultural intensification; and (3) reduced adverse impacts to the environment. The OMB directive also stated that the revised evaluation should include "full consideration of predominantly nonstructural and nontraditional measures" to address flooding issues.

In a November 3, 2000, letter to the Corps on the DSEIS, EPA raised significant concerns regarding the proposed project's extensive impacts to wetlands and associated fish and wildlife resources, its potential to exacerbate existing water quality problems in the Yazoo Backwater Area, the inadequacy of the proposed compensatory mitigation, and the uncertainty associated with the proposed reforestation. We also identified, for further consideration, a number of potentially less environmentally damaging alternatives that emphasized nonstructural and nontraditional measures to address flooding issues. We concluded that the project was environmentally unsatisfactory and noted that it was a candidate for referral to CEQ under section 309(b) of the Clean Air Act and the CEQ regulations at 40 CFR part 1504 and for further action under CWA section 404(c).

Between 2002 and 2005, EPA worked with the Corps to improve its evaluation of the extent of wetlands in the Yazoo Backwater Area, the extent of wetlands potentially impacted by the project, and the nature and degree of these impacts. This work involved extensive site visits and data collection in the Yazoo Backwater Area, meetings, and conference calls. In December 2005, EPA provided detailed technical comments on the revised draft Wetland and Mitigation appendices for the DSEIS outlining a number of concerns regarding the evaluation approaches used in these appendices. We noted that flaws in these evaluation approaches result in an underestimation of the potential adverse impacts to wetlands and fish and wildlife resources associated with the construction and operation of the proposed pumps and an overestimation of the potential environmental benefits associated with the proposed reforestation.

In November 2007, the Corps released the Yazoo Backwater Area Reformulation Main Report and Final Supplemental Environmental Impact Statement (FSEIS).<sup>1</sup> Although the Corps

responded to many of our November 2000 comments on the DSEIS, no substantive modifications had been made to the structural component of the proposed project since November 2000. In our January 22, 2008, letter to the Corps on the FSEIS, we concluded that the nature and extent of anticipated adverse environmental impacts continue to be significant and that we continue to have significant concerns with the proposed project including: (1) Magnitude of anticipated impacts to wetlands and associated fish and wildlife resources; (2) compliance with the CWA's substantive environmental criteria (*i.e.*, the Section 404(b)(1) Guidelines); (3) uncertainties with the proposed reforestation plan; (4) changes in land use; (5) environmental justice (EJ) considerations; (6) uncertainty with the economic analysis; and (7) the evaluation of potential project alternatives. We again identified the project as a candidate for referral to CEQ and for further action pursuant to our authorities under the CWA.

In its January 18, 2008, comment letter to the Corps regarding the FSEIS, the FWS shared similar concerns, particularly those associated with the proposed project's potentially unacceptable adverse impacts on fish and wildlife resources. The FWS also reiterated its determination that the project is a candidate for referral to CEQ.

On February 1, 2008, EPA's Regional Administrator informed the Corps and the Board of Mississippi Levee Commissioners of his intention to begin a section 404(c) action, based on his belief that the project may have an unacceptable adverse effect on fish and wildlife resources. During the 15-day response period following the 404(c) initiation letter (which was extended to March 3, 2008) EPA met with representatives from the Corps and Board of Mississippi Levee Commissioners. In addition, EPA had a number of conference calls with the Corps during this consultation period to discuss specific technical concerns we had with the Corps' analysis (many of which are discussed in this notice). However, the Regional Administrator was not satisfied that no unacceptable adverse effect would occur, or that adequate corrective action would be taken to prevent an unacceptable adverse effect, and has published this Proposed Determination in order to solicit public comment.

### III. Characteristics and Functions of the Site

The Lower Mississippi River Alluvial Valley (LMRAV) was a 25-million acre

<sup>1</sup> U.S. Army Corps of Engineers' Yazoo Backwater Area Project Reformulation Main Report and FSEIS: [http://www.mvk.usace.army.mil/offices/pp/projects/YBR\\_Report/index.html](http://www.mvk.usace.army.mil/offices/pp/projects/YBR_Report/index.html).

area of forested wetlands that extended along both sides of the Mississippi River from Illinois south to Louisiana and the Gulf of Mexico. The extent and duration of seasonal flooding from the Mississippi River fluctuated annually, recharging the LMRAV systems and creating a diversity of dynamic habitats that once supported a vast array of fish and wildlife resources. Over the past 100 years, the greatest changes to the landscape have been land clearing for both agriculture and flood control projects. These habitat alterations have had an adverse effect on biological diversity and integrity. For example, breeding bird surveys show continuing declines in species richness and population numbers. In addition to the loss of approximately 80 percent of the bottomland forested wetlands within the LMRAV,<sup>2</sup> there have been significant alterations in the region's hydrology due to river channel modification, construction of flood control levees and reservoirs, and deforestation. The cumulative effect of these hydrological alterations has reduced both the extent and duration of the annual seasonal flooding, adversely affecting the forested wetlands and their associated wetland-dependent species.

These significant cumulative aquatic resource losses across the broader LMRAV are mirrored in the Mississippi Delta region of the LMRAV, in which the Yazoo Backwater Area is situated. Mississippi's 2005 Comprehensive Wildlife Conservation Strategy<sup>3</sup> reports that only fifteen percent of the Mississippi Delta remains forested and the largest segment remaining is the complex of bottomland hardwood forests approximately 100,000 acres in size within and surrounding the Delta National Forest. Much of this important complex of remaining forests and forested wetlands is located in the Yazoo Backwater Area.

Extensive studies of the Yazoo Backwater Area demonstrate that it includes some of the richest wetland and aquatic resources in the Nation. These include a highly productive floodplain fishery, a highly productive but increasingly rare bottomland hardwood forest ecosystem that once dominated the LMRAV, hemispherically important migratory bird foraging grounds and one of only four remaining

backwater ecosystems with a hydrologic connection to the Mississippi River. These wetlands provide critical habitat for a variety of wetland-dependent animal and plant species, including the federally protected Louisiana black bear and pondberry. In addition to serving as critical fish and wildlife habitat, project area wetlands also provide a suite of other important ecological functions. These wetlands protect and improve water quality by removing and retaining pollutants, reduce flood damage by storing floodwaters, recharge groundwater and maintain stream flows, and sequester significant amounts of elemental carbon.

Wetlands in the Yazoo Backwater Area have been described by the Corps as belonging to the hydrogeomorphic (HGM) riverine backwater subclass. This classification indicates that these wetlands flood as a result of impeded drainage of small streams, channels, and drainage ditches due to high water in larger downstream reaches. As a result of this impeded drainage, low lying areas associated with these small streams fill with relatively still "backwater." As stated in the Yazoo Basin HGM Guidebook, the characteristics of the riverine backwater wetlands in this area are: A direct connection to a channel during flood stages equivalent to at least the 5-year frequency return period; the primary source of hydrology to the wetland is backwater; and floodwaters largely drain from the site back to the channel as flood stages fall (as opposed to being retained on the site in depressions).<sup>4</sup>

The wetlands of the riverine backwater subclass occur on various substrates which developed as a result of Mississippi River meandering. This subclass typically contains vegetative communities dominated by green ash (*Fraxinus pennsylvanica*), and Nuttall oak (*Quercus nuttallii*) as well as overcup oak (*Q. lyrata*) and water hickory (*Carya aquatica*) in more low lying areas. However, in addition to these dominant canopy species, willow oak (*Q. phellos*), Sugarberry (*Celtis lavigata*), American elm (*Ulmus americana*), cedar elm (*U. crassifolia*), Red maple (*Acer rubrum*), Cypress (*Taxodium distichum*), water elm (*Planera aquatica*), and Black willow (*Salix nigra*) were also found dominating many of the field sampled

plots in the area.<sup>5</sup> The combination of the hydrologic, soil, and vegetative characteristics of this wetland subclass contribute to the wetland processes, or functions, which support the area's diverse and abundant flora and fauna. However, hydrology is considered by most to be the critical determinant of the establishment and maintenance of specific types of wetlands and wetland processes.<sup>6</sup> As thoroughly discussed in the Yazoo Basin HGM Guidebook and outlined below, maintenance of the natural hydrologic regime (*i.e.*, natural timing, frequency, and duration of water reaching area wetlands) is the most important factor in ensuring that riverine backwater wetlands in the Yazoo Backwater Area perform important functions such as floodwater detention, nutrient cycling, organic carbon export, pollutant filtering/removal, and maintenance of biologically diverse plant and animal habitat.

When riverine backwater wetlands are allowed to temporarily detain and moderate floodwater they provide a number of important benefits. Floodwater interaction with wetlands tends to dampen and broaden the flood wave, which reduces peak discharge downstream. Wetlands can reduce the velocity of water currents and, as a result, reduce erosion. Some portion of the floodwater volume detained within riverine backwater wetlands is likely to be evaporated or transpired, thereby reducing the overall volume of water moving downstream. The portion of the detained flow that infiltrates into the alluvial aquifer, or which returns to the channel very slowly via low-gradient surface routes, may be sufficiently delayed that it contributes significantly to the maintenance of baseflow in some streams long after flooding has ceased. Retention of particulates is also an important component of the flood detention function because sediment deposition directly alters the physical characteristics of the wetland (including hydrologic attributes) and positively influences downstream water quality.

In riverine backwater wetlands, nutrients are stored within, and cycled among, four major compartments: (a) The soil; (b) primary producers such as vascular and nonvascular plants; (c) consumers such as animals, fungi, and bacteria; and (d) dead organic matter, such as leaf litter or woody debris, referred to as detritus. The

<sup>2</sup> Department of the Interior, The Impact of Federal Programs on Wetlands, Volume I: The Lower Mississippi Alluvial Plain and the Prairie Pothole Region, A Report to Congress by the Secretary of the Interior, October 1988 at 60.

<sup>3</sup> Mississippi's Comprehensive Wildlife Conservation Strategy (MCWCS) 2005–2015, October 2005: [http://www.wildlifeactionplans.org/pdfs/action\\_plans/ms\\_action\\_plan.pdf](http://www.wildlifeactionplans.org/pdfs/action_plans/ms_action_plan.pdf).

<sup>4</sup> Smith, R. D., and Klimas, C. V. 2002. A regional guidebook for applying the hydrogeomorphic approach to assessing wetland functions of selected regional wetland subclasses, Yazoo Basin, Lower Mississippi River Alluvial Valley. ERDC/EL TR-02-04. U.S. Army Engineer Research and Development Center, Vicksburg, MS. See: <http://el.erd.usace.army.mil/wetlands/pdfs/trel02-4.pdf>.

<sup>5</sup> EPA, 2008. Yazoo Backwater Area Plant Species List. Wetlands Regulatory Section, Water Management Division, EPA Region 4, Atlanta, GA.

<sup>6</sup> Mitsch, W.J., and Gosselink, J.G. 2000. Wetlands (3rd edition). John Wiley and Sons, Inc. New York, NY.

transformation of nutrients within each compartment and the flow of nutrients between compartments are mediated by a complex variety of biogeochemical processes associated with primary production and decomposition. These biogeochemical processes and their ability to support the rich array of flora and fauna found in the Yazoo Backwater Area are directly linked to maintenance of the natural timing, frequency, and duration of flooding in the area's riverine backwater wetlands systems.

The high productivity and close proximity of riverine backwater wetlands to streams make them important sources of dissolved and particulate organic carbon for aquatic food webs and biogeochemical processes in downstream aquatic habitats. Dissolved and particulate organic carbon is a significant source of energy for the microbes that form the base of the detrital food web in aquatic ecosystems. The ability of riverine backwater wetlands to perform this critical function is directly linked to factors associated with their natural hydrologic cycle of backwater flooding, including: (a) The large amount of organic matter in the litter and soil layers that comes into contact with surface water during flooding; (b) relatively long periods of inundation and, consequently, contact between surface water and organic matter, thus allowing for significant leaching; (c) the ability of the labile carbon fraction to be rapidly leached from organic matter when exposed to water; and (d) the ability of floodwater to transport dissolved and particulate organic carbon from the floodplain to the stream channel.

The area's riverine backwater wetlands permanently remove or temporarily immobilize elements and compounds that are imported to the wetland from various sources, but primarily via the natural cycle of flooding. Elements include macronutrients essential to plant growth e.g., nitrogen, phosphorus, and potassium) as well as heavy metals (zinc, chromium, etc.) that can be toxic at high concentrations. Compounds include pesticides and other imported materials. The primary benefit of this function is that the removal and sequestration of elements and compounds by wetlands reduces the load of nutrients, heavy metals, pesticides, and other pollutants in rivers and streams.

This often translates into improved water quality and aquatic habitat in adjacent or down gradient rivers and streams.

Once nutrients and compounds arrive in riverine backwater wetlands, they may be removed and sequestered through a variety of biogeochemical processes including complexation, chemical precipitation, adsorption, denitrification, decomposition to inactive forms, hydrolysis, uptake by plants, and other processes. The effective performance of many of the most critical biogeochemical processes depends on maintenance of the natural hydrologic cycle of flooding in riverine backwater wetlands and the anoxic/reducing environment created by periodic cycles of inundation and saturation. For example, denitrification will not occur unless the soil is anoxic and the redox potential falls below a certain level. Flooding for approximately 14 days causes soils to become anoxic. When this occurs and other soil conditions are favorable (i.e., availability of soil carbon) the nitrogen in nitrate (NO<sub>2</sub>) is removed by denitrification and released as nitrogen gas to the atmosphere. In addition, sulfate is reduced to sulfide, which then reacts with metal cations to form insoluble metal sulfides such as copper sulfide (CuS), iron sulfide (FeS), lead sulfide (PbS), and others which then fall out of the water column and are retained by the wetland sediments.

The ability of riverine backwater wetlands to maintain a characteristic plant community is important because of the intrinsic value of the plant community and the many attributes and processes of wetlands that are influenced by the plant community. For example, primary productivity, nutrient cycling, and the ability to provide a variety of habitats necessary to maintain local and regional diversity of animals are directly influenced by the plant community. Due to the inundation by nutrient rich floodwaters, a diverse assemblage of plants grow in riverine backwater wetlands and contribute to the primary production of these ecosystems. The growth of different plant communities as a result of variable hydrologic regimes and topography contributes to the uptake and release of nutrients and provides many layers of potential habitat (i.e., litter layer to canopy) for the hundreds of wildlife species which utilize these wetlands. In addition, the plant community of river connected wetlands such as riverine backwater wetlands in the Yazoo River Basin influences the quality of the physical habitat, nutrient status, and biological diversity of downstream systems. As noted in the Yazoo Basin HGM Guidebook, maintaining the natural hydrologic regime of these

wetlands is consistently cited as the principal factor controlling plant community attributes.

A broad array of fish and wildlife species utilize the riverine backwater wetlands in the Yazoo Backwater Area during some part of their life cycles. Terrestrial, semi-aquatic, and aquatic animals use these wetlands extensively. These wetlands provide important habitat for a diversity of organisms, are sites of high levels of secondary production, and are essential in the maintenance of complex trophic interactions. Habitat functions span a range of temporal and spatial scales. For example, invertebrate communities utilize the organic matter generated in these wetlands as a food source and the vertical structure of the plant community as refugia from flooding. Amphibian and reptile species use the wetlands for breeding and foraging habitats and fish utilize floodplains for spawning, rearing, and foraging. Birds and mammals utilize the wetlands for food, cover, and nesting. Most wildlife and fish species found in riverine backwater wetlands of the Yazoo River Basin depend on certain aspects of wetland structure and dynamics such as specific vegetation composition and proximity to other habitats, but of particular importance to the life cycles of these species is the periodic flooding or ponding of water associated with the natural hydrologic regime of riverine backwater wetlands.

The topographic and commensurate hydrologic complexity of these riverine backwater wetlands contribute to the biodiversity for which they are well known. The World Wildlife Fund estimates that there are 372 wildlife species occurring in the Mississippi Lowland Forest ecoregion, which encompasses the Yazoo River Basin and Yazoo Backwater Area.<sup>7</sup> Of these species 35 are amphibian, 52 are reptiles, 223 are birds, and 62 are mammals. According to the Mississippi Museum of Natural History, 40 percent of the amphibians, 60 percent of the reptiles, 82 percent of the birds, and 71 percent of the mammals from the World Wildlife Fund's Mississippi Lowland Forest list occur in the Yazoo River Basin.<sup>8</sup> In addition, 2 amphibian, 4 reptile, 74 bird, and 5 mammalian species were catalogued by the State beyond what World Wildlife Fund reported. Further, the FWS has listed

<sup>7</sup> World Wildlife Fund Mississippi Lowland Forest species list: <http://worldwildlife.org/wildfinder/searchByPlace.cfm?ecoregion=NA0409>.

<sup>8</sup> Personal Communication between William Ainslie, EPA Region 4, and Scott Peyton, Mississippi Museum of Natural History, February 5, 2008.

258 species of birds which use its complex of refuges located in the Yazoo Backwater Area<sup>9</sup> and over 90 species of fish have been documented as utilizing the Yazoo River.<sup>10</sup>

According to the State's Comprehensive Wildlife Conservation Strategy, bottomland hardwood wetlands such as those in the Yazoo Backwater Area provide habitat for 33 *species of greatest conservation need*<sup>11</sup> including 20 birds, 12 mammals, and 1 reptile. Also, all of the standing and running water systems of the Mississippi Alluvial Plain, including the Yazoo Backwater Area, have been classified as critically imperiled because of their high conservation priority rank and the widespread degradation of stream habitats in this region. These waterbodies provide important habitat for 23 *species of greatest conservation need*, including 4 fish, 18 mussels, and 1 reptile. Finally, the stream habitat that remains in the Upper Coastal Plain Yazoo Drainage area, which receives significant hydrologic inputs from the Yazoo Backwater Area, is considered to be vulnerable because of extensive alteration caused by channelization, agricultural use of surrounding lands and impoundments. This portion of the Yazoo River Basin provides critical habitat for 17 *species of greatest conservation need* including 1 amphibian, 12 fish, and 1 reptile.<sup>12</sup>

In its comments in the FSEIS, the FWS reports that the Lower Yazoo Delta is part of a major continental migration corridor for birds funneling through the midcontinent from as far north as the Arctic Circle and as far south as South America. The Yazoo Backwater Project Area comprises approximately 926,000 acres located in LMRAV, through which 60 percent of all bird species in the U.S., over 40 percent of the Nation's waterfowl population, and 500,000 to

1,000,000 shorebirds migrate on a biannual basis. FWS also notes that natural springtime flooding in the area's riverine backwater wetlands coincides with two major events in the LMRAV: (1) Native bird and waterfowl migration that requires suitable and productive stopover and foraging habitats to meet migratory energy needs; and (2) breeding bird and waterfowl nesting that requires adequate nesting and foraging habitats to meet reproductive and rearing needs.

#### IV. Basis of the Proposed Determination

##### A. Section 404(c) Standards

The CWA requires that exercise of the final section 404(c) authority be based on a determination of "unacceptable adverse effect" to municipal water supplies, shellfish beds, fisheries, wildlife, or recreational areas. In making this determination EPA takes into account all information available to it, including any written determination of compliance with the Section 404(b)(1) Guidelines. EPA's regulations at 40 CFR 231.2(e) define "unacceptable adverse effect" as:

*Impact on an aquatic or wetland ecosystem which is likely to result in significant degradation of municipal water supplies or significant loss of or damage to fisheries, shellfishing, or wildlife habitat or recreation areas. In evaluating the unacceptability of such impacts, consideration should be given to the relevant portions of the Section 404(b)(1) Guidelines (40 CFR part 230).*

Those portions of the Guidelines relating to less environmentally damaging practicable alternatives, significant degradation of waters of the United States, water quality impacts, and impact minimization are particularly important to evaluating the unacceptability of environmental impacts in this case. The Guidelines prohibit any discharge of dredged or fill material where: (1) There is a less environmentally damaging practicable alternative to meet the project purpose; (2) the proposed project would violate other environmental standards, including applicable water quality standards; (3) the proposed project would cause or contribute to significant degradation of the Nation's waters; or (4) the proposed project fails to adequately minimize and compensate for wetland and other aquatic resource losses (see 40 CFR 230.10(a)-(d)).

##### B. Adverse Impacts of the Proposed Project

EPA believes the proposed project will result in significant adverse environmental impacts to extensive areas of ecologically significant and important forested wetlands and their

associated fisheries and wildlife resources. At a minimum, the construction and operation of the proposed pumps would degrade the critical functions and values of approximately 67,000 acres of nationally significant wetland resources in the Yazoo River Basin. Of this total, approximately 26,300 acres would be hydrologically modified (i.e., reduced flood duration) to the extent that they would no longer be defined as wetlands and would lose CWA regulatory protection. The natural timing, frequency, and duration of water reaching the remaining approximately 40,700 acres of wetlands would be impacted by the proposed pumping, altering the wetlands' ecological characteristics and reducing their functions. As a point of reference, the impacts estimated by the Corps for this single project are more extensive than the total impacts (on an annual average basis) associated with the 86,000 projects authorized by the Corps permit program nationwide each year.<sup>13</sup> We do not believe that impacts of this magnitude are consistent with the requirements of the CWA. Our concerns regarding this project are amplified because we believe the potential adverse impacts to wetlands and associated fish and wildlife resources may be much greater than the Corps has estimated.

##### 1. Significant Degradation and Adverse Effects

The annual hydrologic cycle of water moving into and out of the project area defines the ecological attributes of the project area's wetland and aquatic resources and fuels the fundamental processes essential to fish and wildlife productivity. This annual water cycle not only makes the project area's diverse habitats accessible to fish and wildlife but also provides the primary linkages that transfer energy and organisms between the project area wetlands and the rest of the lower Mississippi River ecosystem.

The basic objective of the project is to limit the spatial extent, frequency, and length of time the Yazoo Backwater Area floods. The ecological effect of this project will be to dampen the natural variability in flood regime (the flood pulse) which currently contributes to the biodiversity of the project area's wetlands. Operation of the proposed pumps will dramatically alter the hydrologic cycle of this area, and would therefore eliminate or significantly

<sup>9</sup>FWS list of bird species utilizing wildlife refuges in the Yazoo Backwater Area: <http://www.npwr.usgs.gov/resource/birds/chekebird/r4/yazoo.htm>.

<sup>10</sup>Lee, D.S., C.R. Gilbert, C.H. Hocutt, R.E. Jenkins, D.E. McAllister, and J.R. Stauffer, Jr. 1980. Atlas of North American Freshwater Fishes. North Carolina State Museum of Natural History. Publication #1980-12 of the North Carolina Biological Survey. 877 pgs.

<sup>11</sup>Species of Greatest Conservation Need (SGCN) are those animals, both aquatic and terrestrial, that are at risk or are declining in a State. They include threatened and endangered species, as well as other species of concern. The SGCN for Mississippi was developed through a rigorous analysis of the Mississippi Natural Heritage Program's list of "Animals of Special Concern" (ASC). An Expert Team of scientists evaluated the approximately 1,500 species from the ASC and narrowed this list down to only the species most at risk—resulting in approximately 300 Species of Greatest Conservation Need statewide (MCWCS, 2005).

<sup>12</sup>MCWCS, 2005.

<sup>13</sup>Based on data from Fiscal Years 1999 to 2003. Source: Corps Regulatory Program, Headquarters, 2008. See: <http://www.usace.army.mil/cw/cecwo/reg/2003webcharts.pdf>.



degrade many of the critical ecological functions provided by wetlands in the Yazoo Backwater Area, including floodwater detention, nutrient cycling, organic carbon export, pollutant filtering/removal, and maintenance of biologically diverse plant and animal habitat.

The reduction or elimination of the floodwater detention function of wetlands in the Yazoo Backwater Area as a result of the proposed project could increase peak discharges and water currents in the Mississippi River, and exacerbate flooding problems downstream at a time when communities in the lower Mississippi River Valley are still struggling to recover from the effects of recent catastrophic flooding. By maintaining water levels of regular flood events at approximately 87.0 feet, NGVD, at the Steele Bayou gauge, water would not be allowed to collect for significant periods of time in the backwater wetlands. Instead, water that would otherwise remain in the wetlands would be drawn off by the pump and discharged to the Mississippi River. Reducing or eliminating the floodwater detention function of project area wetlands will also decrease the amount of water delivered to plants and allowed to infiltrate into the alluvial aquifer in the Yazoo Backwater Area. The effect of the project is to increase the overall volume of water moving downstream. Not allowing adequate time for floodwater infiltration in the Yazoo Backwater Area will also reduce the amount of water that returns to area streams as baseflow. This is particularly critical in the Yazoo Backwater Area as dewatering of the alluvial plain has already resulted in extremely low seasonal flows in area streams. For example, the Sunflower River flow rate often drops below the minimum low flow rate established by the USGS (i.e., the 7Q10 low flow rate).<sup>14</sup>

Reducing the spatial extent, frequency, and duration of time project area wetlands flood will significantly reduce the amount of dissolved and particulate organic carbon available for wetland and aquatic food webs as well as biogeochemical processes in downstream aquatic habitats. The microbial and invertebrate communities, which are critical to the breakdown and recycling of organic matter in these wetlands, are adapted to the periodic pulsing of floodwaters which currently occurs. Without these periodic flood pulses, microbial and invertebrate communities will diminish, and this will affect the capacity of the

wetland to maintain the base of the food chain. The cycling and export of dissolved and particulate carbon requires prolonged contact between soil organic matter, flood waters, and the invertebrate community and subsequent floodwater transport downstream—circumstances that would be dramatically altered by the proposed project.

Reducing the spatial extent, frequency, and duration of time project area wetlands flood will reduce the capacity of area wetlands to remove water pollutants, thus exacerbating existing water quality problems in the Yazoo Backwater Area. Many water pollutants are imported to wetlands via flood water. Hydrologic alterations associated with the proposed project (i.e., prevention of floodwater from accessing wetlands) will reduce the level of sediment deposition as well as the levels of permanent removal and temporary immobilization of nutrients, metals, and other elements and compounds in project area wetlands. Loss or reduction of this important water quality enhancement function is of particular concern in light of existing water quality concerns in the Yazoo Backwater Area. The State reports that overall water quality is lower in this area than anywhere else in the State, as evidenced by a region-wide advisory regarding fish consumption, and numerous consumption bans in some area waters because of high pesticide levels.<sup>15</sup>

Although the FSEIS concludes otherwise, we believe there is potential for conversion of those 26,300 acres that, as a result of the project, would no longer be defined as wetlands and would lose CWA regulatory protection. These conversions of wetlands to other uses could result in additional adverse environmental effects. For example, agricultural conversion could change a forested wetland habitat to an agriculture use, destroying or significantly degrading all wetland functions. Agricultural intensification could have water quality implications by promoting faster and increased surface water runoff from agricultural fields. Given that the Yazoo Backwater Area already contains CWA section 303(d)-listed impaired waterbodies, additional runoff impacts would likely exacerbate the elevated concentrations of the pollutants of concern, potentially causing or contributing to violations of applicable state water quality standards (40 CFR 230.10(b)).

Reducing the spatial extent, frequency, and duration of time project

area wetlands flood will dramatically alter the structure and species composition of the plant community in the Yazoo Backwater Area. Wetland plant communities will shift over time to communities composed of species adapted to drier environments. For example, large areas currently dominated by Nuttall oak and green ash or overcup oak and water hickory will eventually become drier and be replaced by less flood tolerant species such as sweetgum, which produces mast that has a lower biological value to wildlife. This shift will result in a commensurate reduction in the habitat for other wetland dependent plant species found in the Yazoo Backwater Area such as pondberry, which is listed as Federally *endangered* under the Endangered Species Act. As discussed below, this large shift in plant communities will also have adverse effects on area fish and wildlife which depend on these wetland plant species, and the hydrologic regimes they represent, to meet specific life history requirements.

Reducing the spatial extent, frequency, and duration of time project area wetlands flood will significantly degrade their capacity to provide habitat for an extensive list of fish and wildlife species. Insect larvae, midges, oligochaetes (worms), scuds (microcrustaceans), crayfish, worms, snails and spiders make up a critical component of the macroinvertebrate communities that thrive in the area's riverine backwater wetlands due to the presence of saturated soils, organic material and periphyton (a layer of microbial organisms which colonize detrital material). These invertebrates not only contribute to the breakdown of organic material (shredders and grazers) but they are also critical sources of prey for fish, waterfowl, rodents, bats, and birds. The draining and drying of area wetlands associated with the proposed project would significantly reduce the species diversity, as well as the richness and productivity of the area's macroinvertebrate community, thus adversely impacting an extensive list of vertebrate species which depend upon the wetlands' rich macroinvertebrate community for nourishment.

Reducing the spatial extent, frequency, and duration of time project area wetlands flood will also adversely impact amphibian and reptile species in the Yazoo River Basin that depend upon wetlands for breeding and foraging habitat. The life cycles of amphibians and reptiles in alluvial floodplain ecosystems are linked to hydrology as

<sup>14</sup> MCWCS, 2005.

<sup>15</sup> MCWCS, 2005.

well as soil conditions and climate.<sup>16</sup> Abiotic factors that influence habitat conditions within floodplains include hydrologic regime, flood pulse intensity and duration, topography, wetland permanence (hydroperiod), water quality, and connectivity to rivers or streams. For many amphibians, the hydrology associated with floodplain wetlands is necessary for breeding and egg laying. The proposed project would desiccate these floodplain habitats making it difficult for portions of the amphibian population to survive. The proposed project would also adversely affect reptile and amphibian species by modifying river-wetland connectivity, reducing flood pulses and wetland water recharge, and increasing habitat fragmentation.

The proposed project will reduce extensive areas of flooded wetlands which provide critical habitat for fish spawning, rearing, foraging, and cover. As the FWS noted in its review of the FSEIS, the backwater floodplain in the project area supports a diverse fishery, and relative fish abundance is highly dependent upon seasonal overbank or backwater flooding. It also noted that reproduction by 55 of the 140 (39 percent) resident fish species in the Mississippi River is dependent on backwater flooded areas. According to the FWS, the proposed action would reduce the areal extent of wetlands subject to flooding in the Yazoo Backwater Area that are critical to fishery reproduction by approximately 46 percent, or 112,600 acres, during the critical spawning and rearing months. Spring flooding is the major factor responsible for fishery productivity within the Yazoo River Basin. It provides access to protective spawning and nursery habitat outside the stream channels where larger predatory fish species live. These shallowly flooded areas remain inundated for a duration that allows water temperatures to rise quickly, providing suitable spawning habitat, and allowing for optimum larval fish growth. Once the larval fish hatch and their yolk sack is absorbed (7 to 10 days), these seasonally flooded bottomland hardwood areas provide protective shallow water areas with an abundance of cover for protection from predators, as well as the organic matter,

nutrients, and invertebrates needed for larval and juvenile fish growth.

Backwater riverine wetlands such as the ones that would be impacted by the proposed project are used by more bird species than most other ecosystems in North America.<sup>17</sup> Project area wetlands provide migratory bird habitat of hemispheric significance, particularly for waterfowl, shorebirds, over-water nesting waterbirds and wading birds, as well as numerous migratory songbirds. The loss of the productive shallowly flooded wetlands, especially in the spring months when the proposed pumps will be in operation, will impact migratory birds such as shorebirds and waterfowl as they stop over and forage in preparation for their seasonal migration. Fewer shallowly flooded wetlands will reduce foraging habitat, which will equate to reduced nutritional uptake and could result in higher mortality or reduced reproductive fitness as the birds travel the great distances between their wintering and breeding areas in the northern U.S., Canada, and the Arctic. Breeding for many species could be adversely affected during the spring-time nesting season because foraging areas would be reduced. As a result of the reduction in flooding, adult birds will have to travel longer distances to find food, which equates to longer times away from the nest and their chicks and may ultimately lead to higher nest mortality and lower recruitment.

The hydrologic regime of backwater riverine wetlands creates seasonal pulses of nutrient flow and food resources. The timing of these seasonal pulses of energy is important to many wetland dependent birds and mammals inhabiting the Yazoo Backwater Area. The consequences of even modest changes in the timing of events can adversely affect these species. For example, delayed or reduced flood hydrology caused by the proposed project in late fall or early winter could delay and decrease detrital invertebrate populations in late winter and spring, which would affect, among other factors and other species, the foraging resources for mallards, egg-laying of night herons and hooded mergansers, embryo development in raccoons and storage of

nutrient reserves needed by hibernating black bears.<sup>18</sup>

The proposed project would significantly degrade critical habitat for many of the 258 species of birds (e.g., little blue herons, yellow-crowned night herons, wood storks and prothonotary warblers), many species of waterfowl (e.g., wood ducks, mallards, blue and green-winged teal)<sup>19</sup> and over 90 species of fish (e.g., catfish, sunfish and crappies)<sup>20</sup> which have been documented as utilizing wetlands and other waterbodies in the Yazoo Backwater Area and Yazoo River. The proposed project would also degrade critical habitat for 33 *species of greatest conservation need* which depend on bottomland hardwood wetlands in the Yazoo Backwater Area, including the Louisiana black bear which is listed as Federally *threatened* under the Endangered Species Act and the American black bear, 23 *species of greatest conservation need* which depend on standing and running waterbodies in the Yazoo Backwater Area, and 17 *species of greatest conservation need* which depend on the Yazoo River and its major tributaries.<sup>21</sup>

The proposed project would degrade critical ecological functions provided by wetlands in the Yazoo Backwater Area including floodwater detention, nutrient cycling, organic carbon export, pollutant filtering/removal, and maintenance of biologically diverse plant and animal habitat. We believe that impacts to these functions at the scale associated with this project will result in significant degradation (40 CFR 230.10(c)) of the Nation's waters, particularly in light of the extensive historic wetland losses in the lower Mississippi Valley and specifically the Yazoo Backwater Area.

## 2. Underestimation of Adverse Effects

*a. Underestimation of the Spatial Extent of Adverse Effects.* EPA believes the spatial extent of wetlands potentially impacted by the proposed project is much greater than that estimated in the FSEIS. EPA's analysis identified 81,000 acres of jurisdictional wetlands located outside of the wetland impact assessment area established in the FSEIS. EPA believes a significant portion of these wetlands are connected to backwater flooding and will be adversely impacted by the project. However, the FSEIS did not evaluate impacts to these wetlands.

<sup>16</sup> Jones, J.C. and J.D. Taylor. 2005. Herptofauna communities in temperate river floodplain ecosystems of the southeastern United States. pages 235–257. in L.H. Frederickson, S.A. King, and R.M. Kaminski, eds. Ecology and Management of Bottomland Hardwood Systems: The State of our Understanding. University of Missouri-Columbia, Gaylord Memorial Laboratory Special Publication No.10, Puxico.

<sup>17</sup> Heitmeyer, M.E., R.J. Cooper, J.G. Dickson, and B.D. Leopold. 2005. Ecological relationships of warmblooded vertebrates in bottomland hardwood ecosystems. Pages 281–306. in L.H. Frederickson, S.A. King, and R.M. Kaminski, eds. Ecology and Management of Bottomland Hardwood Systems: The State of our Understanding. University of Missouri—Columbia, Gaylord Memorial Laboratory Special Publication No.10, Puxico.

<sup>18</sup> Heitmeyer et al., 2005.

<sup>19</sup> FWS list of bird species utilizing wildlife refuges in the Yazoo Backwater Area: <http://www.npwr.usgs.gov/resource/birds/chekbird/r4/yazoo.htm>.

<sup>20</sup> Lee et al., 1980.

<sup>21</sup> MCWCS, 2005.

In our November 2000, comment letter on the DSEIS, we recommended that the Corps expand its scope of wetland impact assessment to include jurisdictional wetlands in the 2-year floodplain (i.e., 91.0 foot, NGVD elevation). While the FSEIS implies that there are more jurisdictional wetlands in the 100-year floodplain than previously estimated in the DSEIS, the FSEIS concludes that only those wetlands flooded for 5 percent of the growing season and which occur at or below the 88.6 foot, NGVD elevation (i.e., the wetland impact assessment area established in the FSEIS using the Flood Event Assessment Tool (FEAT)/Flood Event Simulation Model (FESM)) will be affected by this project. The FSEIS also concludes that any wetlands occurring outside the FEAT/FESM modeled boundary are not connected to the backwater ecosystem and thus would not be impacted by the pumping project. We disagree and, as discussed further below, note that data included in the FSEIS supports our position that a significant amount of jurisdictional wetlands outside the FEAT/FESM modeled boundary is indeed connected to the backwater ecosystem, and thus will likely be adversely impacted by the proposed project.

During the course of this project several attempts have been made to estimate the spatial extent of wetlands based upon remote sources of data (i.e., Geographic Information Systems (GIS), satellite images, hydrologic models). These remote based estimates of jurisdictional wetland extent ranged from approximately 60,000 to over 200,000 acres. Since these landscape level estimates were based on remote data with un-estimated error, EPA determined a field based, statistical survey would provide a more precise and scientifically defensible basis for establishing the extent and spatial distribution of wetlands in the study area. Therefore, in 2003, EPA in cooperation with the Corps, the FWS and the Natural Resources Conservation Service (NRCS) implemented a field sampling survey designed by EPA's Environmental Monitoring and Assessment Program (EMAP). EMAP survey designs and methods have been developed and tested within EPA's Office of Research and Development over the past decade with published results. Discussion of the methods and results of the EMAP survey were incorporated into Appendix 10 of the FSEIS.

The spatial extent and distribution of wetlands in the Yazoo Backwater Area was determined with known confidence using EPA's EMAP survey design and

analysis. Based on this design, the total wetland extent for the 100-year floodplain is approximately 212,000 acres. Most of the wetlands were found in the FEAT/FESM predicted area. However, EMAP also found approximately 81,000 acres of jurisdictional wetlands occurring outside the wetland boundary predicted by the Corps' FEAT/FESM model. It is the potential impacts to these wetlands that EPA believes were not analyzed in the FSEIS.

The stated effect of the Yazoo Backwater Area Project is the reduction of the areal extent and duration of floods greater than the 1-year flood (FSEIS, paragraph 31). Paragraphs 194–195 in the Main Report state that the timing, frequency and duration of flooding will be affected by the project. Therefore, areas typically covered/inundated by 2-, 5-, 10-, 25-, 50-, and 100-year flood events will be reduced with the proposed project (i.e., less area will be flooded). These areas contain a substantial acreage of wetlands.

Data included in the FSEIS indicates that hydrologic connections exist amongst wetlands beyond those depicted by FEAT/FESM. Table 10–7, in the Wetlands Appendix of the FSEIS indicates that the March 10, 1989; March 21, 1987; and the January 9 and 13, 1983 satellite scenes show between 18,000 and 71,000 acres flooded in the area between 91.0 feet and 100 feet, NGVD (i.e., 2–100 year band). Hence, it is likely that the jurisdictional wetlands between the 2-year and 100-year flood elevations currently experience flooding. This conclusion is further supported by the statement that the FESM model overestimates flooding close to the channels utilized by the model, but does “less well” when flooded areas are away from the channels (FSEIS, paragraph 43). EPA interprets this to mean that areas away from the FESM channels could flood, but the model is unable to depict those flooded areas. FSEIS Tables 10–10 (Areal extent of wetlands by composite wetland cell value) and 10–11 (Wetland losses by duration interval and duration zone) in the Wetlands Appendix (Appendix 10) and Plate 10–25 indicate there are wetland areas beyond the FEAT boundary that flood and would be affected by the proposed pump by virtue of having decreased flood durations after the project. These items in Appendix 10 indicate impacts to be approximately 60,000 acres. The Wetland Appendix also indicates that approximately 41,000 acres outside the Corps' assessment area (i.e., “Tier 2” wetlands in Table 10–16) flood during the 2-year return period flood.

Corps' hydrologic data also indicate that flooded wetlands exist in the 2-year floodplain and will be impacted through a change in flood duration as well as a change in flood frequency. In 2004, the Corps provided EPA with a copy of the Period of Record gage data for the years 1943 to 1997. These data contained daily gage records, presumably as outputs from the Period of Record Routing model, for the with- and without project scenarios at Steele Bayou and Little Sunflower gages. A frequency analysis of this data indicates the 2-year flood elevation (stage) is 91.0 feet, NGVD in the Lower Ponding area and 91.6 feet, NGVD in the Upper Ponding area (FSEIS, Appendix 6—Engineering Summary and Appendix 10). A stage duration analysis of these data indicates that, over the entire period of record, flooding sufficient for wetland hydrology occurs in areas between 89.0 feet and 92.0 feet, NGVD at Steele Bayou under base conditions.<sup>22</sup> As a result of the proposed project, durations would be decreased, on an average annual basis, by 4.5 percent or 15 days. Flood frequency would be changed, at this 2-year return interval elevation, approximately 45 percent. This corresponds to the Corps' calculated stage reductions of approximately 4.5 feet (92.9 feet, NGVD reduced to 88.5 feet, NGVD) at Steele Bayou.

Corps' stage-frequency data indicates flooding will become much less frequent in the 2- and 5-year floodplains, increasing from a 2-year return interval to a 10-year return interval and a 5-year return interval to a 50-year return interval (FSEIS, Appendix 6, Table 6–14 and 6–15). This would result in significant impacts to, among other functions, the hydrologic functions of wetlands in the 2-year floodplain. However, by restricting the impact assessment area to only the FEAT/FESM modeled areas, the Corps is ignoring changes in flood duration and frequency that will result in major impacts to wetlands outside the FSEIS's assessment area.

Existing information regarding the extensive hydrologic network in the Yazoo Backwater Area offers further support that wetlands outside the Corp's assessment area would be affected by the proposed project. The National Hydrography Dataset (NHD) is a comprehensive set of digital spatial data that encodes information about naturally occurring and constructed bodies of water and paths through which water flows. The NHD is mapped at a 1:100,000 scale. When the NHD for the Yazoo River Basin is overlain with the wetland points surveyed in EMAP, the density of stream channels at this

scale strongly indicates that backwater has a great many conduits and that many wetlands on the 2-year floodplain represented by EMAP data points are connected or adjacent to channels. This finding is consistent with the detailed characterization of the Yazoo Backwater Area's hydrology found in the Yazoo Basin HGM Guidebook, which states that during periods of backwater flooding the area's extensive drainage networks "function in reverse and deliver water to low areas far from the source stream."

For these reasons, EPA believes that a significant portion of the 81,000 acres of jurisdictional wetlands identified in the EMAP analysis that exist outside of the Corps' wetland assessment area are connected to backwater flooding and will likely be adversely affected by the project. These wetlands were not evaluated in the FSEIS's impact assessment.

*b. Underestimation of the Degree and Nature of Adverse Effects.* In addition to significantly underestimating the spatial extent of wetlands potentially impacted by the proposed project, wetland, fish, and wildlife functional assessments in the FSEIS also understate the degree and nature of adverse impacts to the wetlands that were evaluated. EPA encouraged the use of the HGM assessment method and the Habitat Evaluation Procedure (HEP) as tools to help evaluate wetland functions, and we still support the use of those tools; however, we believe that certain factors used in the application of these assessment tools are flawed, leading to a significant underestimation of the proposed pumping station's adverse impacts on the aquatic ecosystem. Our primary concerns include:

- The summation of assessment units (i.e., Functional Capacity Units and Habitat Units) in the FSEIS obscures significant wetland, fish, and wildlife impacts. For example, the HGM assessment evaluated eight functions performed by affected wetlands and estimated how these functions would decrease at wetlands adversely impacted by the proposed pumping and increase at reforestation/mitigation sites. These functions are: *detain floodwater*, *detain precipitation*, *cycle nutrients*, *export organic carbon*, *physical removal of elements and compounds*, *biological removal of elements and compounds*, *maintain plant communities*, and *provide wildlife habitat*. In drawing its conclusion that the proposed project would result in an overall 19.5 percent increase in wetland functions, not only does the FSEIS factor in unsubstantiated and improbable benefits associated with the proposed restoration as discussed

below, it also adds the losses and gains for each of the eight functions. This kind of comparison is of concern because it allows large predicted gains in functions such as maintaining plant communities to obscure losses in other critical water quality related functions.

- Impacts to key functions are omitted. In the HGM assessment, no effect is shown in the *detain floodwater* function as a result of this project despite the fact that this is one of the functions which the proposed pumping project is designed to most dramatically impact. In its discussion of the *detain floodwater* function, the Yazoo Basin HGM Guidebook clearly states the importance of duration of flooding on the performance of this function. However, despite this recognition, the duration information which was incorporated into several other functions in the FSEIS's HGM assessment (which did indicate project related impacts) was not incorporated into the *detain floodwater* function.

- The flood frequency variable shows no change in HGM assessment. Despite information in the FSEIS Engineering Appendix (Table 10-6) which indicates that the proposed project will result in less frequent flooding in areas above the 1-year floodplain, the frequency of flooding variable in the HGM assessment models reflects no change, for any function. This seems incongruous, since the entire stated objective of the project is to modify the timing, frequency and duration of flooding (FSEIS, paragraph 194).

- Despite the pumping project, the HGM assessment assumes that vegetative species composition remains approximately static over time. Over the course of the 50-year project and beyond, the vegetation structure of the Yazoo Backwater Area would change as significant areas at higher elevations shift to drier species composition. The FSEIS's HGM assessment assumes that vegetative species composition remains static through time or that the species shift would still be within the range of reference standards. However, if the hydrologic regime of the area is significantly changed, as proposed, there would be much larger changes in the plant and animal community than was accounted for in the FSEIS's HGM assessment.

- The HEP and HGM assessments assume that land use will not change over the 50-year life of the project. For example, the assessment assumes that mature wetland forest that is hydrologically modified to the extent that it is no longer defined as a wetland would stay mature forest despite no longer being provided CWA regulatory

protection. We believe this assumption is not supported by a more careful evaluation of land-use trends. For example, given the rise in prices for agricultural products in the Mississippi Delta, and the strong increase in domestic production of corn nationwide, agricultural intensification is a serious possibility.

- The HEP assessment underestimates the amount of aquatic spawning habitat adversely affected. According to the HEP model used, fish spawning habitat requires 8 days of continuous inundation at least 1 foot in depth, from March to May. Based on these requirements and hydrologic data provided by the Corps, 3300 acres of habitat would be lost as a result of the project. However, this amount of lost habitat is inconsistent with values reported in the Wetland Appendix (Table 10-10). The Wetland Appendix indicates that approximately 39,000 acres which currently flood for 14 days or less (but greater than 7 days) would, as a result of the proposed project, only flood for less than 7 days (i.e., shift to the <2.5 percent duration band). EPA's interpretation of Table 10-10 is that there is currently at least 39,000 acres of potentially suitable fish spawning habitat that will become unsuitable after project implementation. These impacts appear far greater than the 3300 acres of lost spawning habitat discussed in the FSEIS's Aquatics Appendix and would require far more compensation than what is proposed in the FSEIS.

- Inappropriate selection of fish species for the HEP assessment results in an underestimation of the proposed project's adverse effects on fisheries. The nine fish species selected for the FSEIS's HEP assessment do not represent fish species whose life cycles would be affected by the proposed project's hydrological modifications within riverine backwater wetlands. All nine of the fish species evaluated in the HEP are commonly found in larger open water systems and do not require floodplain habitats for their spawning or rearing. Thus, the HEP assessment underestimates how the proposed project would impact the large number of fish species which do require floodplain connections and periodic flooding events for key aspects of their life cycles such as spawning and rearing.

- HEP does not evaluate the impacts of the proposed project on amphibians and reptiles. The FSEIS's HEP assessments exclude entirely any assessment of the proposed project's adverse impacts on amphibians and reptiles. Species in both of these classes of animals depend upon wetland habitat

to meet numerous life history requirements and would experience extensive adverse effects from the proposed project.

The FSEIS's exclusion from analysis of wetlands above the 2-year, 5 percent flood duration elevation, and in particular wetlands above the 2-year, 5 percent duration flood elevation and within the 5-year flood elevation, does not acknowledge the influence and importance of shorter duration and less frequent flooding on establishing and maintaining the diversity of wetlands and the functions they provide. Nor does it recognize the impacts of the reduction in flooding resulting from the project on the maintenance of that diversity of wetlands and the biodiversity they support. The importance of wetland functions within and above the 2-year, 5 percent flood elevation is noted in the Yazoo Basin HGM Guidebook which states "one of the primary criteria used to identify wetland subclasses in the Yazoo Basin is flood return interval. A 5-year or less flood return interval is regarded as sufficient to support major functions that involve periodic connection to stream systems." Shorter duration and less frequent flooding will significantly and adversely affect the vegetation and aquatic animal communities within these wetlands, nutrient and sediment cycling, and other functions that establish and maintain the diversity of habitats critical for fish and wildlife dependent upon them, including waterfowl, shorebird, and wading bird foraging habitats, fish spawning and rearing habitats, and amphibian, reptile, and mammal habitats. Reducing the spatial extent, frequency, and duration of time project area wetlands flood will result in the reduction and loss of important wetland functions, according to the criteria outlined in the Yazoo Basin HGM Guidebook. These reductions and losses in wetland functions were not adequately factored into the FSEIS's HGM and HEP assessments.

### 3. Overestimation of Environmental Benefits

Both the HGM and HEP analyses assume extensive yet unsubstantiated and improbable environmental benefits from the project's proposed reforestation. These analyses assume that the entire proposed 55,600 acres of reforestation and mitigation will be obtained and that every acre will be ideally situated in the target area (i.e., areas currently in agricultural production within the two-year floodplain that will flood for a sufficient period to yield equivalent wetland

functions) to produce maximum environmental benefits for all affected resources. However, EPA's EMAP assessment and the Corps' land use assessment (FSEIS, Table 10-9) indicate that there are not enough acres of cleared wetlands with the proper hydrology and soils in the target area to satisfy this goal. Aside from the project's compensatory mitigation (discussed below), there are no commitments to initiate any of the reforestation prior to initiating operation of the pumps. Further, no reforestation (or mitigation) sites have been identified or secured and the FSEIS indicates that these sites may not be located in the target area or even the greater Yazoo—Mississippi Delta (Main Report, paragraph 316). If sites are found, the reliance on willing sellers would likely result in a noncontiguous patchwork of fragmented sites that cannot deliver the kinds of ecological benefits predicted by the HGM and HEP assessments.

Based on our review of available information, EPA believes the proposed project would result in extensive adverse impacts to wetland functions and fish and wildlife resources; impacts which would be inconsistent with the CWA. As discussed below, we do not believe the proposed compensatory mitigation would reduce these adverse impacts to an acceptable level.

### C. Mitigation

To offset the project's extensive adverse environmental impacts, the Corps proposes 10,662 acres of compensatory mitigation. Compensation would consist of reforestation and conservation of areas located in previously cleared wetlands to restore those areas to bottomland hardwood forests. However, compensation sites have not been specifically identified for the proposed mitigation. Rather, the FSEIS states that conservation easements will be purchased only from "willing sellers" to conduct the proposed compensatory mitigation.

EPA has significant concerns regarding the adequacy of the proposed compensatory mitigation. Based on our preliminary review of the HGM and HEP analyses, we believe that compensation requirements for impacts of this type and on this scale would be much greater than that estimated in the FSEIS. In addition, there do not appear to be enough acres of cleared wetlands with the proper hydrology and soils in the target area to satisfy more accurate projections of the mitigation needs of the proposed project. Even if sufficient compensation acreage were available, we do not believe that impacts of this scale and concentration could be

effectively compensated for to avoid causing or contributing to significant degradation (40 CFR 230.10(c)), given that reliance on willing sellers would likely result in a noncontiguous patchwork of fragmented compensation sites that cannot deliver the ecological benefits predicted by the FSEIS. We also believe that the project fails to include all appropriate and practicable steps to minimize and compensate for the project's adverse impacts on the aquatic ecosystem as required by 40 CFR 230.10(d).

The section 404(b)(1) guidelines prohibit discharges that would cause or contribute to significant degradation. As previously discussed, we believe this project would cause or contribute to significant degradation. If the project is going to rely on compensatory mitigation to reduce impacts to an acceptable level, there must be a very robust and detailed mitigation plan which would inform whether in fact the impacts could reliably be reduced to avoid significantly degrading the Nation's waters. These plans should include a number of critical details regarding the mitigation project(s) including: clearly articulated project goals and objectives; project site selection criteria; site protection instruments (e.g., conservation easements); detailed quantitative and qualitative baseline information describing both the impact and compensation sites; a detailed discussion of the mitigation project's credit determination methodology and results; a maintenance plan; ecological performance standards used to evaluate the degree to which the compensation projects are replacing lost functions and area; detailed monitoring requirements; a long-term management plan describing necessary long-term stewardship of the compensation sites and who is responsible for performing this stewardship; an adaptive management plan; and financial assurances to ensure project construction, implementation, and long-term management.

Another critical element of these plans is the site specific mitigation work plans. These plans include detailed written specifications and work descriptions for the compensatory mitigation project, including, but not limited to: geographic boundaries of the project; construction methods, timing, and sequence; source(s) of water, including connections to existing waters and uplands; methods for establishing the desired plant community; plans to control invasive plant species; the proposed grading plan, including elevations and slopes of the substrate;

soil management; and erosion control measures.

Despite the extensive anticipated environmental impacts associated with the proposed project, no specific compensation project sites have been identified or secured. Thus, the mitigation plan included in the FSEIS lacks most of the aforementioned details. In particular, it lacks accurate information regarding baseline conditions at compensation sites, as well as substantiated information regarding potential environmental benefits likely to accrue at these sites if reforestation activities are successfully implemented. Without these details it is not possible to determine that the potential adverse environmental impacts of a project would be successfully minimized and compensated for to avoid significantly degrading the Nation's waters.

What information is included in the FSEIS describing compensatory mitigation raises more concerns. The Corps only promises that 10,662 acres of compensatory mitigation will take place prior to initiating operation of the pumps and notes that this minimum may not be located in the target area or even the greater Yazoo-Mississippi Delta, raising significant concerns that important wetland functions will not be replaced in the watershed. The FSEIS indicates that no requirements will be included to implement hydrological modifications or to otherwise ensure that the compensation projects will result in fully functioning wetland systems. This is of particular concern since the Corps envisions mitigation projects being located in areas whose hydrology will be impacted by the proposed pumping station. The conservation easements used to provide long-term site protection described in the FSEIS (if such sites can be found) will not require landowners to ensure that sites are or will retain wetland characteristics and will allow potentially ecologically disruptive silvicultural practices in these areas. Additionally, the monitoring provisions described in the FSEIS entail only initial visual inspections in the early years of project implementation followed by remote sensing techniques in later years. These are inadequate and are one of many weaknesses in the mitigation plan that make it impossible to conclude that impacts will be reduced permanently below the threshold of significant degradation.

#### *D. Uncertainty of the Proposed Reforestation*

Consistent with our comments regarding the proposed compensatory

mitigation, EPA believes the Corps does not provide effective assurances regarding the project's primary nonstructural component—the proposed reforestation of up to 40,571 acres of cleared wetlands (i.e., up to 55,600 acres less the 10,662 acres the Corps proposes to use as compensation for this project and the 4,367 acres it proposes to use as compensation for impacts associated with already implemented aspects of related projects) through the purchase of conservation easements from willing sellers. Reforestation sites have not been specifically identified in the FSEIS and, as with the compensatory mitigation, there do not appear to be enough acres of cleared wetlands with the appropriate hydrology and soils in the target area to meet this goal. Even if there were enough potential wetland reforestation acres, reliance on willing sellers does not provide effective assurance that the acreage proposed (up to 40,571 acres) will ultimately be made available for the reforestation effort. The reforestation component also suffers from the same technical problems associated with the compensatory mitigation plan in that it would likely result in a fragmented patchwork of reforestation sites with limited benefits. In addition to logistical and technical issues, the management of the reforestation lands (e.g., ensuring the implementation and success of planting efforts, providing long-term stewardship), the restoration of wetland hydrology, the replacement of temporal losses incurred before replanted trees become fully functional bottomland hardwood forested wetlands (hardwoods typically require a minimum of 60–70 years before they are mature), and the continuation of silvicultural practices in the reforestation areas are also major uncertainties. In light of these uncertainties, the environmental benefits suggested by the FSEIS to accrue from the proposed reforestation have not been substantiated.

#### *E. Project Alternatives*

EPA believes, based on the record to date, that the Corps has not sufficiently considered potential alternatives that would avoid and minimize the proposed project's significant adverse impacts to aquatic resources pursuant to 40 CFR 230.10(a). Specifically, we believe that an alternative may be available that would provide a less environmentally damaging and more sustainable approach to floodplain management in the Yazoo Backwater Area. Such an alternative might incorporate, among other actions: reforestation of farmlands in the floodplain, relocation or flood proofing

of flood-prone structures, conservation easements, localized flood protection structures including pumps, and expansion of insurance programs to compensate for economic losses from flooding.

While EPA believes that the nature and extent of the environmental impacts associated with the structural proposal are significant, further evaluation of nonstructural actions could produce a cost-effective solution with significantly fewer adverse environmental impacts than the proposed project, consistent with the Guidelines. We acknowledge that such a solution would likely require participation by multiple federal and state agencies, private industry, and non-governmental organizations, and may necessitate additional Congressional authorization. However, a primarily nonstructural approach could ultimately provide a better balance of Federal objectives for addressing the needs of the Yazoo Backwater Area community for flood reduction and wetlands protection.

#### *F. Recreation*

As previously noted, a 404(c) determination can be based on unacceptable adverse effects on recreational areas. Significant, seasonally-inundated public lands are located in the Yazoo Backwater Area including: (a) The Delta National Forest (61,800 acres); (b) the Yazoo National Wildlife Refuge Complex (including the Yazoo (13,000 acres), Holt Collier (1,400 acres), Theodore Roosevelt (4,000 acres), and part of Panther Swamp (14,000 acres) refuges); (c) Twin Oaks Mitigation Area (5,675 acres); (d) Mahanna Mitigation Area (12,675 acres); and (e) Lake George Wildlife Management Area (8,383 acres). The FSEIS acknowledges these lands as significant resources (FSEIS, page 90) however it does not evaluate how these resources and particularly their recreational values will be affected by the proposed project. In its January 18, 2008, detailed comments on the FSEIS, the FWS indicated that the proposed project will have unacceptable adverse effects on recreational areas in the Yazoo Backwater Area, including four National Wildlife Refuges mentioned above and other publicly-owned land in the project area. EPA is soliciting information about these and other recreational areas in the Yazoo Backwater Area, the use of these areas and how these areas would be impacted if the proposed pumping station is built.

#### **V. Proposed Determination**

The Regional Administrator proposes to recommend that the discharge of

dredged or fill material in wetlands and other waters in Issaquena County, Mississippi be prohibited for the purpose of constructing the Yazoo Backwater Area Project's pumping station or any other pumping proposal in the Yazoo Backwater Area that would involve significant adverse impacts on waters of the United States. Based on current information, the Regional Administrator has reason to believe the Yazoo Backwater Area Project could result in unacceptable adverse impacts. Moreover, these impacts may be partly or entirely avoidable.

This proposed determination is based on unacceptable adverse impacts to wildlife and fisheries pursuant to section 404(c). EPA has reason to believe the project would cause or contribute to significant degradation of waters of the United States and violate the section 404(b)(1) guidelines. At a minimum, the construction and operation of the proposed pumps would degrade the critical functions and values of approximately 67,000 acres of nationally significant wetland resources in the Yazoo River Basin. Of this total, approximately 26,300 acres would be hydrologically modified to the extent that they would no longer be defined as wetlands and would lose CWA regulatory protection. The natural timing, frequency, and duration of water reaching the remaining approximately 40,700 acres of wetlands would be impacted by the proposed pumping, altering the wetlands' ecological characteristics and reducing their functions. EPA does not believe that impacts of this magnitude are consistent with the requirements of the CWA. Our concerns regarding this project are amplified because we believe the potential adverse impacts on wetlands (particularly those wetlands located within the 2-year floodplain) and associated fish and wildlife resources may be much greater than is estimated in the FSEIS. These impacts must also be viewed in the context of the significant cumulative losses across the LMRAV, which has already lost over 80 percent of its bottomland forested wetlands, and specifically in the Mississippi Delta where the proposed project would significantly degrade important remnant bottomland forested wetlands.

EPA does not believe the potential impacts of the project, as currently proposed, can be adequately mitigated to reduce the impacts to an acceptable level. Additionally, we do not believe that the environmental benefits suggested by the FSEIS to accrue from the project's nonstructural component (e.g., the reforestation of up to 40,571

acres) have been substantiated. EPA supports the goal of providing improved flood protection for the residents of the Mississippi Delta; however, we believe that accomplishment of this vital objective can be fully consistent with ensuring effective protection for the area's valuable natural resources. In light of existing information, EPA believes that there are likely to be less environmentally damaging practicable alternatives to building the proposed pumping station.

#### VI. Other Considerations

Like the Corps, EPA has met with local community residents and listened to their hope and belief that the Yazoo Backwater Area Project will protect their homes against major floods, like the one in 1973. The community residents we met expressed a strong belief that by making the area less prone to flooding, the project will bring economic development, jobs, and a return of residents to the area. EPA recognizes the importance of improved flood protection for the people living and working in the project area, which includes low-income and minority populations, and we appreciate that the Corps responded to DSEIS follow-up discussions on environmental justice (EJ) by preparing an EJ analysis pursuant to Executive Order 12898.

The Corps' EJ analysis generally discusses the potential flood protection and economic development that could accrue from the project within communities with potential EJ concerns. However, it has not demonstrated specifically which surrounding communities will be protected and which will remain subject to flooding after the project is completed, and whether they will be protected against 1-year, 2-year, or 100-year floods. The FSEIS does not provide flood risk maps that show the location of residences and habitable structures within the potentially affected communities. Furthermore, EPA does not believe the Corps has fully analyzed the impact of this project on potential economic development in the EJ community.

Under Executive Order 12898, the Corps should have also considered the project's potential effects on subsistence fishers and hunters who could be disproportionately impacted by the operation of the pumps. The FSEIS does not address whether the project would adversely impact populations that depend on subsistence fishing or hunting. We are soliciting information about these and other potential impacts on local communities if the proposed pumping station is built.

Although EPA's proposed section 404(c) determination would prohibit the construction of the pumps as proposed, as mentioned previously, EPA continues to believe there are alternatives that could provide flood protection and other benefits to all communities within the Yazoo Backwater Area. We support working with the residents of the Delta and our federal partners to propose and evaluate alternatives that are responsive to local conditions, needs, and preferences.

#### VII. Solicitation of Comments

EPA is today soliciting comments on all issues discussed in this notice. In particular, we request information on the likely adverse impacts to fish and wildlife values of all of the wetlands, streams, and other waters in all areas which would be affected by the construction and operation of the pumping station proposed in the Yazoo Backwater Area Project. We also seek information pertaining to flora, fauna, and hydrology of the Yazoo Backwater Area. All relevant data, studies, knowledge of studies, or informal observations are appropriate. Information on species or communities of regional or statewide importance would be especially useful.

While the anticipated unacceptable adverse effects on fisheries and wildlife serves as EPA's main basis for this proposed 404(c) determination, EPA has additional concerns with the proposed project, including water quality impacts, alternatives, mitigation, and impacts on recreation. Therefore, EPA also solicits comments on the following aspects of the project and corrective actions that could be taken to reduce the adverse impact of the discharge:

(1) The potential for additional violations of State Water Quality Standards to occur in the Yazoo River Basin if the pumping station is built;

(2) Additional information about low-income and minority populations in the Yazoo Backwater Area and, in the context of Executive Order 12898, the disproportionately high adverse human health or environmental effects, if any, on these populations if EPA makes a final determination to prohibit or restrict the use of certain waters in the Yazoo River Basin as disposal sites for dredged or fill material in connection with the project;

(3) Additional information about fisheries in the Yazoo River Basin and the impacts to fisheries if the pumping station is built and operated;

(4) Additional information on the wildlife species which would be affected by changes in the aquatic

ecosystem if the pumping station is built and operated;

(5) Additional information on municipal and other water supplies in the Yazoo River Basin and how the quantity and quality of those water supplies could be affected by the operation of the proposed pumping station;

(6) The potential for impacts to wetlands and their associated functions in the Yazoo River Basin if the pumping station is built and operated;

(7) Information about recreational uses of the area and how they would be impacted if the pumping station is built and operated;

(8) Additional information on the availability of less environmentally damaging practicable alternatives to satisfy flooding issues, taking into account cost, technology, and logistics and including other nonstructural alternatives;

(9) Information on the potential for mitigation to replace the functions and services provided by the 67,000 acres of wetlands that are, at a minimum, at risk in the Yazoo Backwater Area;

(10) Whether the discharge should be permanently prohibited, allowed as proposed by the Corps, or restricted in time, size or other manner; and

(11) Potential impacts and benefits of alternatives, both structural and nonstructural.

The record will remain open for comments until May 5, 2008. All comments will be fully considered in reaching a decision to either withdraw the proposed determination or forward to EPA Headquarters a recommended determination to prohibit or restrict the discharge of dredged or fill material in wetlands and other waters in the Yazoo Backwater Area in connection with the construction of the Yazoo Backwater Area Project's pumping station or any other pumping proposal in the Yazoo Backwater Area that would involve significant adverse impacts on waters of the United States.

**Lawrence E. Starfield,**

*Regional Decision Officer.*

[FR Doc. E8-5401 Filed 3-18-08; 8:45 am]

BILLING CODE 6560-50-P

## FEDERAL MARITIME COMMISSION

### Notice of Agreements Filed

The Commission hereby gives notice of the filing of the following agreements under the Shipping Act of 1984. Interested parties may submit comments on agreements to the Secretary, Federal Maritime Commission, Washington, DC

20573, within ten days of the date this notice appears in the **Federal Register**. Copies of agreements are available through the Commission's Office of Agreements (202-523-5793 or [tradeanalysis@fmc.gov](mailto:tradeanalysis@fmc.gov)).

*Agreement No.:* 010982-042.

*Title:* Florida-Bahamas Shipowners and Operators Association.

*Parties:* Atlantic Caribbean Line, Inc.; Crowley Liner Services, Inc.; Nina (Bermuda) Ltd.; Pioneer Shipping Ltd.; Seaboard Marine, Ltd.; Seafreight Line, Ltd.; and Tropical Shipping and Construction Co., Ltd.

*Filing Party:* Wayne R. Rhode, Esq.; Sher & Blackwell; 1850 M Street, NW.; Suite 900; Washington, DC 20036.

*Synopsis:* The amendment would add Bermuth Lines, Ltd. as a party to the agreement.

*Agreement No.:* 011953-003.

*Title:* Florida Shipowners Group Agreement.

*Parties:* The member lines of the Caribbean Shipowners Association and the Florida-Bahamas Shipowners and Operators Association.

*Filing Party:* Wayne R. Rhode, Esq.; Sher & Blackwell; 1850 M Street, NW.; Suite 900; Washington, DC 20036.

*Synopsis:* The amendment would add Bermuth Lines, Ltd. as a party to the agreement.

By Order of the Federal Maritime Commission.

Dated: March 14, 2008.

**Karen V. Gregory,**

*Assistant Secretary.*

[FR Doc. E8-5550 Filed 3-18-08; 8:45 am]

BILLING CODE 6730-01-P

## FEDERAL MARITIME COMMISSION

### Ocean Transportation Intermediary License Applicants

Notice is hereby given that the following applicants have filed with the Federal Maritime Commission an application for license as a Non-Vessel Operating Common Carrier and Ocean Freight Forwarder-Ocean Transportation Intermediary pursuant to section 19 of the Shipping Act of 1984 as amended (46 U.S.C. Chapter 409 and 46 CFR part 515).

Persons knowing of any reason why the following applicants should not receive a license are requested to contact the Office of Transportation Intermediaries, Federal Maritime Commission, Washington, DC 20573.

Non-Vessel Operating Common Carrier and Ocean Freight Forwarder Transportation Intermediary Applicants: Overseas Container Forwarding, Inc., 6804 Perry Ave., SE., Auburn, WA

98092. Officers: Ben M. Bain, Vice President (Qualifying Individual), Peter W. Hilton, President. HADDAD, 1 Deavon Court, Monroe Township, NJ 08831, Nabeel A. Elhaddad, Sole Proprietor. Coreana Express (Sea-Tac) Inc., 930 South 336th Street, Federal Way, WA 98003. Officers: Sung-Hyun Yun, Manager (Qualifying Individual). Kang-Ho Lee, President. World International Logistics, Inc., 139 NW 45th Ave., Opa Locka, FL 33054. Officers: Bassam Mourad, President (Qualifying Individual). Maurice Mrad, Vice President. Prisa International, Inc., 516 SW 147 Terrace, Pembroke Pines, FL 33027. Officers: Prinz Echevers, President (Qualifying Individual), Isabel C. Sierra, Vice President. FERM Holdings, Inc., 6510 NW 84 Avenue, Miami, FL 33166. Officers: Norman R. Jackson, President (Qualifying Individual). Fran D. Jackson, Vice President. Topp Cargo & Logistics, LLC, 2209 NW 79th Avenue, Doral, FL 33126. Officers: Carlos F. Aidunate, Vice President (Qualifying Individual), Robert D. Rubin, President. Ocean Freight Forwarder—Ocean Transportation Intermediary Applicants: Taino Express Cargo, Inc., 4406 NW 74th Avenue, Miami, FL 33168. Officers: Jose L. Montero (Qualifying Individual), Ivan Montero, President. J & V International Shipping Corp., 806 Arcadia Ave., Arcadia, CA 91007. Officer: Vivian W. Liu, President (Qualifying Individual).

Dated: March 14, 2008.

**Karen V. Gregory,**

*Assistant Secretary.*

[FR Doc. E8-5547 Filed 3-18-08; 8:45 am]

BILLING CODE 6730-01-P

## FEDERAL RESERVE SYSTEM

### Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied to the Board for approval, pursuant to the Bank Holding Company Act of 1956 (12 U.S.C. 1841 *et seq.*) (BHC Act), Regulation Y (12 CFR Part 225), and all other applicable statutes and regulations to become a bank holding company and/or to acquire the assets or the ownership of, control of, or the power to vote shares of a bank or bank holding company and all of the banks and nonbanking companies owned by the bank holding company, including the companies listed below.

The applications listed below, as well as other related filings required by the