eligibility was approved in concept by the Assistant Secretary of the Army for Civil Works on November 14, 2008. Affording this credit would not relieve the non-Federal sponsor of the requirement to pay 5 percent of the total project costs in cash during construction of the remainder of the proposed project.

8. All technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included an independent Agency Technical Review (ATR) and a Headquarters, USACE policy and legal review. All concerns of the ATR and policy and legal reviews have been addressed and incorporated into the final report. Given the nature of reconstructing an existing project in the original project footprint, I have granted an exclusion from the requirement to conduct a Type I Independent External Peer Review.

9. I concur with the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the Ohio River Shoreline, Paducah, Kentucky Reconstruction project be authorized in accordance with the reporting officer's recommended plan with such modifications as may be advisable in the discretion of the Chief of Engineers. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including Section 103 of WRDA 1986, as amended by Section 202 of WRDA 1996. Accordingly, the non-Federal sponsor must agree with the following requirements prior to project implementation:

a. Provide a minimum of 35 percent, but not to exceed 50 percent of total first costs further specified as follows:

(1) Provide 35 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for project;

(2) Provide, during construction, a contribution of funds equal to 5 percent of total project costs;

(3) Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material all as determined by the Federal Government to be required or to be necessary for the construction, operation, and maintenance of the project;

(4) Provide, during construction, any additional funds necessary to make its total contribution equal to at least 35 percent of total project costs;

b. Not use funds from other Federal programs, including any non-Federal contribution required as a matching share for that other program, to meet any of its obligations for the project

unless the Federal agency providing the Federal portion of such funds verifies in writing that such funds are authorized to be used to carry out the project;

c. Not less than once each year, inform affected interests of the extent of flood damage reduction afforded by the flood risk management features;

d. Agree to participate in and comply with applicable Federal floodplain management and flood insurance programs;

e. Comply with Section 402 of WRDA 1986, as amended (33 U.S.C. 701b-12), which requires a non-Federal interest to prepare a floodplain management plan within one year after the date of signing a project cooperation agreement, and to implement such plan not later than one year after completion of construction of the flood risk management features;

f. Publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in adopting regulations, or taking other actions, to prevent unwise future development and to ensure compatibility with degrees of flood risk management provided by the flood risk management features;

g. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the level of protection the flood risk management features afford, hinder operation and maintenance of the project, or interfere with the project's proper function;

h. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way required for construction, operation, and maintenance of the project, including those necessary for relocations, the borrowing of materials, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act;

i. For so long as the project remains authorized, operate, maintain, repair, rehabilitate, and replace the project, or functional portions of the project, including any mitigation features, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and state laws and regulations and any specific directions prescribed by the Federal Government;

j. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the City owns or controls for access to the project for the purpose of completing, inspecting, operating, maintaining, repairing, rehabilitating, or replacing the project;

k. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, rehabilitation, and replacement of the project, except for damages due to the fault or negligence of the United States or its contractors;

l. Keep and maintain books, records, documents, or other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence are required, to the extent and in such detail as will properly reflect total project costs, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations Section 33.20;

m. Comply with all applicable Federal and state laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141- 3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.),* the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.),* and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c *et seq.);*

n. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under CERCLA, Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the City with prior specific written direction, in which case the City shall perform such investigations in accordance with such written direction;

o. Assume, as between the Federal Government and the City, complete financial responsibility for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project;

p. Agree, as between the Federal Government and the City, that the City shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent

practicable, operate, maintain, repair, rehabilitate, and replace the project in a manner that will not cause liability to arise under CERCLA; and

q. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), and Section 1030) of WRDA 1986, Public Law 99-662, as amended (33 U.S.C. 2213(j), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the City has entered into a written agreement to furnish its required cooperation for the project or separable element.

r. Provide the non-Federal share of that portion of the costs of mitigation and data recovery activities associated with historic preservation, that are in excess of one percent of the total amount authorized to be appropriated for the project.

10. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsor, the State, interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

MERDITH W. B. TEMPLE
Major General, U.S. Army
Acting Commander

DEPARTMENT OF THE ARMY
U.S. Army Corps of Engineers
441 G Street N.W.
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

SEP 28 2009

CECW-SAD (1105-2-10a)

SUBJECT: West Onslow Beach and New River Inlet (Topsail Beach), North Carolina

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on hurricane and storm damage reduction along a 5-mile reach of Atlantic Ocean shoreline at Topsail Beach, North Carolina. It is accompanied by the report of the district and division engineers. These reports are in final response to the Energy and Water Development Appropriations Act for Fiscal Year 2001, Public Law 106-377, which included funds for the U.S. Army Corps of Engineers to initiate a General Reevaluation Report (GRR) of the West Onslow Beach and New River Inlet (Topsail Beach) Shore Protection Project, and the remaining shoreline at Topsail Beach. The original project was authorized in Section 101(15) of the Water Resources Development Act (WRDA) of 1992 at a total cost of $14,100,000, with an estimated Federal cost of $7,600,000, and an estimated non-Federal cost of $6,500,000. The authorized project was never constructed. Several recent coastal storms and hurricanes along many portions of North Carolina's shoreline and increasing threats to existing and new development within the Town of Topsail Beach led to initiation of this post-authorization investigation. Preconstruction engineering and design activities for Topsail Beach will be continued under the authorities above.

2. The reporting officers recommend a new authorization for a locally preferred plan (LPP) to reduce hurricane and storm damages by construction of a sand dune and berm along the Topsail Beach shoreline. The recommended plan includes a 26,200-foot long dune and berm system to be constructed to an elevation of 12 feet National Geodetic Vertical Datum (NGVD) fronted by a 50-foot wide berm at an elevation of 7-foot NGVD, with a main fill length of 23,200 feet and a 2,000-foot transition length on the north end into the Town of Surf City and a 1,000-foot transition on the south end. The recommended plan also includes periodic nourishment at four-year intervals. Other associated features of the project are dune vegetation and construction of 23 dune walkover structures for public access. The estimated in-place volume of fill for the initial project construction is 2,387,000 cubic yards, which does not include placement of 690,000 cubic yards for the first nourishment. Fill material for the sand dune and berm construction and nourishment will be dredged from offshore borrow sites identified off the coast of Topsail Beach. The recommended plan also includes post-construction monitoring over the life of the project to ensure project performance. Since the recommended plan does not have any significant adverse effects, no mitigation measures (beyond management practices and avoidance) or compensation measures are required. Compared to the National Economic Development (NED) Plan, the LPP has a dune three feet lower and extends the main fill protection 400-feet southwest to include properties south of Godwin Avenue that are vulnerable

to coastal storm damage. The Assistant Secretary of the Army (Civil Works) approved a policy exception allowing the Corps of Engineers to recommend the LPP by letter dated May 8, 2008. The 400-foot project extension costs an additional $320,000, and is not economically justified. The extension will therefore be funded entirely by the non-Federal sponsor. All features are located in North Carolina.

3. Based on October 2008 price levels the estimated total first cost of the NED plan is $50,332,000, of which $32,712,000 (65 percent) is Federal and $17,620,000 (35 percent) is non-Federal. The estimated first cost of the LPP is $37,712,000. The total initial cost of the recommended plan, including sunk preconstruction engineering and design (PED) costs from project authorization in 1992 through completion of this GRR and Environmental Impact Statement (EIS), is $42,558,000. These sunk PED costs include initial project PED costs of $616,000 and the GRR and EIS cost of $4,230,000, for a total of $4,846,000. The sunk PED costs for the original project are cost shared 75 percent Federal and 25 percent non-Federal and the expanded portion of the project is cost shared 50 percent Federal and 50 percent non-Federal. The total initial project construction cost is composed of both the total first cost of the LPP plus sunk PED costs. Cost sharing for the construction of the project is applied in accordance with the provisions of Section 103 of WRDA 1986, as amended by Section 215 of WRDA 1999. The Federal share of the total cost for the LPP is estimated to be $27,455,000 and the non-Federal share is estimated to be $15,103,000, but will be based upon conditions of public ownership and use of the shore when the Project Partnership Agreement is signed. The non-Federal share includes $320,000 for the incremental cost of the 400-foot berm and dune extension. The estimated cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRD) is $ 1,654,000, of which $1,481,000 is estimated to be creditable to the non-Federal sponsor's share.

4. Total periodic nourishment costs for the LPP are estimated to be $113,904,000 (October 2008 price level) over the 50-year period following initiation of construction. These costs are based on an estimated cost for each periodic nourishment of $9,492,000 occurring at four year intervals subsequent to completion of the initial construction (year zero) and include engineering and design and monitoring. The ultimate project cost, which includes initial construction, project monitoring, and periodic nourishment is estimated to be $170,032,000 (October 2008 price level). The equivalent annual cost of periodic nourishment is estimated to be $2,190,000, based on a Federal discount rate of 4.625 percent and a 50-year period of analysis. Based on WRDA 1996, as amended, subject to the availability of funds, periodic nourishment is cost-shared 50 percent Federal and 50 percent non-Federal, based upon conditions of public ownership and use of the shore. The Federal share of each periodic nourishment cost is estimated to be $4,746,000 (50 percent) and the non-Federal share is estimated to be $4,746,000 (50 percent). The project includes beach fill and environmental monitoring costs estimated at $269,000. Annual beach fill monitoring includes semi-annual beach profile surveys ($137,000), annual hydrographic surveys of New Topsail Inlet ($6,000), annual aerial photography of the inlet and beach (cost included in inlet hydrographic survey), an annual monitoring report ($93,000), and monitoring program coordination ($15,000). Annual environmental monitoring includes sea turtle nesting ($17,000) and sea beach amaranth surveys ($1,000), and a one-time cost for benthic invertebrate monitoring ($120,000). The estimated Federal share of annual monitoring costs is $134,500 (50 percent) and the estimated non-Federal share is $134,500 (50 percent). The estimated

Federal share of the one-time benthic invertebrate monitoring is $60,000 (50 percent) and the estimated non-Federal share is $60,000 (50 percent). The Town of Topsail Beach is the non-Federal cost-sharing sponsor for all features and is responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction, a cost currently estimated at about $22,000 per year.

5. Based on a 4.625-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be $4,450,000, including monitoring and OMRR&R. The equivalent average annual benefits are estimated to be $13,328,000 with net average annual benefits of $8,878,000. The benefit-cost ratio is three to one.

6. The goals and objectives included in the Campaign Plan of the U.S. Army Corps of Engineers have been fully integrated into the Topsail Beach study process. From inception, the district has implemented an effective comprehensive systems approach with full stakeholder participation. The study included an integrated analysis of the Topsail Beach shoreline system and cumulative environmental effects. A statistical, risk based model was used to formulate and evaluate the project. The study report describes risks associated with residual coastal storm damages and risks that will not be reduced such as sound side flooding and wind damages. Loss of life is prevented by the existing procedure of evacuating the barrier island completely well before expected hurricane landfall, removing people from harm's way. The study recommends continuation of the evacuation policy both with and without the project. The selected plan would reduce average annual coastal storm damages by about 84 percent and would leave average annual residual damages estimated at $1,543,000. Additional institutional nonstructural measures to be implemented by the local government are contained in the study report recommendation. The project contains adaptive management measures through the development of borrow area contingency plans to be applied during construction and by an annual project monitoring program to reevaluate and adjust the periodic renourishment actions. The project monitoring program will be a useful research tool for other beach and shoreline studies.

7. I concur with the findings, conclusions, and recommendations of the reporting officers. The plan developed is technically sound, economically justified, and environmentally and socially acceptable. The plan conforms to essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other administrative and legislative policies and guidelines. Also, the views of interested parties, including Federal, State, and local agencies have been considered. Substantive comments concerned borrow material compatibility, potential existence of near shore hard bottom areas, and avoiding impacts to sea turtles and piping plover. The comments resulted in some changes to the text of the GRR and EIS, but did not change the design of the recommended plan. Independent external peer review (IEPR) was not undertaken for this project, since it was not considered to be unusually complex, novel approaches or methods were not employed, there is no significant threat to public safety from project failure, and it was not controversial. Additionally, the project did not generate significant interagency interest, and only negligible adverse impacts would result.

8. Accordingly, I recommend that the plan to reduce hurricane and storm damages at Topsail Beach, North Carolina be authorized in accordance with the reporting officers' recommended

plan at an October 2008 estimated cost of $42,558,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including Section 103 of WRDA 1986, as amended by Section 215 of WRDA 1999. The non-Federal sponsor would provide the non-Federal cost share and all LERRD. Further, the non-Federal sponsor would be responsible for all OMRR&R. This recommendation is subject to the non-Federal sponsors agreeing to comply with all applicable Federal laws and policies.

9. I further recommend that construction of the proposed project be contingent on the project sponsor giving written assurances satisfactory to the Secretary of the Army that it will:

a. Provide 35 percent of initial construction costs assigned to hurricane and storm damage reduction plus 100 percent of initial construction costs assigned to protecting privately owned shores where use is limited to private interests, and as further specified below:

1. Provide 25 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

2. Provide, during the first year of construction, any additional funds necessary to pay the full non-Federal share of design costs;

3. Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of the project; and

4. Provide, during initial construction, any additional funds necessary to make its total contribution equal to 35 percent of project costs assigned to hurricane and storm damage reduction plus 100 percent of costs assigned to protecting privately owned shores where use is limited to private interests.

b. Provide during the periodic nourishment period, 50 percent of periodic nourishment costs and 50 percent of monitoring costs assigned to hurricane and storm damage reduction plus 100 percent of periodic nourishment costs and 100 percent of monitoring assigned to protecting privately owned shores where use is limited to private interests.

c. Shall not use funds from other Federal programs, including any non-Federal contribution required as a matching share therefore, to meet any of the non-Federal obligations for the project unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is authorized;

d. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the project, hinder operation and maintenance of the project, or interfere with the project's proper function;

e. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way required for construction, operation, and maintenance of the project, including those necessary for relocations, the borrowing of materials, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act;

f. For so long as the project remains authorized, operate, maintain, repair, rehabilitate, and replace the project, or functional portions of the project, including any mitigation features, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

g. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor owns or controls for access to the project for the purpose of completing, inspecting, operating, maintaining, repairing, rehabilitating, or replacing the project;

h. Hold and save the United States free from all damages arising from the construction, periodic nourishment, operation, maintenance, repair, rehabilitation, and replacement of the project and any betterments, except for damages due to the fault or negligence of the United States or its contractors;

i. Keep and maintain books, records, documents, or other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence are required, to the extent and in such detail as will properly reflect total project costs, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations (CFR) Section 33.20;

j. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141- 3148 and 40 U.S.C. 3701 – 3708 (revising, codifying and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*), and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c *et seq.*);

k. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such

investigations unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

l. Assume, as between the Federal Government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project;

m. Agree, as between the Federal Government and the non-Federal sponsor, that the non-Federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, repair, rehabilitate, and replace the project in a manner that will not cause liability to arise under CERCLA;

n. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), and Section 103(j) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213(j)), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project or separable element;

o. Not less than once each year, inform affected interests of the extent of protection afforded by the project;

p. Agree to participate in and comply with applicable Federal floodplain management and flood insurance programs;

q. Comply with Section 402 of the Water Resources Development Act of 1986, as amended, (33 U.S.C. 701b-12) , which requires a non-Federal interest to prepare a floodplain management plan within one year from signing a project partnership agreement., and to implement such plan not later than one year after completion of construction of the project;

r. Publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in adopting regulations, or taking other actions, to prevent unwise future development and to ensure compatibility with protection levels provided by the project;

s. For so long as the project remains authorized, the non-Federal Sponsor shall ensure continued conditions of public ownership, access, and use of the shore upon which the amount of Federal participation is based;

t. Provide and maintain necessary access roads, parking areas, and other public use facilities , open and available to all on equal terms; and

u. At least twice annually at no cost to the Federal Government, perform surveillance of the beach to determine losses of nourishment material from the project design section and provide the results of such surveillance to the Federal Government.

10. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsor, the State of North Carolina, interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

Vr,

R. L. VAN ANTWERP
Lieutenant General, US Army
Chief of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

CECW-SAD (1105-2-10a)

DEC 30 2010

SUBJECT: Surf City and North Topsail Beach, North Carolina Coastal Storm Damage Reduction Report

THE SECRETARY OF THE ARMY

1. I submit for transmission my report on coastal storm damage reduction along the Atlantic Ocean shoreline of the towns of Surf City and North Topsail Beach, North Carolina. It is accompanied by the report of the district and division engineers. These reports are in response to two resolutions by the Committee on Transportation and Infrastructure of the House of Representatives, adopted on February 16, 2000 and April 11, 2000. The resolutions requested a review of the report of the Chief of Engineers on West Onslow Beach and New River Inlet, North Carolina, and other pertinent reports, to determine whether any modifications of the recommendations contained therein are advisable at the present time in the interest of shore protection and related purposes for Surf City and North Topsail Beach, North Carolina. Preconstruction engineering and design activities for this project will be continued under the authority provided by the resolutions cited above.

2. The reporting officers recommend authorization for a plan to reduce coastal storm damages by construction of a berm and dune along the Surf City and North Topsail Beach shorelines. The recommended plan includes a 52,150-foot long dune and berm system to be constructed to an elevation of 15 feet National Geodetic Vertical Datum (NGVD) fronted by a seven-foot NGVD (50-foot wide) beach berm with a main fill length of 52,150 feet, extending from the boundary between Topsail Beach and Surf City to the southern edge of the Coastal Barrier Resources Act (CBRA) Zone in North Topsail Beach. The recommended plan also includes renourishment at six-year intervals. Other associated features of the project are dune vegetation and construction of 60 dune walkover structures. Material for the dune and berm construction and renourishment will be dredged from borrow sites identified between one to six miles off the coast of Topsail Island. The recommended plan also includes post-construction monitoring over the period of Federal participation to ensure project performance and adjust renourishment plans as needed. Since the recommended plan would not have any significant adverse effects, no mitigation measures (beyond management practices and avoidance) or compensation measures would be required. The recommended plan is the National Economic Development (NED) Plan for coastal storm damage reduction.

3. The Towns of Surf City and North Topsail Beach are the non-Federal cost-sharing sponsors for all features. Based on October 2010 price levels the estimated total first cost of the plan is

$123,135,000. Renourishment is planned at six-year intervals. There will be seven renourishments with a total cost estimated at October 2010 price levels to be $205,539,000. The ultimate project cost, which includes initial construction, monitoring, and periodic renourishment is estimated to be $353,924,000. Cost sharing is applied in accordance with the provisions of Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended by Section 215 of WRDA 1999. Additional access points and nearby public parking will be necessary to meet the requirements for federal cost sharing; the sponsors anticipate no obstacles to develop such additional access and parking. The Federal and non-Federal shares shown below reflect anticipated development and satisfaction of access and parking requirements, but the final cost-share amounts will be based upon the conditions of public access, parking, development and use of the shore at the time when the Project Partnership Agreement (PPA) is signed.

a. The Federal share of the total first cost would be about $80,038,000 (65 percent) and the non-Federal share would be about $43,097,000 (35 percent).

b. The cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRD) is estimated at $4,814,000, all of which is eligible for LERRD credit.

c. The Federal share of the total renourishment cost would be about $102,769,500 (50 percent) and the non-Federal share would be about $102,769,500 (50 percent).

4. Based on a 4.125 percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be $10,702,000, including monitoring and OMRR&R. All project costs are allocated to the authorized purpose of coastal storm damage reduction. The equivalent average annual benefits, which include recreation benefits, are estimated to be $40,129,000 with net average annual benefits of $29,427,000. The benefit cost ratio is approximately 3.7 to 1.

5. The goals and objectives included in the Campaign Plan of the U.S. Army Corps of Engineers have been fully integrated into the Surf City and North Topsail Beach study process. The project contains adaptive management measures through an annual project monitoring program in order to be able to reevaluate and adjust the periodic renourishment actions. The study was conducted using a systems perspective that considered the effects of other Federal (West Onslow and New River Inlet [Topsail Beach] Coastal Storm Damage Reduction study, New River and New Topsail Inlet Navigation features) and non-Federal projects in the area, particularly as related to borrow volume availability. A statistical, risk based model was used to formulate and evaluate the project. The study report fully describes risks associated with residual coastal storm damages and risks that will not be reduced, such as sound side flooding and wind damages. The project is intended to address erosion and prevent damages to structures and contents; it is not intended to

nor will it reduce the risk to loss of life during major storm events. Loss of life can only be prevented by the existing procedure of evacuating the barrier island completely well before expected hurricane landfall, thus removing people from harm's way. This study recommends continuation of the evacuation policy both with and without the project. Additional institutional nonstructural measures to be implemented by the local governments are contained in the study report recommendation. The selected plan would reduce average annual coastal storm damages by about 88 percent and would leave average annual damages estimated at $2,241,000. These residual risks have been communicated to both the Towns of Surf City and North Topsail Beach.

6. In accordance with the Corps Engineering Circular EC 1165-2-211 on sea level change, the study performed a sensitivity analysis to look at the economic effects that different rates of accelerated sea level rise could have on the recommended plan. The plan was formulated using a historical or low rate of sea level rise, and the sensitivity analysis used additional accelerated rates, which includes what the EC defines as medium and high rates. The sensitivity analysis indicates that at higher rates of sea level rise, the project costs increase; the project benefits however, increase even more.

7. In accordance with the Corps Engineering Circular EC 1165-2-209 on review of decision documents, all technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included an independent Agency Technical Review (ATR) and an Independent External Peer Review (IEPR). The IEPR was managed by an outside eligible organization (Battelle) that assembled a panel of five experts with combined expertise in the fields of geotechnical and coastal engineering, plan formulation, environment/biology, economics, and recreation analysis. Ultimately, the panel identified and documented sixteen comments. Eight of the panel comments were classified as having high significance. These comments raised questions regarding various aspects of the coastal and non-structural analysis in the report, the availability of sufficient borrow material for the life of the project, and the methods used to determine property values in the economic analysis. Based on these comments, the report's coastal appendix was greatly expanded. To address the concern regarding borrow volume availability, additional analysis was conducted and the discussion in the report regarding risks and uncertainty in borrow availability was expanded. Also information regarding the economic feasibility of obtaining additional borrow material if the currently identified borrow sites were to be depleted in the latter years of the project was added. The panel did not concur with this last response and maintained that the plan formulation should still have been constrained by borrow availability due to uncertainty. I have considered the borrow availability issue and concluded it has been appropriately addressed in the project's risk management plan through the identification of additional sites with similar borrow cost and volume to mitigate the uncertainty. Even though uncertainty remains regarding utilization of specific borrow sites, the recommendation is viable and economically justifiable. Overall the reviews have resulted in the improvement of the technical quality of the report including the enhanced communication of risk and uncertainty.

8. The United States Army Corps of Engineers Headquarters review indicates that the project recommended by the reporting officers is technically sound, environmentally and socially acceptable, and economically justified. The goal to reduce loss of life is incorporated into this project but it is a shared responsibility that can never be completely mitigated by structural solutions. Discussion in the report emphasizes that residual risk will remain after this project is executed; it also, emphasizes the roles of all partners in addressing and communicating residual risk to the public, including the need for a well coordinated hurricane storm warning and evacuation plan. The plan complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land Related Resources implementation studies and complies with other administrative and legislative policies and guidelines.

9. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan to reduce coastal storm damages for Surf City and North Topsail Beach, North Carolina be authorized in accordance with the reporting officers recommended plan at an October 2010 estimated initial cost of $123,135,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended by Section 215 of WRDA 1999. The non-Federal sponsors would provide the non-Federal cost share and all LERRD. Further, the non-Federal sponsors would be responsible for all Operation and Maintenance, Repair, Replacement and Rehabilitation (OMRR&R). This recommendation is subject to the non-Federal sponsors agreeing to comply with all applicable Federal laws and policies and in accordance with the required items of cooperation, and agreeing prior to project implementation, to perform as follows:

a. Provide 35 percent of initial project costs assigned to coastal storm damage reduction, plus 50 percent of initial project costs assigned to reducing damages to undeveloped public lands, plus 50 percent of initial project costs assigned to recreation, plus 100 percent of initial project costs assigned to reducing damages to undeveloped private lands and other private shores that do not provide public benefits; and 50 percent of periodic nourishment costs assigned to hurricane and storm damage reduction, plus 100 percent of periodic nourishment costs assigned to reducing damages to undeveloped private lands and other private shores that do not provide public benefits and as further specified below:

(1) Provide 25 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project.

(2) Provide, during the first year of construction, any additional funds needed to cover the non-Federal share of design costs.

(3) Provide all lands, easements, and rights-of-way, and perform or ensure the performance of all relocations determined by the Federal Government to be necessary for the initial construction, periodic nourishment, operation, and maintenance of the project.

(4) Provide, during construction, any additional amounts as are necessary to make it total contribution equal to 35 percent of initial project costs assigned to coastal storm damage reduction, plus 50 percent of initial project costs assigned to reducing damages to undeveloped public lands, plus 50 percent of initial project costs assigned to recreation, plus 100 percent of initial project costs assigned to reducing damages to undeveloped private lands and other private shores that do not provide public benefits; and 50 percent of periodic nourishment costs assigned to hurricane and storm damage reduction, plus 100 percent of periodic nourishment costs assigned to reducing damages to undeveloped private lands and other private shores that do not provide public benefits.

b. Operate, maintain, repair, rehabilitate and replace the completed project, or functional portion of the project, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government.

c. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, on property that the non-Federal sponsors, now or hereafter, owns or controls for access to the project for the purpose of inspecting, operating, maintaining, repairing, replacing, rehabilitating, or completing the project. OMRR&R by the Federal Government will not relieve the non-Federal sponsors of responsibility to meet the non-Federal sponsors' obligations, or to preclude the Federal Government from pursuing any other remedy at law or equity to ensure faithful performance.

d. Hold and save the United States free from all damages arising from the initial construction, periodic nourishment, OMRR&R of the project and any project related betterments, except for damages due to the fault or negligence of the United States or its contractors.

e. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three years after completion of the accounting for which such books, records, documents, and other evidence is required, to the extent and in such detail as will properly reflect total costs of construction of the project, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 CFR 33.20.

f. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), P.L. 96-510, as amended, 42 U.S.C. 9601–9675, that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for the initial construction, periodic nourishment, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government will perform such investigations unless the Federal Government provides the non-Federal sponsors with prior specific written direction, in which case, the non-Federal sponsors will perform such investigations in accordance with such written direction.

g. Assume, as between the Federal Government and the non-Federal sponsors, complete financial responsibility for all necessary cleanup and response costs of any CERCLA-regulated materials in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the initial construction, periodic nourishment, operation, or maintenance of the project.

h. Agree that, as between the Federal Government and the non-Federal sponsors, the non-Federal sponsor will be considered the operators of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, and repair the project in a manner that will not cause liability to arise under CERCLA.

i. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, P.L. 91-646, as amended by (42 U.S.C. 4601–4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way required for the initial construction, periodic nourishment, operation, and maintenance of the project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and inform all affected persons of applicable benefits, policies, and procedures in connection with that Act.

j. Comply with all applicable Federal and State laws and regulations, including section 601 of the Civil Rights Act of 1964, P.L. 88-352 (42 U.S.C. 2000d), Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, titled *Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army*, and all applicable Federal labor standards and requirements, including, 40 U.S.C. 3141–3148 and 40 U.S.C. 3701–3708 (revising, codifying, and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c *et seq.*).

k. Comply with section 402 of the WRDA of 1986, as amended (33 U.S.C. 701b-12), which requires the non-Federal interest to participate in and comply with applicable Federal floodplain management and flood insurance programs, prepare a floodplain management plan within one year after the date of signing a PPA, and implement the plan no later than one year after project construction is complete.

l. Provide the non-Federal share of that portion of the costs of data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project, in accordance with the cost-sharing provisions of the agreement.

m. Participate in and comply with applicable Federal floodplain management and flood insurance programs.

n. Do not use Federal funds to meet the non-Federal sponsors' share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is authorized.

o. Prevent obstructions of or encroachment on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments), which might reduce the level of damage reduction it affords, hinder operation and maintenance or future periodic nourishment, or interfere with its proper function, such as any new developments on project lands or the addition of facilities that would degrade the benefits of the project.

p. Not less than once each year, inform affected interests of the extent of damage reduction afforded by the project.

q. Publicize floodplain information in the area concerned and provide such information to zoning and other regulatory agencies for their use in preventing unwise future development in the floodplain and in adopting such regulations as might be necessary to prevent unwise future development and to ensure compatibility with damage reduction levels provided by the project.

r. For so long as the project remains authorized, the non-Federal sponsors must ensure continued conditions of public ownership, access, and use of the shore on which the amount of Federal participation is based.

s. Provide and maintain necessary access roads, parking areas, and other public use facilities, open and available to all on equal terms.

t. At least twice annually and after storm events, perform surveillance of the beach to determine losses of nourishment material from the project design section and provide the results of such surveillance to the Federal Government.

u. Comply with section 221 of P.L. 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), and section 103(j) of the WRDA of 1986, P.L. 99-662, as amended (33 U.S.C. 2213(j)), which provides that the Secretary of the Army must not commence the construction of any water resources project or separable element thereof, until the non-Federal interests have entered into a written agreement to furnish its required cooperation for the project or separable element.

10. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsors, the State, interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

R. L. VAN ANTWERP
Lieutenant General, US Army
Chief of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

CEMP-SPD (1105-2-10a)

APR 15 2012

SUBJECT: San Clemente Shoreline, Orange County, California

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on coastal storm damage reduction along the Pacific Ocean shoreline in San Clemente, California. It is accompanied by the report of the Los Angeles District Engineer and the South Pacific Division Engineer. These reports are in partial response to the authority contained in Section 208 of the Flood Control Act of 1965 (Title II of P.L. 89-298), which provides for studies to determine the advisability of protection work against storm and tidal waves along the coasts of Washington, Oregon, and California. The Energy and Water Development Appropriations Act of 2000, P.L. 106-60, appropriated the funds for a reconnaissance study to investigate shoreline protection alternatives for San Clemente Shoreline, California. Preconstruction engineering and design activities for this project will be continued under the authority provided by the resolutions cited above.

2. The reporting officers recommend authorization for a plan to reduce coastal storm damages by constructing a beach fill/berm along the San Clemente shoreline. The recommended plan for coastal storm damage reduction includes construction of a 50-foot-wide beach nourishment project along a 3,412-foot-long stretch of shoreline using 251,000 cubic yards of compatible sediment, with renourishment on the average of every 6 years over a 50-year period of Federal participation, for a total of eight additional nourishments. The design berm will be constructed to an elevation of 17 feet MLLW with foreshore slope of 8H:1V (at equilibrium). Material for the beach fill will be dredged from a borrow site identified off the coast of San Diego County. Physical monitoring of the performance of the project will be required annually throughout the 50-year period of Federal participation. The recommended plan would provide coastal storm damage reduction throughout the project reach and would maintain the existing recreational beach. Monitoring of the environmental resources will be required for each construction event. The project is expected to have minimal impacts to environmental resources. A comprehensive monitoring and mitigation plan has been incorporated in the project in the event that impacts to habitat result. The recommended plan is the national economic development (NED) plan for coastal storm damage reduction.

3. The City of San Clemente is the non-Federal cost-sharing sponsor for all features. Based on October 2011 price levels, the estimated total nourishment cost of the plan is $98,100,000, which includes the project first cost of initial construction of $11,300,000 and a total of 8 periodic renourishments at a total cost of $86,800,000. Periodic renourishments are planned at 6-year

[1] This report contains the proposed recommendation of the Chief of Engineers. The recommendation is subject to change to reflect Washington level review and comments from Federal and State agencies.

intervals. In accordance with the cost share provisions in Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended (33 U.S.C. 2213), the Federal and non-Federal shares are as follows:

a. The Federal share of the project first cost would be $7,350,000 and the non-Federal share would be $3,960,000, which equates to 65 percent Federal and 35 percent non-Federal. The cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRD) is estimated at $11,000, all of which is eligible for LERRD credit.

b. The Federal share of the total renourishment cost would be $43,400,000 and the non-Federal share would be $43,400,000, which equates to 50 percent Federal and 50 percent non-Federal.

c. The total nourishment cost includes $4,460,000 for environmental monitoring, and $8,550,000 for physical monitoring over the life of the project.

d. The City of San Clemente would be responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction. The project is not currently estimated to result in a significant incremental increase over the sponsor's existing beach maintenance activities and costs.

4. Based on a 4-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be $2,180,000, including monitoring. All project costs are allocated to the authorized purpose of coastal storm damage reduction. The selected plan would reduce average annual coastal storm damages by about 97 percent and would leave average annual damages estimated at $36,900. The equivalent average annual benefits, which include recreational benefits, are estimated to be $3,160,000, with net average annual benefits of $978,000. The benefit-cost ratio is approximately 1.4 to 1.

5. The goals and objectives included in the Campaign Plan of the U.S. Army Corps of Engineers have been fully integrated into the San Clemente Shoreline study process. The project includes an annual project monitoring program to reevaluate and adjust the periodic renourishment actions. The study was conducted using a watershed perspective to examine sediment supply changes within the San Juan Creek Watershed. A statistical, risk based model was used to formulate and evaluate the project. The project is intended to address erosion and prevent damages to structures and contents; it is not intended to, nor will it, reduce the risk to loss of life during major storm events. The study report fully describes risks associated with residual coastal storm damages and risks that will not be reduced. These residual risks have been communicated to the City of San Clemente.

6. Along the shoreline of San Clemente, a lack of sediment supply to the shoreline has resulted in chronic, mild, and long-term erosion. Without a coastal storm damage reduction project public properties and structures will continue to be susceptible to damages caused by erosion (including land loss and undermining of structures), inundation (structures), and wave attack (structures, railroad). The project area includes the LOSSAN (Los Angeles to San Diego)

railroad corridor which is a vital link for passenger and freight service and has been designated as a Strategic Rail Corridor by the Department of Defense. As the protective beach lessens over time and is eventually lost, it is expected that storm waves will act directly upon the railroad ballast, significantly threatening the operation of the LOSSAN railroad line. The narrowing beaches are also expected to subject ancillary beachfront public facilities to storm wave-induced damages, and further reduce recreational space on an already space-limited beach. The recommended plan was formulated to maximize coastal storm damage reduction, address potential environmental affects, and minimize cost.

7. In accordance with the Corps Engineering Circular (EC 1165-2-211) on sea level change, the study performed a sensitivity analysis to investigate the economic effects that different rates of accelerated sea level rise could have on the recommended plan. The plan was formulated using a historical or low rate of sea level rise, and the sensitivity analysis used additional accelerated rates, which includes what the EC defines as medium and high rates. The sensitivity analysis indicates that at higher rates of sea level rise, renourishment intervals increase and the reduction of storm damages decreases, but the plans are still justified.

8. In accordance with the Corps Engineering Circular (EC 1165-2-209) on review of decision documents, all technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included an Agency Technical Review (ATR), an Independent External Peer Review (IEPR) (Type I), and a Corps Headquarters policy and legal review. All concerns of the ATR have been addressed and incorporated into the final report. The IEPR was completed by Battelle Memorial Institute. A total of 24 comments were documented. The IEPR comments identified significant concerns in areas of the plan formulation and engineering assumptions that are needed to support the decision-making process and plan selection. This resulted in expanded narratives throughout the report to support the decision-making process and justify the recommended plan. A safety assurance review (Type II IEPR) will be conducted during the design phase of the project. All comments from the above referenced reviews have been addressed and incorporated into the final documents. Overall the reviews resulted in improvements to the technical quality of the report.

9. Washington level review indicates that the project recommended by the reporting officers is technically sound, environmentally and socially acceptable, and economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Land related resources implementation studies and complies with other administrative and legislative policies and guidelines. Also the views of interested parties, including Federal, State and local agencies have been considered.

10. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan to reduce coastal storm damages for the San Clemente, California shoreline be authorized in accordance with the reporting officers' recommended plan at an estimated project first cost of $11,300,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including Section 103 of WRDA 1986, as amended by Section 215 of WRDA 1999. The non-Federal

sponsor would provide the non-Federal cost share and all LERRD. Further the non-Federal sponsor would be responsible for all OMRR&R. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies.

a. Provide a minimum of at least 35 percent of initial project costs assigned to coastal storm damage reduction, plus 50 percent of initial project costs assigned to reducing damages to undeveloped public lands, plus 50 percent of initial project costs assigned to recreation, plus 100 percent of initial project costs assigned to reducing damages to undeveloped private lands and other private shores that do not provide public benefits; and 50 percent of periodic nourishment costs assigned to hurricane and storm damage reduction, plus 100 percent of periodic nourishment costs assigned to reducing damages to undeveloped private lands and other private shores that do not provide public benefits and as further specified below:

(1) Provide 25 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project.

(2) Provide, during the first year of construction, any additional funds necessary to pay the full non-Federal share of design costs.

(3) Provide all lands, easements, and rights-of-way, and perform or ensure the performance of all relocations determined by the Federal Government to be necessary for the initial construction, periodic nourishment, operation, and maintenance of the project.

(4) Provide, during construction, any additional amounts as are necessary to make the total contribution equal to 35 percent of initial project costs assigned to coastal storm damage reduction, plus 50 percent of initial project costs assigned to reducing damages to undeveloped public lands, plus 50 percent of initial project costs assigned to recreation, plus 100 percent of initial project costs assigned to reducing damages to undeveloped private lands and other private shores that do not provide public benefits; and 50 percent of periodic nourishment costs assigned to hurricane and storm damage reduction, plus 100 percent of periodic nourishment costs assigned to reducing damages to undeveloped private lands and other private shores that do not provide public benefits.

b. For so long as the project remains authorized, operate, maintain, repair, rehabilitate, and replace the project, or functional portion of the project, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government.

c. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal Sponsor, now or hereafter, owns or controls for access to the project for the purpose of inspecting, operating, maintaining, repairing, replacing, rehabilitating, or completing the project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Federal Government shall relieve the non-Federal Sponsor

of responsibility to meet the non-Federal Sponsor's obligations, or to preclude the Federal Government from pursuing any other remedy at law or equity to ensure faithful performance.

d. Hold and save the United States free from all damages arising from the initial construction, periodic nourishment, operation, maintenance, repair, replacement, and rehabilitation of the project and any project related betterments, except for damages due to the fault or negligence of the United States or its contractors.

e. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations (CFR) Section 33.20.

f. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended, 42 U.S.C. 9601-9675, that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for the initial construction, periodic nourishment, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the non-Federal Sponsor with prior specific written direction, in which case the non-Federal Sponsor shall perform such investigations in accordance with such written direction.

g. Assume, as between the Federal Government and the Non-Federal Sponsor, complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the initial construction, periodic nourishment, operation, or maintenance of the project.

h. Agree, as between the Federal Government and the Non-Federal Sponsor, that the non-Federal Sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, and repair the project in a manner that will not cause liability to arise under CERCLA.

i. If applicable, comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended by Title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, required for the initial construction, periodic nourishment, operation, and maintenance of the project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

j. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), requiring non-Federal preparation and implementation of floodplain management plans; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c))."."

k. Comply with section 402 of the WRDA of 1986, as amended (33 U.S.C. 701b-12), which requires the non-Federal interest to participate in and comply with applicable Federal floodplain management and flood insurance programs, prepare a floodplain management plan within one year after the date of signing a Project Partnership Agreement (PPA), and implement the plan no later than one year after project construction is complete.

l. Provide the non-Federal share of that portion of the costs of data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project, in accordance with the cost sharing provisions of the agreement.

m. Participate in and comply with applicable Federal floodplain management and flood insurance programs.

n. Do not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is authorized.

o. Prescribe and enforce regulations to prevent obstruction of or encroachment on the project that would reduce the level of protection it affords or that would hinder future periodic nourishment and/or the operation and maintenance of the project.

p. Not less than once each year, inform affected interests of the extent of protection afforded by the project.

q. Publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the floodplain, and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the project.

r. For so long as the project remains authorized, the non-Federal Sponsor shall ensure continued conditions of public ownership and use of the shore upon which the amount of Federal participation is based;

s. Provide and maintain necessary access roads, parking areas, and other public use facilities, open and available to all on equal terms;

t. At least twice annually and after storm events, perform surveillance of the beach to determine losses of nourishment material from the project design section and provide the results of such surveillance to the Federal Government;

u. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), and Section 103(j) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213(j)), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project or separable element.

11. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsor, the State, interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

MERDITH W. B. TEMPLE
Major General, U.S. Army
Acting Commander

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CECW-SAD

05 SEP 2009

SUBJECT: Mississippi Coastal Improvements Program, Hancock, Harrison, and Jackson Counties, Mississippi, Comprehensive Plan Report

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my final report on water resources improvements associated with hurricane and storm damage risk reduction and ecosystem restoration in the coastal counties of Hancock, Harrison, and Jackson, Mississippi. It is accompanied by the report of the district and division engineers. These reports are a final response to authorizing legislation contained in the Department of Defense Appropriation Act of 2006 (P.L. 109-148), dated 30 December 2005. The study authorization states, in part, the following:

> *"... the Secretary shall conduct an analysis and design for comprehensive improvements or modifications to existing improvements in the coastal area of Mississippi in the interest of hurricane and storm damage reduction, prevention of saltwater intrusion, preservation of fish and wildlife, prevention of erosion, and other related water resource purposes at full Federal expense; Provided further, that the Secretary shall recommend a cost-effective project, but shall not perform an incremental benefit-cost analysis to identify the recommended project, and shall not make project recommendations based upon maximizing net national economic development benefits; Provided further, that interim recommendations for near term improvements shall be provided within 6 months of enactment of this act with final recommendations within 24 months of this enactment."*

Pre-construction engineering and design and additional studies will be initiated upon Congressional authorization.

2. The Mississippi Coastal Improvements Program Comprehensive Plan, hereinafter referred to as the MsCIP Comprehensive Plan, is a systemwide approach linking structural and nonstructural hurricane and storm damage risk reduction elements with ecosystem restoration elements, all with the goal of providing for a coastal community that is more resilient to hurricanes and storms. The MsCIP Comprehensive Plan for hurricane and storm damage risk reduction in coastal Mississippi was developed using a multiple lines-of-defense approach focusing on reducing hurricane and storm damages through barrier islands restoration, and employing beachfront protection, wetland restoration, and floodplain evacuation concepts of the MsCIP Comprehensive Plan. The reporting officers identify 12 elements to aid recovery of coastal Mississippi that was severely damaged by the hurricanes of 2005. Structural elements include restoring protective beaches and systems, restoring native habitats, and raising an

existing levee. Non-structural elements include removing structures from floodplains or raising structures that are highly vulnerable to storm damage. The hurricanes of 2005 severely taxed the resources of local governments and institutions, making it unlikely that those resources could be employed to implement these proposed recovery actions without Federal assistance. Thus, this package of 12 elements and the identified further feasibility studies will help the people of coastal Mississippi in their recovery. Implementation of the 12 elements would provide for the restoration of over 3,000 acres of coastal forest and wetlands, approximately 30 miles of beach and dune restoration, and floodproofing or acquisition of approximately 2,000 tracts within the 100-year floodplain.

3. The MsCIP Comprehensive Plan also includes recommendations for additional studies to address the longer term needs over the next 30-40 years. These studies would evaluate the restoration of over 30,000 acres of coastal forest, wetlands, beaches and dunes; sustainable restoration of the barrier islands; structural measures; and floodproofing or acquisition of over 58,000 tracts within the 100-year floodplain.

4. The reporting officers developed the recommended 12 elements for coastal Mississippi consistent with the direction provided in the Department of Defense Appropriations Act of 2006 (P.L. 109-148), dated 30 December 2005. In accordance with P.L. 109-148, the reporting officers found each of the 12 elements to be cost-effective, technically sound, and environmentally and socially acceptable. These 12 elements are described below and include two non-structural hurricane storm risk reduction elements, one structural hurricane and storm damage risk reduction element, seven ecosystem restoration elements, and two coastal ecosystem restoration elements. The additional studies that are part of the MsCIP Comprehensive Plan could provide further improvements in the coastal area of Mississippi if implemented. Discussion of these studies is included in paragraphs 5 and 6.

a. High Hazard Area Risk Reduction Program (HARP). This project element consists of acquisition of approximately 2,000 tracts which are at the highest risk of being damaged by storm surge, demolition of existing structures, and retention of acquired tracts in an open space condition. The number of tracts was based on an estimate of what could be acquired during a five year period following the execution of the Project Partnership Agreement for implementation of this element. To the extent practicable, acquisition would be on a willing seller basis, but eminent domain could be utilized when determined to be warranted. As described in the report, acquisition will be in compliance with the provisions of the Uniform Relocations Assistance and Real Property Acquisition Policies Act (P.L. 91-646), as amended, and the uniform regulations contained in 49 CFR, Part 24 including the provision of payment of relocation assistance benefits to eligible recipients. The tracts would include residential, commercial and unimproved tracts. In addition, buildings owned by the City of Moss Point that are used for municipal purposes will be replaced with buildings out of the Federal Emergency Management Agency (FEMA) designated Velocity Zone. Benefits of the HARP include approximately $22,000,000 – $33,000,000 in average annual hurricane and storm damage risk

reduction benefits, depending on the specific tracts acquired. At October 2008 price levels, the estimated first cost of this element is $407,860,000. The cost of this non-structural project element is allocated to hurricane and storm damage risk reduction. In accordance with the provisions of the Water Resources Development Act of 1986 (WRDA 1986), as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this element would be $265,110,000 and the non-Federal share would be $142,750,000. The estimated annual cost for operation, maintenance, repair, replacement and rehabilitation of this project element is $75,000 and is a 100-percent non-Federal responsibility.

b. Waveland Floodproofing. This project element consists of elevating approximately 25 residential structures in the City of Waveland, Mississippi that are determined to be eligible for floodproofing by elevation out of the 1-percent chance storm event inundation level. Benefits of the Waveland Floodproofing include $224,000 in average annual hurricane and storm damage risk reduction benefits. At October 2008 price levels, the estimated first cost of this element is $4,450,000. The cost of this element is allocated to hurricane and storm damage risk reduction. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this project element is $2,890,000 and the non-Federal share is $1,560,000. Due to the non-structural nature of this element, the estimated annual costs for operation, maintenance, repair, replacement and rehabilitation are expected to be nominal. However any operation, maintenance, repair, replacement and rehabilitation that would be needed is a 100-percent non-Federal responsibility.

c. Forrest (Forest) Heights Levee. This project element for the Forrest Heights community in the Turkey Creek watershed of Gulfport, Mississippi consists of raising approximately 6,500 linear feet of an existing non-Federal levee to a levee crest elevation of 21 feet North Atlantic Vertical Datum of 1988 (NAVD-88). An existing publicly owned park with a surface elevation of 12 to 14 feet NAVD-88 would be included in the plan to serve as a water detention area for temporary containment of rainfall during storm events. This recommended project element will require the acquisition of two residential properties within the existing community. Unavoidable adverse environmental impacts have been identified and the cost of acquisition and restoration of approximately 3 acres of mitigation is included in total estimated cost of this element. Hurricane and storm damage risk reduction benefits are estimated at $101,000 to a historically significant minority community. In addition to these benefits, the levee would maintain cohesiveness of the historically significant community, and preserve the culture and heritage of its predominantly minority residential population. At October 2008 price levels, the estimated first cost of this element is $14,070,000. The cost of this element is allocated to hurricane and storm damage risk reduction. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this project element is $9,150,000 and the non-Federal share is $4,920,000. The estimated annual cost for operation, maintenance, repair, replacement, and rehabilitation of this project element is $114,000 and is a 100-percent non-Federal responsibility.

d. Turkey Creek Ecosystem Restoration. This project element consists of the restoration of 689 acres of an undeveloped site of degraded wet pine savannah habitat. Restoration of this area would provide an increase of 1,565 average annual functional habitat units. These habitats have been identified by the U.S. Fish and Wildlife Service as habitats of high value for native species and as relatively scarce or becoming scarce on a national basis or in the ecoregion. Measures required to restore hydrology and natural vegetation on the site include filling drainage ditches, road removal, and controlled burning. Rare and threatened and endangered birds that are expected to utilize the areas following burning and regrowth include Henslow's sparrow, Bachman's sparrow, red-cockaded woodpecker, and Mississippi Sandhill Crane. This restored ecosystem also may benefit the Mississippi Gopher frog and, in drier areas along ridges, the black pine snake and the gopher tortoise. At October 2008 price levels, the estimated first cost of this element is $6,840,000. The cost of this project is allocated to ecosystem restoration. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this project element is $4,450,000 and the non-Federal share is $2,390,000. The estimated annual cost for operation, maintenance, repair, replacement, and rehabilitation of this project element is $47,000 and is a 100-percent non-Federal responsibility. Post-implementation monitoring of this ecosystem restoration element is projected to be conducted for no more than five years at a cost of less than 1-percent of the total first cost of the ecosystem restoration elements. Adaptive management of ecosystem restoration element is expected to cost no more than 3-percent of the total first cost of the ecosystem restoration element. The cost of monitoring and adaptive management is included in the total estimated first cost of this element.

e. Dantzler Ecosystem Restoration. This project element consists of restoration of 385 acres of severely degraded wet pine savannah owned by the State of Mississippi. Measures required to restore hydrology and natural vegetative habitat to the site include removal of existing hurricane debris and sedimentation, filling drainage ditches, road removal, control of non-native species, and controlled burning. The proposed element would provide an increase of 1,244 average annual functional habitat units and restore the natural hydrologic character of the area. The site's location in proximity to the Pascagoula River delta, a Gulf Ecological Management Site, increases the value of this restoration element by minimizing the fracturing of biodiversity. At October 2008 price levels, the estimated first cost of this element is $2,210,000. The cost of this project is allocated to ecosystem restoration. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this project element is $1,440,000 and the non-Federal share is $770,000. The estimated annual cost for operation, maintenance, repair, replacement, and rehabilitation of this project element is $26,000 and is a 100-percent non-Federal responsibility. Post-implementation monitoring of this ecosystem restoration element is projected to be conducted for no more than five years at a cost of less than 1-percent of the total first cost of the ecosystem restoration elements. Adaptive management of ecosystem restoration element is expected to cost no more than 3-percent of the total first cost of the ecosystem restoration element. The cost of monitoring and adaptive management is included in the total estimated first cost of this element.

f. Franklin Creek Ecosystem Restoration. This project element includes restoration of hydrology and native habitats by removing ditches, excavating and removing existing roadbeds, installing culverts under U.S. Highway 90, control of non-native species, and controlled burning to restore 149 acres located north and south of U.S. Highway 90 with critical wet pine savannah habitat. This area routinely floods with only a slight rainfall; thus, this would also provide additional flood storage capacity by restoring the natural habitat. Pine savannah wetlands provide floodwater retention, groundwater recharge, and water purification. This habitat is becoming fragmented and with the increased development, fire maintenance is increasingly harder to perform. The proposed element would provide an increase of 516 average annual functional habitat units and restore the natural hydrology of the area. In addition, restoration of this area would provide for additional flood storage capacity within the Grand Bay area reducing flooding severity within the adjacent communities of Orange Grove and Pecan in Jackson County. The site's location in proximity to the Grand Bay National Wildlife Refuge (NWR) and the Grand Bay National Estuarine Research Reserve (NERR) increases the value of this restoration element by minimizing the fracturing of biodiversity. Incidental hurricane and storm damage risk reduction benefits would be realized from the removal of approximately 30 residential structures from the floodplain. At October 2008 price levels, the estimated first cost of this element is $1,860,000. The cost of this project is allocated to ecosystem restoration. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non Federal. The Federal share of the estimated first cost of this project element is $1,210,000 and the non-Federal share is $650,000. The estimated annual cost for operation, maintenance, repair, replacement, and rehabilitation of this project element is $11,000 and is a 100-percent non-Federal responsibility. Post-implementation monitoring of this ecosystem restoration element is projected to be conducted for no more than five years at a cost of less than 1-percent of the total first cost of the ecosystem restoration elements. Adaptive management of ecosystem restoration element is expected to cost no more than 3-percent of the total first cost of the ecosystem restoration element. The cost of monitoring and adaptive management is included in the total estimated first cost of this element.

g. Bayou Cumbest Ecosystem Restoration. This project element includes the acquisition of approximately 61 tracts, removal of 19 structures, excavation and removal of fill material from former home sites and adjacent lands, filling drainage ditches, control of non-native species, and planting with native emergent wetland species. Following acquisition of these tracts, 148 acres would be restored to emergent wetland (110 acres) and coastal scrub shrub habitat (38 acres). The estuarine wetland habitats provide nursery and foraging habitat that supports various species including economically-important marine fishery species, such as black drum, spotted seatrout, southern flounder, Gulf menhaden, bluefish, croaker, mullet, and blue crab. The proposed element would provide an increase of 637 average annual functional habitat units. The site's proximity to Franklin Creek, Grand Bay NWR and Grand Bay NERR increases the value of this project element by minimizing the fracturing of biodiversity. At October 2008 price levels, the estimated first cost of this element is $25,530,000. The cost of this project is allocated to ecosystem restoration. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this project

element is $16,590,000 and the non-Federal share is $8,940,000. The current estimated annual cost for operation, maintenance, repair, replacement, and rehabilitation of this project element is $114,000 and is a 100-percent non-Federal responsibility. Post-implementation monitoring of this ecosystem restoration element is projected to be conducted for no more than five years at a cost of less than 1-percent of the total first cost of the ecosystem restoration elements. Adaptive management of ecosystem restoration element is expected to cost no more than 3-percent of the total first cost of the ecosystem restoration element. The cost of monitoring and adaptive management is included in the total estimated first cost of this element.

h. Admiral Island Ecosystem Restoration. This project element consists of restoration of a severely degraded 123-acre tidal wetland area owned by the State of Mississippi. Measures required to restore hydrology and native habitat to the area include excavating fill material, filling ditches, control of non-native species and planting native tidal emergent species. The proposed element would provide an increase of 108 average annual functional habitat units. At October 2008 price levels, the estimated first cost of this element is $21,810,000. The cost of this project is allocated to ecosystem restoration. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this project element is $14,180,000 and the non-Federal share is $7,630,000. The current estimated annual cost for operation, maintenance, repair, replacement, and rehabilitation of this project element is $58,000 and is a 100-percent non-Federal responsibility. Post-implementation monitoring of this ecosystem restoration element is projected to be conducted for no more than five years at a cost of less than 1-percent of the total first cost of the ecosystem restoration elements. Adaptive management of ecosystem restoration element is expected to cost no more than 3-percent of the total first cost of the ecosystem restoration element. The cost of monitoring and adaptive management is included in the total estimated first cost of this element.

i. Deer Island Ecosystem Restoration. This project element includes actions that will complement existing Federal restoration projects by minimizing the fracturing of biodiversity. Measures include restoration of a portion of the northern and southern shorelines of the island, and new stone training dikes to prevent future erosion. The proposed element would provide an additional 400 acres of highly productive estuarine wetlands, restore beach and dune habitat, create hard bottom habitat, reduce coastal erosion, and restore the coastal maritime forest. This element would produce an increase of 2,125 average annual functional habitat units. In addition, the restoration of Deer Island provides incidental hurricane and storm damage risk reduction benefits to the developed mainland Biloxi area. At October 2008 price levels, the estimated first cost of this element is $21,520,000. The cost of this project is allocated to ecosystem restoration. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this project element is $13,990,000 and the non-Federal share is $7,530,000. All costs for operation, maintenance, repair, replacement and rehabilitation are a 100-percent non-Federal responsibility. Post-implementation monitoring of this ecosystem restoration element is projected to be conducted for no more than five years at a cost of less than 1-percent of the total first cost of the ecosystem

restoration elements. Adaptive management of ecosystem restoration element is expected to cost no more than 3-percent of the total first cost of the ecosystem restoration element. The cost of monitoring and adaptive management is included in the total estimated first cost of this element.

j. Submerged Aquatic Vegetation Element. This element consists of measures designed to evaluate techniques for restoring submerged aquatic vegetation (SAV), an essential component of an estuarine ecosystem. Specifically, five acres of SAVs in the Grand Bay National Estuarine Research Reserve (NERR) area that were destroyed by Hurricane Katrina will be restored using different techniques. The results will be used to guide and develop other SAV restoration projects that would be undertaken as future authorized elements of the overall Comprehensive Plan. At October 2008 price levels, the estimated first cost of this element is $900,000. Cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this measure is $590,000 and the non-Federal share is $310,000.

k. Coast-wide Beach and Dune Ecosystem Restoration. This project element consists of beach and dune improvements to approximately 30 miles of the 60 miles of existing beaches on the mainland coast. These improvements would include construction of 60-foot wide vegetated dune fields approximately 50 feet seaward of the existing seawalls. The element would provide 248 average annual functional habitat units. These beach and dune areas are critical to nesting and resting shorebirds such as the State listed least tern and the threatened piping plover. In addition to the ecological benefits, the dunes would provide incidental hurricane and storm damage risk reduction benefits particularly during smaller storm events, tropical storms, and lower energy hurricanes. At October 2008 price levels, the estimated first cost of this element is $23,320,000. The cost of this project is allocated to ecosystem restoration. In accordance with the provisions of WRDA 1986, as amended, cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated first cost of this project element is $15,160,000 and the non-Federal share is $8,160,000. All costs for operation, maintenance, repair, replacement and rehabilitation are a 100-percent non-Federal responsibility. Post-implementation monitoring of this ecosystem restoration element is projected to be conducted for no more than five years at a cost of less than 1-percent of the total first cost of the ecosystem restoration elements. Adaptive management of ecosystem restoration element is expected to cost no more than 3-percent of the total first cost of the ecosystem restoration element. The cost of monitoring and adaptive management is included in the total estimated first cost of this element.

l. Barrier Island Restoration. This project element consists of the placement of approximately 22 million cubic yards of sand within the National Park Service's Gulf Islands National Seashore, Mississippi unit. Approximately 13 million cubic yards of sand would be used to close a gap between East Ship Island and West Ship Island, originally opened by Hurricane Camille, through the construction of a low level dune system. The remaining 9 million cubic yards of sand would be placed in the littoral zones at the eastern ends of Ship and Petit Bois Islands. This would result in the restoration of 1,150 acres of critical coastal zone habitats. In accordance with the requests of the National Park Service, the closure of the Ship Island gap and placement of sand into the littoral zones would be undertaken only once, and would not be nourished or otherwise maintained in the

future. The restoration of Ship Island would provide over 400 average annual functional habitat units and help to ensure the sustainability of the Mississippi Sound ecosystem by maintaining salinity inflows from the Gulf of Mexico. The estuarine habitats provide nursery and foraging habitat that supports various species including economically-important marine fishery species, such as black drum, spotted seatrout, southern flounder, Gulf menhaden, bluefish, croaker, mullet, and blue crab. These estuarine-dependent organisms serve as prey for other important fisheries, such as mackerels, snappers, and groupers, and highly migratory species, such as billfishes and sharks. Incidental benefits associated with this element include average annual hurricane and storm damage risk reduction benefits of $20,000,000 to mainland Mississippi, $470,000 in average annual recreation benefits, and $43,000,000 in average annual fishery benefits to Mississippi Sound. The placement of sand would also provide incidental protection to two cultural sites listed on the National Register of Historic Places. At October 2008 price levels, the estimated cost of this element is $479,710,000. The cost of this element is allocated to ecosystem restoration. Cost sharing would be 65-percent Federal and 35-percent non-Federal. The Federal share of the estimated cost of this project element is $311,810,000 and the non-Federal share is $167,900,000.

5. Further Detailed Investigations of Remaining Elements of the Comprehensive Plan. The MsCIP Comprehensive Plan describes a number of additional components that could provide further improvements in the coastal area of Mississippi if implemented. However, these components are not recommended for authorization for construction at this time because further feasibility level analysis under additional study authority would be required to support a recommendation for construction authorization. Consequently, the reporting officers recommended additional feasibility level studies as part of the MsCIP Comprehensive Plan. These follow-on feasibility studies would evaluate the potential for restoration of over 30,000 acres of coastal forest, wetlands, beaches and dunes; restoration of barrier islands; structural measures; and floodproofing of structures on, or acquisition of, over 58,000 tracts within the 100 year floodplain. The reporting officers worked closely with other Federal agencies, the State of Mississippi, environmental groups, stakeholders, and interested parties to ensure that the program recommended for implementation best meets the goals and objectives of the MsCIP Comprehensive Plan consistent with the Congressional authorization. The total study cost of the recommended follow-on feasibility level studies is estimated to be $143,200,000, which would be cost shared on a 50-percent Federal and 50-percent non-Federal basis consistent with cost sharing provisions of Section 105 of WRDA 86, as amended. Follow-on analysis would include:

- 6 additional ecosystem restoration studies to restore the hydrology and native habitat on undeveloped state owned property.
- Long-term High Hazard Area Risk Reduction Program element to evaluate the further acquisition of high risk properties.
- Escatawpa River Freshwater Diversion to evaluate a variety of freshwater diversion scenarios to restore wet pine savannah habitat and reduce salinities in Grand Bay.

- 30 long-term ecosystem restoration and hurricane and storm damage risk reduction studies to restore the hydrology and natural habitat and reduce storm damages in developed residential areas.
- 7 hurricane and storm damage risk reduction studies to evaluate additional hurricane and storm damage risk reduction opportunities in high density land use areas.

6. At October 2008 price levels, the estimated first cost of the 12 elements of the MsCIP Comprehensive Plan recommended for authorization is $1,010,080,000, of which $656,550,000 would be Federal and $353,530,000 would be non-Federal. The estimated first cost of the individual elements recommended for authorization is summarized below in Table 1. The first cost of the recommended feasibility studies is estimated at $143,200,000. The estimated first cost of the individual studies recommended are summarized below in Table 2.

Table 1
Mississippi Coastal Improvements Program
Cost Sharing (October 2008 Price Level)

Phase I Recommended Plan Element	Total First Cost	Federal Cost	Non-Federal Cost
Phase I High Hazard Area Risk Reduction Plan	$407,860,000	$265,110,000	$142,750,000
Waveland Floodproofing	$4,450,000	$2,890,000	$1,560,000
Forrest Heights Levee	$14,070,000	$9,150,000	$4,920,000
Turkey Creek Ecosystem Restoration	$6,840,000	$4,450,000	$2,390,000
Dantzler Ecosystem Restoration	$2,210,000	$1,440,000	$770,000
Franklin Creek Ecosystem Restoration	$1,860,000	$1,210,000	$650,000
Bayou Cumbest Ecosystem Restoration & Hurricane & Storm Damage Reduction	$25,530,000	$16,590,000	$8,940,000
Admiral Island Ecosystem Restoration	$21,810,000	$14,180,000	$7,630,000
Deer Island Ecosystem Restoration	$21,520,000	$13,990,000	$7,530,000
Submerged Aquatic Vegetation Pilot Program	$900,000	$590,000	$310,000
Coast-wide Beach and Dune Ecosystem Restoration	$23,320,000	$15,160,000	$8,160,000
Comprehensive Barrier Island Restoration	$479,710,000	$311,810,000	$167,900,000
Total MsCIP Authorization Request	$1,010,080,000	$656,550,000	$353,530,000

Table 2
Mississippi Coastal Improvements Program
Cost Sharing (October 2008 Price Level)

Feasibility Studies	Estimated Study Cost	Federal Cost	Non-Federal Cost
Long-term High Hazard Area Risk Reduction	$5,000,000	$2,500,000	$2,500,000
Escatawpa River Freshwater Diversion	$3,000,000	$1,500,000	$1,500,000
Ecosystem Restoration Studies	$1,700,000	$850,000	$850,000
Long-term Ecosystem Restoration and Hurricane and Storm Damage Risk Reduction	$48,500,000	$24,250,000	$24,250,000
Structural Hurricane and Storm Damage Risk Reduction	$85,000,000	$42,500,000	$42,500,000
Total First Cost of MsCIP Recommended Investigations	$143,200,000	$71,600,000	$71,600,000

7. In concert with the Corps Campaign Plan, the MsCIP Comprehensive Plan was developed utilizing a systematic and regional approach in formulating solutions and in evaluating the impacts and benefits of those solutions. All potential impacts, both adverse and beneficial, have been considered without regard to geographic boundaries. The MsCIP and Louisiana Coastal Protection and Restoration (LACPR) study teams collaborated fully their efforts on a systems scale to ensure consistency. A regional salinity and water quality model has been developed covering an area from west of Lake Pontchartrain to east of Mobile Bay and south beyond the Chandeleur Islands in the Gulf. Regional storm surge modeling has been applied to examine regional-scale changes to storm surge levels associated with several of the proposed project alternatives. A multi-disciplinary risk assessment team was assembled by the Corps to characterize the probabilities of different hurricanes that can impact the northern Gulf of Mexico region. The risk assessment team supported both the MsCIP and LACPR work and FEMA's remapping efforts, and developed a unified general coastal flooding methodology that is being applied by U.S. Army Corps of Engineers (Corps) and FEMA.

8. Independent External Peer Review (IEPR) of the MsCIP Comprehensive Plan was managed by Battelle Memorial Institute, a non-profit science and technology organization with experience in establishing and administering peer review panels for the Corps. The IEPR panel consisted of seven individuals selected by Battelle with technical expertise in engineering (civil and geotechnical); geology/geomorphology; hydrology; hydraulics; coastal environmental science, water quality/resource management; floodplain management; meteorology/hurricanes; socioeconomics; real estate; risk assessment; and modeling. The Final Report from the IEPR panel was issued November 7, 2008 and included 14 final comments. Overall, the IEPR panel found the MsCIP Comprehensive Plan is an impressive body of work that is wide-ranging in the scope of research used to inform plan selection and recommendations. However, they felt that the plan could be improved by inclusion of a concise statement of the project's long-term vision for the future coastal landscape and a figure illustrating the project in the Executive Summary. The panel also acknowledged that there has been extensive outreach and community engagement

in the scoping process. The panel encouraged continued Corps collaboration with the public, local and Federal agencies, and the inclusion of universities and research institutions to continue to inform this plan. Support of local communities and states should be fostered as it is also a critical component to project success. Of the 14 IEPR comments identified by the panel, four were classified as high significance by the panel. This first comment recommended including a refined analysis in certain areas before design and build is conducted. In response, additional clarification was added to the report to indicate that a refined analysis would be undertaken in the ensuing project phases. The second comment requested providing additional explanations on the preliminary evaluations of hurricane storm damage risk reduction, erosion control, and ecosystem restoration. In response, with assistance from recommendations in the IEPR report, the Comprehensive Plan was revised to provide further clarification in these areas. The third comment recommended that the redevelopment scenarios should include a range of possible outcomes for the economy. In response, the team provided further explanations on the preliminary analysis and possible outcomes for the redevelopment scenarios. The fourth comment recommended that adaptive management processes should be a more integral part of the Comprehensive Plan and must include a strong monitoring and feedback mechanism. In response, the adaptive management process was further integrated into the Comprehensive Plan, along with recognition that adaptive management will be developed more extensively in collaboration with others in the ensuing project phases. Eight of the IEPR panel comments were classified as medium significance by the panel. They included clarifying the extent of inclusion of public and agency engagement into plan selection; including additional information on future impacts to municipal and industrial waste facilities; including additional detail on human adaptation, as it relates to economic activities; including additional explanations on sea level rise; including a clearer description on how relative sea level rise is incorporated; providing a clearer explanation on the physics-based models; providing further descriptions on the factors in model selection; and providing further explanation on why oysters were used as an indicator species. As a result of these comments, additional discussions were added to the report to clarify these areas, including why decisions were made through the study process respective to these comments. The report was also revised to provide further explanation on the use of oysters as one of several indicator species that assisted in the identification of feasible alternatives. The final two comments from the IEPR panel were classified as low significance. They included reevaluating the goal to reduce loss of life by 100% as it is unrealistic for the project; and to clarify the process for weighting metrics, both of which were addressed with modifications to the report. While the goal to reduce loss of life by 100% remained in the study, additional discussion was added to the report to state that residual risk will remain with any type of plan in place, and to emphasize the roles of all partners in addressing and communicating residual risk, including the need for a well coordinated hurricane evacuation plan.

9. Washington level review indicated that the project is technically sound, environmentally acceptable, and cost effective. The plan conforms with essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation studies and complies with other administration and

legislative policies and guidelines. Also, the views of interested parties, including Federal, State and local agencies have been considered.

10. One or more of the 12 elements of the MsCIP Comprehensive Plan recommended in this report to be authorized for implementation may be implementable pursuant to statutory language included in Title IV of the Supplemental Appropriations Act, 2009 (Public Law 111-32) under the heading "Flood Control and Coastal Emergencies" that was enacted on June 24, 2009 (*see* 123 Stat. 1875-1876). Analysis as to which element or elements may be implemented pursuant to that language is ongoing.

11. I find that the reporting officers have addressed the provisions of P.L. 109-148, and I generally concur in their findings, conclusions, and recommendations. Accordingly, I recommend that the 12 elements described herein be authorized for implementation in accordance with the reporting officers' plan, with such modifications as in the discretion of the Chief of Engineers may be advisable. I further recommend that the additional studies as described herein be authorized subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including WRDA 1986, as amended. This recommendation of authorization for implementation of the 12 elements is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including WRDA 1986, as amended, and with the non-Federal sponsor agreeing to comply with applicable Federal law and policies, and with the following requirements:

a. Provide 35 percent of total project costs allocated to hurricane and storm damage risk reduction, as further specified below:

(1) Provide 25 percent of design costs allocated to hurricane and storm damage risk reduction in accordance with the terms of a design agreement entered into prior to commencement of design work for a project element for hurricane and storm damage risk reduction;

(2) Provide, during the first year of construction of a project element for hurricane and storm damage risk reduction, any additional funds necessary to pay the full non-Federal share of design costs allocated to hurricane and storm damage reduction;

(3) Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of a project element for hurricane and storm damage risk reduction;

(4) Provide, during construction of a project element for hurricane and storm damage risk reduction, any additional funds necessary to make its total contribution for hurricane and storm damage risk reduction equal to 35 percent of total project costs allocated to hurricane and storm damage risk reduction;

b. Provide 35 percent of total project costs allocated to ecosystem restoration, as further specified below:

(1) Provide 25 percent of design costs allocated to ecosystem restoration in accordance with the terms of a design agreement entered into prior to commencement of design work for a project element for ecosystem restoration;

(2) Provide, during the first year of construction of a project element for ecosystem restoration, any additional funds necessary to pay the full non-Federal share of design costs allocated to ecosystem restoration;

(3) Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of a project element for ecosystem restoration;

(4) Provide, during construction of a project element for ecosystem restoration, any additional funds necessary to make its total contribution for ecosystem restoration equal to 35 percent of total project costs allocated to ecosystem restoration;

c. Shall not use funds from other Federal programs, including any non-Federal contribution required as a matching share therefore, to meet any of the non-Federal obligations for a project element unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is authorized;

d. Shall not use a project element for ecosystem restoration or lands, easements, and rights-of-way required for a project element for ecosystem restoration as a wetlands bank or mitigation credit for any other project or project element;

e. Not less than once each year, inform affected interests of the extent of protection afforded by the project elements for hurricane and storm damage risk reduction;

f. Agree to participate in and comply with applicable Federal floodplain management and flood insurance programs for project elements for hurricane and storm damage risk reduction;

g. Comply with Section 402 of the Water Resources Development Act of 1986, as amended (33 U.S.C. 701b-12), which requires a non-Federal interest to prepare a floodplain management plan within one year after the date of signing a project partnership agreement, and to implement such plan not later than one year after completion of construction of a project element for hurricane and storm damage risk reduction;

h. Publicize floodplain information in the area concerned and provide this information to zoning and other regulatory agencies for their use in adopting regulations, or taking other actions, to prevent unwise future development and to ensure compatibility with protection levels provided by a project element for hurricane and storm damage risk reduction;

i. Prevent obstructions or encroachments on a project element (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project element lands, easements, and rights-of-way or the addition of facilities which might reduce the level of protection a project element affords, reduce the outputs produced by a project element, hinder operation and maintenance of a project element, or interfere with a project element's proper function;

j. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way required for construction, operation, and maintenance of a project element, including those necessary for relocations, the borrowing of materials, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act;

k. For so long as a project element remains authorized, operate, maintain, repair, rehabilitate, and replace the project element, or functional portions of the project element, including any mitigation features, at no cost to the Federal Government, in a manner compatible with the project element's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

l. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor owns or controls for access to a project element for the purpose of completing, inspecting, operating, maintaining, repairing, rehabilitating, or replacing the project element;

m. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, rehabilitation, and replacement of a project element and any betterments, except for damages due to the fault or negligence of the United States or its contractors;

n. Keep and maintain books, records, documents, or other evidence pertaining to costs and expenses incurred pursuant to a project element, for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence are required, to the extent and in such detail as will properly reflect total project costs, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations (CFR) Section 33.20;

o. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141- 3148 and 40 U.S.C. 3701 – 3708 (revising, codifying and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c *et seq.*);

p. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of a project element. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

q. Assume, as between the Federal Government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of a project element;

r. Agree, as between the Federal Government and the non-Federal sponsor, that the non-Federal sponsor shall be considered the operator of a project element for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, repair, rehabilitate, and replace the project element in a manner that will not cause liability to arise under CERCLA; and

s. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), and Section 103(j) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213(j)), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project or separable element.

12. The recommendations contained herein reflect the information available at this time and current Departmental policies governing formulation of individual projects. They do not reflect program and budgeting priorities inherent in the formulation of a national Civil Works construction program nor the perspective of higher review levels within the Executive Branch. Consequently, the recommendations may be modified before they are transmitted to the Congress as proposals for authorization and implementation funding. However, prior to transmittal to the Congress, the non-Federal sponsor, the State, interested Federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.

R. L. VAN ANTWERP
Lieutenant General, US Army
Chief of Engineers

DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CEMP-NAD (1105-2-10a)

AUG 24 2009

SUBJECT: Mid-Chesapeake Bay Island Ecosystem Restoration Project, Chesapeake Bay, Dorchester County, Maryland

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration in the Middle Chesapeake Bay at James and Barren Islands. It is accompanied by the report of the Baltimore District Engineer and the North Atlantic Division Engineer. These reports are a partial response to a resolution by the Senate Committee on Environment and Public Works, adopted 5 June 1997. The resolution requested that the Secretary review the report of the Chief of Engineers on the Chesapeake Bay, Maryland and Virginia, published as House Document 176, Eighty-eighth Congress, First Session, and other pertinent reports with a view to conducting watershed management studies, in cooperation with other Federal agencies, the State of Maryland and the State of Delaware, their political subdivisions and agencies and instrumentalities thereof, of water resources improvements in the interest of navigation, flood control, hurricane protection, erosion control, environmental restoration, wetlands protection, and other allied purposes in watersheds of the Eastern Shore, Maryland and Delaware. The Eastern Shore, Maryland (MD) and Delaware (DE) Section 905(b) analysis concluded that a Federal interest existed to assess the needs and opportunities within the study area and recommended a variety of potential projects for further study. The Mid-Chesapeake Bay Island Ecosystem Restoration Study was initiated specifically to evaluate protecting and/or restoring island habitat loss because of erosion and subsidence through the beneficial use of dredged material, as recommended in the Section 905(b) analysis.

2. Land subsidence, rising sea level, and wave action are causing valuable remote island habitats to be lost throughout the Chesapeake Bay. Approximately 10,500 acres of island habitat has been lost in middle-eastern portion of Chesapeake Bay in the last 150 years, and should present island loss rates continue in the future, it is estimated that most remote island habitats will disappear from the Mid-Chesapeake Bay region within 20 years. The Mid-Chesapeake Bay Island Ecosystem Restoration Project consists of constructing environmental restoration projects at both James and Barren Islands. The reporting officers recommend authorizing a plan that will restore 2,144 acres of remote island habitat (2,072 acres at James Island and 72 acres at Barren Island), while also protecting approximately 1,325 acres of submerged aquatic vegetation (SAV) habitat adjacent to Barren Island and providing approximately 90 to 95 million cubic yards, or approximately 28 to 30 years, of dredged material placement capacity. Through the beneficial use of dredged material, the Mid-Chesapeake Bay Island Ecosystem Restoration Project would replace hundreds of acres of lost wetland and upland remote island habitat. This habitat would

improve productivity in the surrounding area, while providing an environmentally sound method for the use of dredged material from the Chesapeake Bay approach channels to the Port of Baltimore. Cost effectiveness and incremental cost analysis techniques were used to evaluate alternative ecosystem restoration plans. Since the recommended plan would not have any significant adverse effects, no mitigation measures (beyond management practices and avoidance) or compensation measures would be required. The recommended plan is the most efficient and cost-effective of the alternatives considered and provides substantial environmental benefits. The recommended plan is the national ecosystem restoration plan (the NER plan).

3. The incremental cost of the disposal of dredged material for ecosystem restoration purposes over the least cost, environmentally acceptable method of disposal is shared in accordance with Section 210 of WRDA 1996 (PL 104-303). Project cost sharing for ecosystem restoration requires that the non-Federal sponsor provide 35 percent of the cost associated with construction of the project for the protection, restoration, and creation of aquatic and ecologically related habitats, including provision of all lands, easements, rights-of-way, and necessary relocations. Cost sharing for recreation features requires that the non-Federal sponsor provide 50 percent of the cost associated with construction cost. Recreation facilities will be constructed on existing project lands required for the environmental restoration. Further, the non-Federal project sponsor must pay 100 percent of the operation, maintenance, repair, replacement, and rehabilitation costs associated with the project.

4. The Maryland Port Administration, under the auspices of the Maryland Department of Transportation is the non-Federal sponsor for the project. The estimated total first cost including contingencies for the Mid-Chesapeake Bay Island Ecosystem Restoration Project is $1.612 billion based on October 2008 price levels. The Federal share of the total project costs would be $1.045 billion for the Federal government (65 percent) and $567 million for the non-Federal sponsor (35% percent). Operations, maintenance, repair, rehabilitation, and replacement (OMRR&R) costs for the completed project are projected to be less than 2 percent of the total project cost and would be a non-Federal responsibility. The first costs of the recommended recreation facilities are estimated at $210,000. The Federal Government and the non-Federal sponsor would each share 50 percent of the cost or $105,000. Since the recreation features are not planned to be constructed until the project is largely complete, OMRR&R costs would be incurred beyond to period of analysis for the project and so are not included in the project cost.

5. The cost of the recommended environmental restoration plan is justified by the restoration of 2,144 acres of remote island habitat (2,072 acres at James Island and 72 acres at Barren Island), the protection of approximately 1,325 acres of SAV habitat adjacent to Barren Island, and achieving habitat increases in the most cost-effective manner. The habitats constructed as part of the Mid-Bay Ecosystem Restoration Project will restore additional remote island habitat, a scarce and rapidly vanishing ecosystem niche within the Chesapeake Bay region that provide a vital

connection for avian species between open-water and mainland terrestrial habitats within the region and provide valuable nesting habitat for a variety of colonial nesting and wading bird species. Protection of the extensive SAV beds east of Barren Island will provide nursery habitat for blue crabs and many species of commercially important finfish species, while also providing foraging habitat for waterfowl. The restoration projects at James and Barren Islands would contribute to the goals of the Chesapeake Bay Program watershed partnership through its habitat and ecosystem recovery and preservation efforts. Both James and Barren Islands would contribute to the Chesapeake 2000 Agreement goals to restore tidal and non-tidal wetlands, to protect and restore submerged aquatic vegetation, and to develop strategies to address water clarity in areas of critical importance for submerged aquatic vegetation.

6. The Corps of Engineers uses a Campaign Plan to establish priorities, focus transformation initiatives, measure and guide progress, and adapt to the needs of the future. The second of four goals of the Campaign Plan is to deliver enduring and essential water resource solutions through collaboration with partners and stakeholders. In developing this project, the Corps of Engineers has focused its talents and energy on a comprehensive, sustainable and integrated solution to the one of the Chesapeake Bay's greatest water resources and related challenges, and has accomplished this through collaboration with a diverse group of organizations and individuals, ranging from large government agencies to local watermen making their living on the Chesapeake Bay in the vicinity of James and Barren Islands. They included numerous local, State, and Federal agencies; defined groups such as watermen's, fishermen's, and boating associations; and private citizens. Through this substantial network of stakeholders and the beneficial use of dredged material, this project is an integrated and holistic solution that not only sustains one of the Nation's most productive ports, but ensures that the invaluable remote island habitat that the project is restoring in the Nation's largest estuary is equally sustainable.

7. The plan as developed is technically sound, economically efficient, and environmentally and socially acceptable. The plan conforms with essential elements of the U.S. Water Resources Council's 1983 Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other administration and legislative policies and guidelines. The development of this project benefited from an extensive review process that included the District Quality Control by the Baltimore District, Agency Technical Review by the Philadelphia District, and an Independent External Peer Review. District Quality Control reviewed basic science and engineering products. The Agency Technical Review was an in-depth review by senior Corps personnel to ensure the proper application of clearly established criteria, regulations, laws, codes, principles, and professional practices. In addition, the primary benefit model, the Island Community Units Model, was reviewed by the Corps of Engineers National Ecosystem Planning Center of Expertise and the Engineer Research and Development Center. Approval of the application of the Island Community Units model was recommended for the Mid-Chesapeake Bay Island Ecosystem Restoration Project. It was also determined that

use of the model for future projects would require additional documentation supporting model assumptions, justification of guild weightings, and a sensitivity analysis of individual guild models and guild weighting.

8. The Independent External Peer Review (IEPR) was managed by an outside eligible organization that assembled a panel of four experts in the fields of engineering, estuarine ecology, economics and plan formulation, and hydrology. Ultimately, the panel identified and documented 14 comments. Four were classified as low significance and included comments about the influence of climate change on design, the addition of figures to the main body of the report, citations for restoration literature, and clarification of the location for dredged material in the most probable future without project condition. These comments were addressed with minor modifications to the feasibility report. Eight of the comments were classified as medium significance. They included the level of rigor/review of the preferred alternative; the use of a sensitivity analysis and the documentation of risk and uncertainty; the schedule for establishment of a fully functioning marsh; further discussion of the link between the need and scale of the project with the target volume of dredged material; description of the environmental monitoring; connectivity between the salt marsh and the estuary; inclusion of climate change, sea level rise, and invasive species in the Adaptive Management Plan; and potential discounting of environmental outcomes over the project lifetime. As a result, clarification was added to the report, a cost and schedule risk assessment was conducted, and a detailed monitoring plan and Adaptive Management Plan are being developed with the assistance of the panel's recommendations. The remaining two panel comments were determined to be of high significance. One concern was that the analysis of environmental benefits was biased by the failure to subtract quantitative habitat injuries, making the selection process and justification of the preferred alignment unreliable. In response, the team worked with fishery managers to quantify adverse impacts from filling the water column and benthic habitat and provided a discussion to support the conclusions produced by the plan formulation selection process using net benefits. The second concern was that water quality impacts associated with construction and the potential negative impacts of resettled suspended sediment were not addressed. As suggested by the IEPR reviewers, the team prepared an assessment that considered sediment re-suspension, transport, and deposition, and oyster and submerged aquatic vegetation requirements to assess construction impacts for Barren and James Islands. Federal and State resource agencies were involved in the planning and assessment of impacts. The team concluded that there will be no significant turbidity or environmental impacts to the oyster bars or submerged aquatic vegetation from construction at Barren or James Islands.

9. The views of interested parties, including Federal, State and local agencies, have been considered. Specific requests have been made for additional coordination with U.S. Fish and Wildlife Service and the National Marine Fisheries Service as detailed designs proceed on the

project. USACE has agreed to continue close coordination with these agencies and other affected parties as the design and construction process continues.

10. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend implementation of the authorized project in accordance with the reporting officers' plan with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of WRDA 1986, as amended. The non-Federal sponsor would provide the non-Federal cost share and all LERRD. Further, the non-Federal sponsor would be responsible for all OMRR&R. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies, including the following requirements:

a. Provide a minimum of 35 percent of total ecosystem restoration costs as further specified below:

1) Provide *25* percent of design costs allocated by the Government to ecosystem restoration in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

2) Provide, during the first year of construction, any additional funds necessary to pay the full non-Federal share of design costs allocated by the Government to ecosystem restoration;

3) Provide all lands, easements, and rights-of-way, including suitable borrow, and perform or ensure the performance of all relocations determined by the Federal Government to be necessary for the construction, operation, and maintenance of the project;

4) Provide all improvements required on lands, easements, and rights-of-way to enable the proper placement of dredged or excavated material associated with the construction, operation, and maintenance of the project;

5) Provide, during construction, any additional amounts as are necessary to make its total contribution at least 35 percent of ecosystem restoration costs.

b. Provide 50 percent of total recreation costs as further specified below:

1) Provide 25 percent of design costs allocated by the Government to recreation in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

2) Provide during the first year of construction, any additional funds necessary to pay the non-Federal share of design costs allocated by the Government to recreation;

3) Provide all lands, easements, and rights-of-way, including those required for relocations, and borrowing of material, and the disposal of dredged or excavated material;

perform or ensure the performance of all relocations; and construct all of the improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated materials all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of the recreation features;

4) Provide, during construction, any funds necessary to make its total contribution for recreation equal to 50 percent of the recreation costs;

5) Provide during construction, 100 percent of the total recreation costs that exceed an amount equal to 10 percent of the Federal share of total ecosystem restoration costs.

c. For so long as the project remains authorized, operate, maintain, repair, replace, and rehabilitate the project, or functional portion of the project, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government.

d. Shall not use the project or project lands, easements, and rights-of-way as a wetland bank or mitigation credit required for another project.

e. Provide and maintain recreation features and public use facilities open and available to all on equal terms.

f. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor, now or hereafter, owns or controls for access to the project for the purpose of inspection, and, if necessary after failure to perform by the non-Federal sponsor, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Federal Government shall operate to relieve the non-Federal sponsor of responsibility to meet the non-Federal sponsor's obligations, or to preclude the Federal Government from pursuing any other remedy at law or equity to ensure faithful performance.

g. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the project and any project related betterments, except for damages due to the fault or negligence of the United States or its contractors.

h. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three years after completion of the accounting for which such books, records, documents, or other evidence are required, to the

extent and in such detail as will properly reflect total project costs, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 CFR Section 33.20.

i. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), PL 96-510, as amended, 42 U.S.C. 9601-9675, that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for the construction, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal government provides the non-Federal sponsor with prior specific written direction, in which case, the non-Federal sponsor shall perform such investigations in accordance with such written direction.

j. Assume, as between the Federal government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated substances located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the construction, operation, or maintenance of the project.

k. Agree, as between the Federal Government and the non-Federal sponsor, the non-Federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability. To the maximum extent practicable, operate, maintain, repair, replace, and rehabilitate the project in a manner that will not cause liability to arise under CERCLA.

1. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91 -646, as amended (42 U.S.C. 4601 - 4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way, required for the construction, operation, and maintenance of the project, including those necessary for relocations, the borrowing of materials, or the placement of dredged or excavated material, and inform all affected persons of applicable benefits, policies, and procedures under said Act.

m. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of -the Civil Rights Act of 1964, PL 88-352 (42 U.S.C. 2000d); Department of Defense Directive 5500.1 1 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army;" and all applicable Federal labor standards including,

but not limited to, 40 U.S.C. 3 141 -48 and 40 U.S.C. 3701-08 (reversing, codifying, and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 267a et seq.), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 et seq.) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c et seq.),

11. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program nor the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to the Congress, the sponsors, the State, interested Federal agencies, and other parties will be advised of any modifications and will be afforded an opportunity to comment further.

R. L. VAN ANTWERP
Lieutenant General, US Army
Chief of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:
CECW-SAD (1105-2-10a)

MAR 11 2010

SUBJECT: Comprehensive Everglades Restoration Plan, Central and Southern Florida, Caloosahatchee River (C-43) West Basin Storage Reservoir Project, Hendry County, Florida

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration improvements for the Caloosahatchee River (C-43) West Basin Storage Reservoir project, located in Hendry County, Florida. It is accompanied by the report of the district and division engineers. These reports are in response to Section 601 of the Water Resources Development Act (WRDA) of 2000, which authorized the Comprehensive Everglades Restoration Plan (CERP) as a framework for modifications and operational changes to the Central and Southern Florida Project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. WRDA 2000 identified specific requirements for implementing components of the CERP, including development of a decision document known as a Project Implementation Report (PIR). The Caloosahatchee River (C-43) West Basin Storage Reservoir Project is a component of the CERP that was not specifically authorized in that Act. The authority for the preparation of the Caloosahatchee River (C-43) West Basin Storage Reservoir Project Implementation Report (PIR), one of a number of site-specific projects, is contained in Section 601(d) of WRDA 2000. Congress may authorize the project following review and approval of a PIR by the Secretary of the Army. The requirements of a PIR are addressed in this report. Preconstruction engineering and design activities for this Project will be continued under the existing CERP Design Agreement.

2. The PIR recommends a project that significantly contributes to two of the ecologic goals and objectives of the CERP: improving habitat and functional quality and improving native plant and animal species abundance and diversity. In addition, it contributes to the socioeconomic objective of providing recreational and navigation opportunities. Scientists have established that a mosaic of uplands, freshwater marsh, deep water sloughs, and estuarine habitats supporting a diverse community of fish and wildlife was one of the defining characteristics of the pre-drainage Everglades ecosystem. Currently in south Florida, habitat function and quality has significantly declined in remaining natural system areas due to water management projects and practices, resulting in a loss of suitable nesting, foraging, and fisheries habitat and a decline in native species diversity and abundance. The PIR confirms information in the CERP and provides project-level evaluation of costs and benefits associated with construction and operations of a reservoir. Constructing and operating a reservoir would reduce the extreme salinity changes in the Caloosahatchee Estuary by providing a more consistent flow of fresh water discharging at S-79 into the Caloosahatchee River Estuary. The extreme fresh water

fluctuations are due to fresh water flows from basin runoff and releases from Lake Okeechobee. Due to the advanced land acquisition activities conducted jointly by the Federal Government and the State of Florida, the Project can be implemented relatively quickly, significantly advancing the realization of project benefits in an area that has been degraded by past water management activities.

3. The reporting officers recommend implementing the Caloosahatchee River (C-43) West Basin Storage Reservoir to improve the ecological function of the Caloosahatchee Estuary by capturing and storing the excess surface water runoff from the Caloosahatchee River watershed (or C-43 Basin) and excess releases from Lake Okeechobee. Stored water will then be discharged to the estuary during the dry season to augment existing inadequate flows. The project site is located on farm land adjacent to the Caloosahatchee River (C-43) canal in Hendry County and totals approximately 10,700 acres. The reservoir will require approximately 10,480 acres of land in fee and 20 acres of perpetual channel easement. Approximately 200 additional acres will be required on a temporary basis during project construction for staging areas. Approximately 7,080 acres of project lands were acquired with a 50 percent Federal cost-share using funds appropriated via the 1996 Federal Farm Bill and the Land and Water Conservation Funds that were specifically designated for the acquisition of lands to restore the South Florida ecosystem. Major features of the reservoir include external (dam) embankments varying in height from 32-37 feet above existing grade, Soil-Bentonite slurry walls within and beneath the external embankments, an internal (dam) embankment separating the two reservoir cells with an approximate height of 31 feet above existing grade, an inflow pump station consisting of diesel-powered pumps with a total pumping capacity of 1,500 cfs, a perimeter canal, and pump station consisting of electric-powered pumps with a total pumping capacity of 195 cfs, and numerous spillways, culverts, perimeter canal structures, an internal cell balancing structure, and outlet structures. Recreational opportunities are also provided at the site within the project footprint.

4. The total first cost of the recommended plan from the Final PIR and Integrated EIS, dated September 2007, based on October 2009 price levels, is estimated to be $570,480,000. The fully funded cost, based on October 2009 price levels, is estimated to be $610,736,000. Project cost increases since the Central and Southern Florida Project Comprehensive Restudy Study Final Integrated Feasibility Report and Programmatic Environmental Impact Statement, April 1999, are primarily due to the fact that the recommended plan is a larger reservoir than originally envisioned (170,000 acre-feet of storage compared to 160,000 acre-feet in the Restudy), that design refinements were needed to incorporate current methods and criteria for addressing dam safety requirements, and that real estate costs increased. Project cost increases from the final PIR to present are due to revisions to the land valuation crediting policy for CERP.

5. In accordance with the cost-sharing requirements of Section 601(e) of the WRDA 2000, as amended, the Federal cost of the recommended plan would be $ 305,368,000 and the non-Federal cost would be $305,368,000. The estimated lands, easements, rights-of-way, and relocations costs for the recommended plan are $84,650,000 of which approximately

$27,566,500 (Rounded) has been provided to the State through the Federal Department of Interior Grant Funds. Based on October 2009 price levels, a 40-year period of economic evaluation and a 4.375 percent discount rate, the equivalent annual cost of the proposed project is estimated at $37,600,000, which includes operation, maintenance, repair, rehabilitation and replacement (OMRR&R), interest and amortization. The estimated annual costs for restoration OMRR&R are $3,100,000. The annual OMRR&R costs for recreation are estimated at $25,000. As a component of the CERP program, the interagency/interdisciplinary scientific and technical team, formed to ensure that system-wide goals are met, will participate in the annual monitoring to assess system-wide changes. In accordance with Sections 601(e)(4) and 601(e)(5)(D) of WRDA 2000 as amended, OMRR&R costs and adaptive assessment and monitoring costs will be shared equally between the Federal Government and the non-Federal sponsor. OMRR&R costs related to recreation features will be funded 100 percent by the non-Federal sponsor.

6. To ensure that an effective ecosystem restoration plan was recommended, cost effectiveness/incremental cost analysis techniques were used to evaluate alternative restoration plans. These techniques determined the selected alternative plan to be cost effective. The plan recommended for implementation is an increment of the National Ecosystem Restoration (NER) plan, it supports the adaptive management recommendations established by the National Research Council, and it meets the policy criteria established in U.S Army Corps of Engineers (USACE) guidance for planning in a collaborative environment. The recommended plan provides benefits by: 1) reducing harmful discharges to the Caloosahatchee Estuary by capturing a portion of high flow releases from Lake Okeechobee and basin runoff from the lower West Caloosahatchee River Basin during the wet season, 2) storing the water until needed in a reservoir, and 3) discharging stored water to supplement inadequate flows over S-79 to Caloosahatchee Estuary during the dry season, thereby reducing stress on the natural system. Hydrologic output comparisons were made between the flow frequency distribution of each alternative plan and the target frequency distribution for the combined monthly and weekly average freshwater inflows at S-79 for a nine year period of record. The nine years chosen out of the 36 year period of record contain three wet, three dry and three normal years. Biological outputs used to compare plans are based on several parameters that indicate the degree to which natural vegetative conditions and key indicator species are restored. The parameters for both hydrologic outputs and biological outputs are based on established peer-reviewed hydrologic and conceptual ecological models developed to guide the restoration of the South Florida ecosystem.

7. The recommended plan improves functional fish and wildlife habitat in the Caloosahatchee River Estuary. The Everglades has been designated an International Biosphere Reserve (1976) and a World Heritage Site (1979) by the United Nations Educational, Scientific, and Cultural Organization (UNESCO) and a Wetland of International Importance (1987) in accordance with the Ramsar Convention. The portion of the Everglades ecosystem directly affected by the Caloosahatchee River (C-43) West Basin Storage Reservoir, including the project site and the Caloosahatchee River and Estuary, provides habitat for 21 federally-listed endangered or threatened species, including the Florida panther, Everglades snail kite, wood stork, manatee, eastern indigo snake, Audubon's crested caracara and five species of sea turtles. In accordance

with the WRDA 2000 Section 601(f)(2), individual CERP projects shall be justified by the environmental benefits derived by the South Florida ecosystem. Similarly, Section 385.9(a) of the CERP Programmatic Regulations (33 CFR Part 385) requires that individual projects shall be formulated, evaluated, and justified based on their ability to contribute to the goals and purposes of the Plan and on their ability to provide benefits that justify costs on a next-added increment basis. The Caloosahatchee River (C-43) West Basin Storage Reservoir Project, operating in conjunction with other projects in the comprehensive plan produces an average annual increase of 12,809 habitat units in the Caloosahatchee River Estuary. On a next-added increment (NAI) basis (meaning adding the Caloosahatchee River (C-43) West Basin Storage Reservoir as the next project to be added to a system of projects) the Caloosahatchee River (C-43) West Basin Storage Reservoir project delivers about 15,300 average annual habitat units. Based on restoration first cost and the Caloosahatchee Estuary, the cost per acre benefited is about $8,034. On a next-added increment basis, the average annual cost per average annual habitat unit is approximately $2,825. Based on these parameters, the Caloosahatchee River (C-43) West Basin Storage Reservoir project is justified by the environmental benefits derived by the South Florida ecosystem and on a next-added increment basis. All NEPA compliance requirements have been completed. Final EIS coordination began on 21 September 2007 and concluded on 22 October 2007. No significant environmental changes have occurred since the EIS coordination was finalized in 2007.

8. Section 601(e)(5)(B) of the Water Resources Development Act of 2000, as amended by Section 6004 of the Water Resources Development Act of 2007, authorizes credit toward the non-Federal share for non-Federal design and construction work completed during the period of design or construction, subject to the execution of the design or project partnership agreement, and subject to a determination by the Secretary that the work is integral to the project. This project is included in the "Expedited Projects" formerly called Acceler8. The reporting officers recommend that the non-Federal sponsor be credited for all reasonable, allowable, necessary, auditable, and allocable costs applicable to The Caloosahatchee River (C-43) West Basin Storage Reservoir Project as may be authorized by law, including those incurred in advance of executing a project partnership agreement for this project, subject to authorization of the Project by law, a determination by the Assistant Secretary of the Army (Civil Works) or his/her designee that the In-kind work is integral to the Authorized CERP Project, that the costs are reasonable, allowable, necessary, auditable, and allocable, and that the In-kind work has been implemented in accordance with Government standards and applicable Federal and State laws.

9. Credits for non-Federal design and construction will be evaluated in accordance with the terms of the Master Agreement Between the Department of the Army and South Florida Water Management District for Cooperation in Constructing and Operating, Maintaining, Repairing, Replacing, and Rehabilitating Projects Authorized to be Undertaken Pursuant to the Comprehensive Everglades Restoration Plan, executed on 13 August 2009 (hereinafter "Master Agreement"). All documentation provided by the non-Federal sponsor will be thoroughly reviewed by USACE to determine reasonable, allowable, necessary, auditable, and allocable costs. Upon completion of this review, a financial audit will be conducted prior to granting final

credit. Coordination between USACE and the Sponsor will occur throughout design and construction via the USACE Regulatory process. The credit afforded to the non-Federal sponsor will be limited to the lesser of the following: (1) actual costs that are reasonable, allowable, necessary, auditable, and allocable to the Project; or (2) the USACE estimate of the cost of the work allocable to the Project had USACE performed the work. The non-Federal sponsor intends to implement this work using its own funds and would not use funds originating from other Federal sources unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute and in accordance with Section 601 (e)(3) of WRDA 2000 as amended and the Master Agreement.

10. The plan recommended by the reporting officers is environmentally justified, technically sound, cost effective, and socially acceptable. The plan conforms to essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other administration and legislative policies and guidelines. Also, the views of interested parties, including Federal, State and local agencies, have been considered.

State and Agency comments received during review of the Final PIR/EIS included concerns raised by the Florida Department of Agriculture and Consumer Services (FDACS) related to savings clause requirements and water reservations within the Caloosahatchee Basin. These concerns were addressed through several multi-agency meetings and ultimately resolved in a Headquarters, US Army Corps of Engineers (HQUSACE) response dated August 11, 2009. This letter stated that "all water to be protected for the natural system is a result of being able to capture and store excess Lake Okeechobee discharges to tide, and then delivering that water at the right time to meet estuary salinity targets. This project as simulated in the modeling, and as it will be operated, will not reduce the amount of water available from existing sources in the C-43 Basin or the amount available to existing legal users."

The U.S. Environmental Protection Agency, the Southwest Florida Regional Planning Council (SWFRPC), Lee County, and the City of Sanibel provided comments expressing water quality concerns associated with the construction and operations of the reservoir. In response, USACE and the non-Federal sponsor explained that the intent of this project is to focus on meeting salinity targets in the estuary. Future CERP planning efforts will focus on other problems, including water quality, identified in the Caloosahatchee River Basin. This project is permitted through the Florida Department of Environmental Protection (FDEP) and compliant with State water quality standards. The FDEP finds that there are reasonable assurances that "State water quality standards, including water quality criteria and moderating provisions, will be met." (FDEP letter to the Mayor of Sanibel dated April 30, 2007). USACE will require the permit holder to conduct limited algal monitoring. The primary purpose of monitoring for algae in the reservoir will be for the prevention of harmful algal bloom exposure to recreationists and users of the downstream potable water supply systems. This initial monitoring program will be assessed after two years to determine if modifications are needed. USACE also intends to require that the permit holder develop an Algal Monitoring and Management Plan for the

reservoir. This plan should include a long-term monitoring program as well as management plans should an algal bloom develop. Additionally, the non-Federal sponsor in conjunction with Lee County has acquired the Boma Property immediately east of S-78 along the Caloosahatchee River for the construction of a water quality treatment facility targeting nitrogen removal. Plans for this facility are being developed as part of the Northern Everglades Program, Caloosahatchee River Watershed Protection Plan, a cooperative State effort between the non-Federal sponsor, FDEP, and FDACS.

The SWFRPC additionally expressed concerns with the intended use of the Picayune Strand Restoration Project lands as mitigation for Florida panther habitat impacted by the construction and operation of the Caloosahatchee River (C-43) West Basin Storage Reservoir. In response, USACE stated that the USFWS has lead responsibility for programmatic tracking of Florida panther habitat losses and gains associated with CERP projects. Although individual projects may cause some panther habitat loss, this loss is being evaluated in the context of the conservation of the species range-wide. Acquisition of lands for this project and other CERP projects has resulted in preservation of important lands that may have otherwise been used for development. A majority of Florida panther habitat to be preserved is associated with the nearby Picayune Strand Restoration Project (PSRP), which is adjacent to other large tracts of natural and preserved lands including Fakahatchee Strand Preserve State Park and Big Cypress National Preserve. Acquisition and preservation of lands in the Caloosahatchee River (C-43) West Basin Storage Reservoir study area are consistent with the USFWS' goal to locate, preserve, and restore tracts of lands containing sufficient area and appropriate land cover types to ensure the long-term survival of the Florida panther.

11. The Project complies with the following requirements of WRDA 2000 as amended:

a. Project Implementation Report (PIR). The requirements of a PIR as defined by Section 601(h)(4)(A).

b. Water Reservations. Sections 601(h)(4)(A)(iii)(IV) and (V) require identification of the appropriate quantity, timing, and distribution of water dedicated and managed for the natural system and the amount of water to be reserved or allocated for the natural system. Additional water delivered to and retained in natural areas was identified and will be reserved or allocated by the State of Florida.

c. Elimination or Transfer of Existing Legal Sources of Water. Section 601(h)(5)(A) states that existing legal sources of water shall not be eliminated or transferred until a new source of water supply of comparable quantity and quality is available to replace the water to be lost as a result of the Plan. Implementation of the Caloosahatchee River (C-43) West Basin Storage Reservoir project will not result in a transfer or elimination of sources of water to meet agricultural and urban demand in the Caloosahatchee River (C-43 Canal) Basin (remaining the same as before the project). Sources of water for the Seminole and Miccosukee Tribes and Everglades National Park are influenced by the regional water management system (C&SF

Project, including Lake Okeechobee), and will not be affected by this project. Therefore, there will be no elimination or transfer as a result of this project on existing legal sources of supply for: agricultural or urban water supply, allocation or entitlement to the Seminole Indian Tribe of Florida under Section 7 of the Seminole Indian Land Claims Settlement Act of 1987 (25 U.S.C. 1772e), the Miccosukee Tribe of Florida, water supply for Everglades National Park, or water supply for fish and wildlife.

d. Maintenance of Flood Protection. Section 601 (h)(5)(B) states that CERP shall not reduce levels of service for flood protection that are in existence on the date of enactment of this Act and in accordance with applicable law. Potential effects of the storage reservoir on water levels on adjacent lands were evaluated. In response to these evaluations, the Project includes a seepage management system, consisting of a seepage cut-off wall, seepage canal, and pump to ensure that adjacent lands in the immediate vicinity of the project are not adversely affected. The operations of this project will not change the operations of the Caloosahatchee River (C-43 Canal); therefore, there will be no system-wide effects on flood protection that will impact the regional basin as a result of the Project.

12. Agency technical reviews (ATR) of the Caloosahatchee River (C-43) West Basin Storage Reservoir document were carried out through collaboration with the National Ecosystem Restoration Planning Center of Expertise (PCX) in compliance with guidance at the time of Final PIR completion (2007). Extensive external scientific peer review through the National Academy of Science (NAS) has been conducted at the CERP programmatic level and will continue throughout the planning and implementation of the CERP program through the NAS biennial reports to Congress. In particular, the NAS promoted the use of traditional water storage technologies and the use of adaptive management principles within the formulation process. Both of these comments have been integrated into the formulation and design of the C-43 project. No further IEPR was deemed necessary or recommended for the study. In addition, no further IEPR is needed in response to WRDA 2007, since C-43 studies had been initiated and alternatives identified more than two years prior to its enactment and the final report had been submitted for approval prior to its passage.

13. I generally concur with the findings, conclusions, and recommendations of the reporting officers. The Caloosahatchee River (C-43) West Basin Storage Reservoir Project requires specific authorization by Congress in accordance with Section 601(d) of the WRDA 2000. Accordingly, I recommend that the plan described herein for ecosystem restoration be authorized for implementation as a Federal Project, with such modifications as in the discretion of the Chief of Engineers may be advisable, and subject to cost-sharing, financing, and other applicable requirements of Section 601 of WRDA 2000 as amended. In addition, I recommend that the non-Federal sponsor be authorized to receive credit for work accomplished prior to the execution of a Project Partnership Agreement (PPA) for this Project, in accordance with Section 601 of WRDA 2000, as amended, and the terms of the Master Agreement.

Further, this recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and agreeing to perform the following items of local cooperation:

a. Provide 50 percent of total project costs consistent with the provisions of Section 601(e) of the Water Resources Development Act of 2000 as amended including authority to perform design and construction of project features consistent with Federal law and regulation;

b. Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations that the Government and the Non-Federal Sponsor jointly determine to be necessary for the construction, operation, maintenance, repair, replacement and rehabilitation of the Project and valuation will be in accordance with the Master Agreement;

c. Shall not use the ecosystem restoration features or lands, easements, and rights-of-way required for such features as a wetlands bank or mitigation credit for any other projects.

d. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land that the non-Federal sponsor owns or controls for access to the Project for the purpose of inspection, and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project;

e. Assume responsibility for operating, maintaining, repairing, replacing, and rehabilitating (OMRR&R) the Project or completed functional portions of the Project, including mitigation features, in a manner compatible with the Project's authorized purposes and in accordance with applicable Federal and State laws and specific directions prescribed in the OMRR&R manuals and any subsequent amendments thereto. Cost sharing for OMRR&R will be in accordance with Section 601 of WRDA 2000 as amended;

f. The non-Federal Sponsor shall operate, maintain, repair, replace and rehabilitate the recreation features of the Project with responsibility for 100 percent of the cost;

g. Keep the recreation features, and access roads, parking areas, and other associated public use facilities, open and available to all on equal terms;

h. Unless otherwise provided for in the statutory authorization for this Project, comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended, and Section 103 of the WRDA of 1986, Public Law 99-662, as amended, which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the Project or separable element;

i. Hold and save the Government free from all damages arising from construction, operation, maintenance, repair, replacement and rehabilitation of the Project and any project-related

betterments, except for damages due to the fault or negligence of the Government or the Government's contractors;

j. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the Project to the extent and in such detail as will properly reflect total project costs and comply with the provisions of the Master Agreement;

k. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601-9675, that may exist in, on, or under lands, easements or rights-of-way necessary for the construction, operation, and maintenance of the Project; except that the non-Federal sponsor shall not perform such investigations on lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude without prior specific written direction by the Government;

l. Assume complete financial responsibility for all necessary cleanup and response costs of any CERCLA-regulated materials located in, on, or under lands, easements, or rights-of-ways that the Government determines necessary for construction, operation, maintenance, repair, replacement and rehabilitation;

m. As between the Government and the non-Federal Sponsor, the non-Federal Sponsor shall be considered the operator of the Project for purposes of CERCLA liability. To the maximum extent practicable, the non-Federal Sponsor shall operate, maintain, repair, replace, and rehabilitate the Project in a manner that will not cause liability to arise under CERCLA;

n. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the ecosystem restoration features, hinder operation and maintenance of the project, or interfere with the project's proper function;

o. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public law 91-646, as amended by title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (Public Law 100-17), and the Uniform Regulations contained in 49 CFR part 24, in acquiring lands, easements, and rights-of-way, and performing relocations for construction, operation, and maintenance of the Project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act;

p. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7,

entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army;" and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708[revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a et seq.), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 et seq.) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c)];

q. Comply with Section 106 of the National Historic Preservation Act in completion of all consultation with the Florida State Historic Preservation Officer, and as necessary, the Advisory Council on Historic Preservation, prior to construction as part of the preconstruction engineering and design phase of the project;

r. Provide 50 percent of that portion of total cultural resource preservation mitigation and data recovery costs attributable to the Project that are in excess of one percent of the total amount authorized to be appropriated for the Project;

s. Do not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized and in accordance with Section 601 (e)(3) of the WRDA of 2000, as amended, and in accordance with the Master Agreement;

t. The Non-Federal Sponsor agrees to participate in and comply with applicable Federal floodplain management and flood insurance programs consistent with its statutory authority.

(1) Not less than once each year the Non-Federal Sponsor shall inform affected interests of the extent of protection afforded by the Project.

(2) The Non-Federal Sponsor shall publicize flood plain information in the area concerned and shall provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the flood plain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the Project.

(3) The Non-Federal Sponsor shall comply with Section 402 of WRDA 1986, as amended (33 U.S.C. 701b-12), which requires a non-Federal interest to have prepared, within one year after the date of signing a PPA for the Project, a floodplain management plan. The plan shall be designed to reduce the impacts of future flood events in the project area, including but not limited to, addressing those measures to be undertaken by non-Federal interests to preserve the level of flood protection provided by the Project. As required by Section 402, as amended, the non-Federal interest shall implement such plan not later than one year after completion of construction of the Project. The Non-Federal Sponsor shall provide an information copy of the plan to the Government upon its preparation.

(4) The Non-Federal Sponsor shall prescribe and enforce regulations to prevent obstruction of or encroachment on the Project or on the lands, easements, and rights-of-way determined by the Government to be required for the construction, operation, maintenance, repair, replacement, and rehabilitation of the Project, that could reduce the level of protection the Project affords, hinder operation or maintenance of the Project, or interfere with the Project's proper function.

u. The overarching objective of the Plan is the restoration, preservation, and protection of the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. The Federal Government and the non-Federal sponsor are committed to the protection of the appropriate quantity, quality, timing, and distribution of water to ensure the restoration, preservation, and protection of the natural system as defined in Section 601 of WRDA 2000, for so long as the project remains authorized. This quantity, quality, timing, and distribution of water shall meet applicable water quality standards and be consistent with the natural system restoration goals and objectives of the CERP, as the Plan is defined in the Programmatic Regulations. The non-Federal sponsor will protect the water for the natural system by taking the following actions to achieve the overarching natural system objectives of the Plan:

(1) Ensure, through appropriate and legally enforceable means under Florida law, that the quantity, quality, timing, and distribution of existing water that the Federal Government and the non-Federal sponsor have determined in this Project Implementation Report is available and beneficial to the natural system, will be available at the time the Project Partnership Agreement for the project is executed and will remain available for so long as the Project remains authorized.

(a) Prior to the execution of the Project Partnership Agreement, reserve or allocate for the natural system the necessary amount of water that will be made available by the project that the Federal Government and the non-Federal sponsor have determined in this Project Implementation Report.

(b) After the Project Partnership Agreement is signed and the project becomes operational, make such revisions under Florida law to this reservation or allocation of water that the non-Federal sponsor determines, as a result of changed circumstances or new information, is necessary for the natural system.

(2) For so long as the Project remains authorized, notify and consult with the Secretary of the Army should any revision in the reservation of water or other legally enforceable means of protecting water be proposed by the non-Federal sponsor, so that the Federal Government can assure itself that the changed reservation or legally enforceable means of protecting water conform with the non-Federal sponsor's commitments under paragraphs 1 and 2. Any change to

a reservation of water made available by the project shall require an amendment to the Project Partnership Agreement.

14. The recommendation contained herein reflects the information available at this time and current Departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities in the formulation of a national Civil Works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding.

R. L. VAN ANTWERP
Lieutenant General, US Army
Chief of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

JAN 0 6 2011

CECW-SAD (1105-2-10a)

SUBJECT: Comprehensive Everglades Restoration Plan, Central and Southern Florida, Caloosahatchee River (C-43) West Basin Storage Reservoir Project, Hendry County, Florida - Supplemental

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress this supplement to my report on ecosystem restoration and recreation for the Caloosahatchee River (C 43) West Basin Storage Reservoir project, located in Hendry County, Florida, dated March 11, 2010. The purpose of this supplement is to clarify the authority for cost sharing of the recreational features recommended for the project.

2. In accordance with the Federal Water Project Recreation Act of 1965, full consideration was given to opportunities the project affords for recreation. The recommended C-43 West Basin Storage Reservoir project contains approximately $3,000,000 of recreation features, including a 12-mile multi-purpose trail and associated parking and toilet facilities, information kiosk, canoe/kayak launch facility, a shade structure, traffic control fencing, and a pedestrian footbridge to provide public access to the reservoir. These recreation features have been justified in accordance with policy.

3. Although cost sharing of the ecosystem restoration features for this project is governed by Section 601 of the Water Resources Development Act (WRDA) of 2000, as amended, cost sharing of the recreation features is governed by Section 103 of the WRDA 1986, as amended. In particular, in accordance with Section 103(j) of WRDA 1986, 100 percent of the cost of operation, maintenance, repair, replacement, and rehabilitation of the recreation features is the non-Federal sponsor's responsibility. In addition, Section 601(e)(5)(B) of WRDA 2000, as amended, governs credit for non-Federal sponsor design and construction work on the ecosystem restoration features of the project, whereas Section 221(a)(4) of the Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b(a)(4)) governs credit for non-Federal sponsor design and construction work on the recreation features of the project.

4. As part of this supplement, the costs of the project have been escalated and updated to October 2010 price levels and the reporting format has been changed from fully funded costs to initial investment. The total first cost of the recommended plan from the Final Project Implementation Report and Integrated Environmental Impact Statement, dated September 2007, based on October 2010 price levels, is estimated to be $579,599,000, including $576,643,000 for ecosystem restoration and $2,956,000 for recreation. In accordance with Section 601 of the

CECW-SAD (1105-2-10a)
SUBJECT: Comprehensive Everglades Restoration Plan, Central and Southern Florida, Caloosahatchee River (C-43) West Basin Storage Reservoir Project, Hendry County, Florida - Supplemental

WRDA 2000, as amended, for the ecosystem restoration features of the recommended plan, the estimated Federal cost is $288,321,500 and the estimated non-Federal cost is $288,321,500. In accordance with Section 103(c) of the WRDA 1986, as amended, for the recreational features of the recommended plan, the estimated Federal cost of $1,478,000; and the non-Federal cost is $1,478,000. The estimated lands, easements, rights-of-way, and relocations costs for the recommended plan are $84,650,000 of which approximately $27,567,000 has been provided to the State through the Federal Department of Interior Grant Funds. Based on October 2010 price levels, a 40-year period of economic evaluation and a 4.12 percent discount rate, the equivalent annual cost of the proposed project is estimated at $35,500,000, which includes operation, maintenance, repair, rehabilitation and replacement (OMRR&R), interest and amortization. The estimated annual OMRR&R costs for ecosystem restoration are $3,160,000. The annual OMRR&R costs for recreation are estimated at $25,000. In accordance with Section 601 of WRDA 2000 as amended, OMRR&R costs and adaptive assessment and monitoring costs for ecosystem restoration will be shared equally between the Federal Government and the non-Federal sponsor. In accordance with Section 103(j) of the WRDA 1986, as amended, OMRR&R costs related to recreation features will be funded 100 percent by the non-Federal sponsor.

Respectfully,

R. L. VAN ANTWERP
Lieutenant General, US Army
Chief of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF
CECW-MVD

DEC 30 2010

SUBJECT: Louisiana Coastal Area, Louisiana, Ecosystem Restoration, Six Projects Authorized by Section 7006(e)(3) of Water Resources Development Act of 2007

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my favorable report on ecosystem restoration for six projects in multiple locations in coastal Louisiana. It is accompanied by the report of the New Orleans District Engineer and Mississippi Valley Division Engineer. These reports are in response to the authorization contained in Section 7006(e)(3) of the Water Resources Development Act (WRDA) of 2007. Section 7006(e)(3) identifies six projects referred to in the Report of the Chief of Engineers for ecosystem restoration for the Louisiana Coastal Area dated January 31, 2005, and states, in part, as follows:

> *"The Secretary may carry out the projects under subparagraph (A) substantially in accordance with the plans and subject to the conditions, recommended in a final report of the Chief of Engineers if a favorable report of the Chief is completed by not later than December 31, 2010."*

Preconstruction engineering and design of all six projects will be undertaken under the authority provided in Section 7006(e)(3). Construction of these projects will be undertaken under the Section 7006(e)(3) authority as well, except for construction of the Medium Diversion at White Ditch and the elements of the Terrebonne Basin Barrier Shoreline Restoration beyond the Whiskey Island component.

2. The Report of the Chief of Engineers for ecosystem restoration for the Louisiana Coastal Area, dated January 31, 2005, (hereinafter referred to as the "restoration plan"), describes a program to address the most critical restoration needs to reduce the severe wetland losses occurring in Louisiana. The restoration plan includes 15 near-term ecosystem restoration features, a demonstration project program, beneficial use of dredged material program, project modifications program, and a science and technology program. These features and programs were all aimed at addressing the critical restoration needs of coastal Louisiana, with Congress authorizing the features for construction, in WRDA 2007, subject to the conditions recommended in a final report of the Chief of Engineers, if a favorable Chief's Report is completed no later than December 31, 2010. This report addresses six of the 15 near-term ecosystem restoration features described in the restoration plan.

3. In accordance with Section 7006(e)(3), the reporting officers recommend that the Secretary carry out under the existing authorization the following five projects: Amite River Diversion Canal Modification; Convey Atchafalaya River Water to Northern Terrebonne Marshes; Multipurpose Operation of the Houma Navigation Canal Lock; Small Diversion at Convent / Blind River; and the Whiskey Island component of the Terrebonne Basin Barrier Shoreline Restoration. The recommended plans for each project contain post-construction monitoring and adaptive management for a period of no more than ten years to ensure project performance. Because the recommended plans are ecosystem restoration plans, they do not have any significant adverse effects and no mitigation measures would be required. While the reporting officers recommend that the Secretary carry out the Multipurpose Operation of the Houma Navigation Canal Lock Project, implementation of this project would be contingent on the construction of a lock at Houma under separate authority.

4. The reporting officers also recommend that the Congress raise the total project cost for the Medium Diversion at White Ditch Project and the recommended plan for the Terrebonne Basin Barrier Shoreline Restoration Project. These projects are consistent with the authorization in Section 7006(e)(3) of WRDA 2007, but modification of that authorization is required, because the total costs for these projects exceed the authorized costs as defined in Section 902 of WRDA 1986, as amended.

5. The reporting officers developed the recommended six projects for Louisiana Coastal Area consistent with the direction provided in WRDA 2007. The reporting officers found each of the six projects to be cost effective, technically sound, and environmentally and socially acceptable. Further refinement and additional analysis of these projects will be performed during preconstruction engineering and design and modifications made, as appropriate, prior to project implementation. Such analysis or modifications will continue to be coordinated with Federal, State, and local agencies and other parties. The following paragraphs describe each of the projects in greater detail.

a. Amite River Diversion Canal Modification. The LCA Amite River Diversion Canal Modification (ARDC) study area is located approximately 30 miles southeast of the City of Baton Rouge and west of Lake Maurepas within one of the largest remaining cypress swamps in coastal Louisiana. This ecosystem provides habitat to threatened and endangered species and buffers the highly developed Interstate 10 corridor between New Orleans and Baton Rouge and Lake Maurepas. The 2004 LCA report recommended several projects to address the restoration and stability of the Maurepas Swamp ecosystem including the Small Diversion at Covent / Blind River also included in this report. The ARDC study area includes portions of the Maurepas Swamp adjacent to the Amite River Diversion Canal which connects, and diverts flows from, the Amite River to the lower Blind River near Lake Maurepas. The ARDC recommended plan (Alternative 33) will restore the most degraded portion of the Maurepas Swamp within the study area by restoring the natural hydrology modified by the construction of the Amite River

Diversion Canal and from the resulting impoundment of water, lack of freshwater, sediment and nutrients, and surge-related saltwater intrusion. The recommended plan includes the creation of three gaps and delivery channels through the north bank of the Amite River Diversion Canal. The bank gaps are 70-foot wide cuts with 25-foot benches through the dredged material berm. The channel cross section is 70, 50 and 30 foot wide as it moves into the swamp. Freshwater swamp tree species will be planted on 438 acres in the swamp. One cut will also be created in the railroad grade approximately 0.9 miles north of the ARDC to improve sheetflow. The recommended plan is an implementable increment of the national ecosystem restoration (NER) plan, meets the LCA Program and project objectives, and is within the cost and scope of the authorization contained in Section 7006(e)(3) of WRDA 2007. The NER plan would create gaps on both the north and south bank of the ARDC along with deliery channels, gaps in the railroad grade and vegetative plantings benefiting 3,881 acres of swamp. The NER plan also includes all the areas addressed by the recommended plan and an additional area that is expected to need restoration in the next 20 years. The NER plan would provide 1,602 average annual habitat units (AAHUs) with a total estimated cost for construction of $15,200,000, which exceeds the current authorization. The State of Louisiana, acting as the non-Federal sponsor, supports the recommended plan. The recommended plan will improve habitat function by 679 AAHUs over the 50-year period of analysis and benefit approximately 1,602 acres of existing freshwater swamp. The estimated first cost of the recommended plan is $8,136,000 and in accordance with the cost sharing provisions of WRDA of 1986, as amended by Section 210 of WRDA 1996, the project will be cost shared 65 percent Federal and 35 percent non-Federal. The Federal share of the estimated first cost of this project is estimated at $5,288,000 and the non-Federal share is estimated at $2,848,000. The operation, maintenance, repair, replacement, and rehabilitation costs for the project are estimated at $10,000 per year and are 100-percent non-Federal responsibility. Based on a 4.375-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated at $489,000, including operation, maintenance, repair, replacement, and rehabilitation. Post-construction monitoring and adaptive management of this ecosystem restoration project is projected to be conducted for no more than 10 years at an estimated cost of $2,971,000.

b. Convey Atchafalaya River Water to Northern Terrebonne Marshes / Multipurpose Operation of the Houma Navigation Canal Lock. The LCA Convey Atchafalaya River Water to Northern Terrebonne Marshes (ARTM) / Multipurpose Operation of the Houma Navigation Lock (MOHNL) study area is located in coastal Louisiana south of Houma, between the Atchafalaya River and Bayou Lafourche. These two projects are hydrologically linked and subsequently have been analyzed and are presented as a combined feature. The ARTM/MOHNL recommended plan (Alternative 2), which is also the national ecosystem restoration plan, will reduce the current trend of marsh degradation in the project area resulting from subsidence, sea level rise, erosion, saltwater intrusion, and lack of sediment and nutrient deposition. The project proposes to accomplish this by utilizing fresh water and nutrients from the Atchafalaya River and the Gulf Intracoastal Waterway (GIWW). The recommended plan features consist of elimination of Gulf Intracoastal Waterway (GIWW) flow constrictions and construction of flow management

features in the interior portions of the Study Area. The recommended plan consists of construction of 56 structures and other water management features. The Carencro Bayou channel would be dredged to restore historic freshwater flow to southeast Penchant basin marshes. A weir would be constructed in Grand Pass to restrict saltwater intrusion into Lake Mechant and surrounding marshes. Several connections would be created between the Houma Navigation Canal and the Lake Boudreaux basin. St. Louis Canal and Grand Bayou would be enlarged to allow for increased fresh water flows into the eastern Terrebonne marshes. These new and enlarged channels would be controlled with water management features such as culverts with stop logs, gates or flap gates. Additionally, marsh berms and terracing would be constructed at strategic locations within the project area to prevent salt water intrusion and slow fresh water outflow. The recommended plan also includes the multipurpose operation of the proposed Houma Navigation Canal (HNC) Lock, if and when constructed. The lock complex would be closed and operated more frequently in order to maximize distribution of freshwater into wetlands downstream of the lock and minimizing saltwater intrusion upstream of the lock. For vessels exceeding the lock size, a traffic management system will be developed to open the sector gates to let these vessels pass. The recommended plan would improve habitat function by approximately 3,220 AAHUs, with the ARTM project providing approximately 2,977 AAHUs and the MOHNL operation providing 243 AAHUs. The project would improve habitat for fish and wildlife species including migratory birds , estuarine fish and shellfish. Benefits include the reduction of projected wetland loss by approximately 9,655 acres of existing wetlands over the 50-year period of analysis. The ARTM/MOHNL recommended plan meets the LCA Program and project objectives, is the NER Plan, and is within the cost and scope of the authorization. The State of Louisiana, acting as the non-Federal sponsor, supports the recommended plan.

The estimated total first cost of the ARTM recommended plan is $283,534,000. In accordance with the cost sharing provisions of WRDA of 1986, as amended by Section 210 of WRDA 1996, the project will be cost shared 65 percent Federal and 35 percent non-Federal. The Federal share of the estimated first cost of the ARTM project is $184,298,000 and the non-Federal share is estimated at $99,236,000. Post-construction monitoring and adaptive management of the ARTM ecosystem restoration project is projected to be conducted for no more than 10 years at an estimated cost of $21,204,000. The operation, maintenance, repair, replacement, and rehabilitation of the ARTM project is estimated at $73,000 per year and is a 100-percent non-Federal responsibility. Based on a 4.375-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the ARTM project are estimated at $15,907,000, including operation, maintenance, repair, replacement, and rehabilitation.

The estimated first cost of MOHNL project which is the incremental cost of operations of the proposed constructed lock, for ecosystem restoration is $1,496,000 and in accordance with the cost sharing provisions of WRDA of 1986, as amended by Section 210 of WRDA 1996, the project will be cost shared 65 percent Federal and 35 percent non-Federal. Federal share of the estimated first cost of the MOHNL project is $972,000 and the non-Federal share is estimated at $524,000. Post-construction monitoring and adaptive management of this ecosystem restoration

project is projected to be conducted for no more than ten years at an estimated cost of $98,000. There is no additional operation, maintenance, repair, replacement, and rehabilitation cost forecast for the modification of the lock project. However should any additional OMRR&R cost be identified in subsequent project design and operation investigations they would be a 100-percent non-Federal responsibility. Based on a 4.375-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated at $83,000, including operation, maintenance, repair, replacement, and rehabilitation. While the reporting officers recommend that the Secretary carry out the Multipurpose Operation of the Houma Navigation Canal Lock Project, this project cannot be implemented until a lock at Houma is constructed under separate authority.

c. Small Diversion at Convent / Blind River. The LCA Small Diversion at Convent/Blind River study area is located approximately equidistant between Baton Rouge and New Orleans, Louisiana within the Maurepas Swamp, one of the largest remaining cypress swamps in coastal Louisiana. The recommended plan (Alternative 2), which is also the national ecosystem restoration plan, will reintroduce the natural periodic, nearly annual flooding by the Mississippi River to the Maurepas Swamp and Blind River, that was cut off by construction of the Mississippi River and Tributaries (MR&T) flood control system. The recommended plan consists of a 3,000 cubic feet per second (cfs) capacity gated box culvert diversion on the Mississippi River with a delivery channel to be constructed in the vicinity of Romeville, Louisiana. The recommended plan has six major components: a diversion structure, a transmission canal, control structures, approximately 30 berm gaps, cross culverts at four locations along U.S. highway 61, and instrumentation to monitor and control the diversion flow rate and the water surface elevations in the diversion, transmission, and distribution system in the swamp. The recommended plan will restore freshwater, nutrients, and sediment input from the Mississippi River. It will promote water distribution in the swamp, facilitate swamp building, and establish hydrologic period fluctuation in the swamp, improving fish and wildlife habitat. The recommended plan will improve habitat function by 6,421 AAHUs over a total of 21,369 acres of bald cypress-tupelo swamp. The recommended plan would improve habitat for many fish and wildlife species including migratory birds, bald eagles, alligators, gulf sturgeon, and the manatee. The recommended plan meets the LCA program and project objectives and is within the scope of the authorization. The State of Louisiana, acting as the non-Federal sponsor, supports the recommended plan. The estimated total first cost of the recommended plan is $116,791,000 and in accordance with the cost sharing provisions of WRDA of 1986, as amended by Section 210 of WRDA 1996, the project will be cost shared 65 percent Federal and 35 percent non-Federal. The Federal share of the estimated first cost of this project is $75,914,000 and the non-Federal share is estimated at $40,877,000. Post-construction monitoring and adaptive management of this project is projected to be conducted for no more than 10 years at a cost of $6,620,000. The operation, maintenance, repair, replacement, and rehabilitation costs of the project are estimated at $2,754,000 per year and are a 100-percent non-Federal responsibility. If further analysis determines that the project increases maintenance dredging requirements for the Mississippi River, Baton Rouge to the Gulf of Mexico project by inducing shoaling, the

incremental costs of any additional maintenance dredging would also be a 100-percent non-Federal responsibility. Based on a 4.375-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated at $8,859,000, including operation, maintenance, repair, replacement, and rehabilitation.

d. Terrebonne Basin Barrier Shoreline Restoration. The LCA Terrebonne Basin Barrier Shoreline Restoration (TBBSR) study area is located in Terrebonne Parish 30 miles south of the city of Houma, Louisiana and includes the Isles Dernieres and the Timbalier Islands. The Isles Dernieres reach includes Raccoon, Whiskey, Trinity, East, and Wine Islands. The Timbalier Island reach includes Timbalier and East Timbalier Islands. These barrier islands have undergone significant reductions in size due to a number of natural processes and human actions including lack of sediment, storm-induced erosion and breaching, subsidence, sea level rise and hydrologic modifications such as navigation and oil and gas canals. These habitat losses have had a direct adverse impact on wildlife and fisheries resources including threatened and endangered species. Loss of the barrier island habitat also leaves the saline, brackish, and fresh marshes in the upper reaches of the Terrebonne Basin more vulnerable to the high energy marine coastal processes which have exacerbated wetland loss in these areas. The barrier islands also protect oil and gas infrastructure investments including hundreds of wells and pipelines which are of regional and national importance. Furthermore, numerical modeling indicates that the barrier islands reduce storm surges which can mitigate the damage associated with tropical storms on human populations and infrastructure in Terrebonne and Lafourche Parishes. The national ecosystem restoration (NER) plan (Alternative 5), will reintroduce sediment to the coastal sediment transport system. The NER plan includes the restoration of Raccoon Island with 25 years of advanced fill and construction of a terminal groin. The NER plan also includes restoration of Whiskey and Trinity Islands with five years of advanced fill and restoration of Timbalier Island with 25 years of advanced fill. The NER plan includes beach, dune, and marsh restoration and proposes dune heights ranging from +6.4 feet NAVD 88 for Whiskey Island to +7.7 feet NAVD 88 for Raccoon Island with a crest width of 100 feet to marsh heights ranging from +2.4 feet NAVD 88 on Whiskey Island to +3.2 NAVD 88 on Raccoon Island. The NER plan includes renourishment at staggered intervals to maintain the islands. Raccoon Island will be renourished at Target Year (TY) 30. Whiskey Island will require two renourishment intervals. The first will occur at TY20 and the second renourishment interval will occur at TY40 Trinity Island will be renourished at TY25. Timbalier Island will be renourished at TY30. The NER plan will restore geomorphic and hydrologic form provided by barrier island systems and restore and improve essential habitats for fish, migratory birds, and terrestrial and aquatic species. This barrier shoreline system is also a key component in regulating the hydrology, and ultimately the rate of wetland erosion, throughout the estuary. The NER plan consists of restoration of four islands (Whiskey, Raccoon, Trinity, and Timbalier) improving habitat function by 2,833 AAHUs by adding 3,283 acres to the islands for a total size of 5,840 acres. The restored acreage would include 472 acres of dune, 4,320 acres of supratidal habitat, and 1,048 acres of intertidal habitat and ensure the geomorphic and hydrologic form and ecological function of the majority of the estuary over the period of analysis. The recommended plan meets

the LCA program and project objectives and is within the scope of the authorization. However, it exceeds the authorized cost. The State of Louisiana, acting as the non-Federal sponsor, concurs with the reporting officers' recommendation that additional Congressional authorization be requested to allow implementation of the NER plan. The estimated total first cost of the NER plan is $646,931,000 and in accordance with the cost sharing provisions of WRDA of 1986, as amended by Section 210 of WRDA 1996, the project will be cost shared 65 percent Federal and 35 percent non-Federal. The Federal share of the estimated first cost of this project is $420,505,000 and the non-Federal share is estimated at $226,426,000. Post-construction monitoring and adaptive management of this ecosystem restoration project is projected to be conducted for no more than ten years at a cost estimated to be $5,280,000. The operation, maintenance, repair, replacement, and rehabilitation costs of the project, including periodic nourishment, are estimated at $9,960,000 per year and are a 100-percent non-Federal responsibility. Based on a 4.375-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated at $26,400,000, including operation, maintenance, repair, replacement, and rehabilitation.

While additional authority is needed to raise the total project cost to allow implementation of the entire NER plan, the reporting officers recommend that the Whiskey Island component (Alternative I1) of the NER plan be implemented under the existing authority provided in Section 7006(e)(3) of WRDA 2007. The Whiskey Island component includes renourishment every 20 years to maintain the constructed features. Restoration of the one island will increase habitat function by 678 AAHUs by restoring a total of 1,272 acres on the island, including 65 acres of dune, 830 acres of supratidal habitat, and 377 acres of intertidal habitat. The Whiskey Island component is an implementable increment of the NER plan, meets the LCA Program objectives, and is within the cost and scope of the current WRDA authorization. The State of Louisiana, acting as the non-Federal sponsor, supports immediate implementation of the Whiskey Island component. The estimated total first cost of the Whiskey Island component is $113,434,000 and in accordance with the cost sharing provisions of WRDA of 1986, as amended by Section 210 of WRDA 1996, the project will be cost shared 65 percent Federal and 35 percent non-Federal. The Federal share of the estimated first cost of this project is $73,732,000 and the non-Federal share is $39,702,000. Post-construction monitoring and adaptive management of this ecosystem restoration project is projected to be conducted for no more than ten years at an estimated cost of $5,820,000. The operation, maintenance, repair, replacement, and rehabilitation cost of the project, including periodic nourishment, are estimated at $6,900,000 per year and is a 100-percent non-Federal responsibility. Based on a 4.375-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated at $9,508,000, including operation, maintenance, repair, replacement, and rehabilitation.

e. Medium Diversion at White Ditch. The LCA Medium Diversion at White Ditch (MDWD) project area is located on the east bank of the Mississippi River south of New Orleans in Plaquemines Parish near the town of Phoenix, Louisiana. The area includes a portion of the Breton Sound basin framed by the Mississippi River and the River aux Chenes ridge as well as

the gulfward extent of the Breton Sound. The recommended plan, (Alternative 4), which is also the national ecosystem restoration plan, will restore the supply and distribution of freshwater and sediment disrupted by the construction of the Mississippi River and Tributaries flood control. The recommended plan includes a 35,000 cubic feet per second (cfs) capacity gated box culvert diversion on the Mississippi River with a delivery channel to be constructed in the vicinity of Phoenix, Louisiana. The structure will consist of ten 15-foot by 15-foot box culverts and an approximately 9,500 foot conveyance channel to move the diverted water into surrounding marshes. Additionally, notched weirs will be constructed at existing channel intersections to help control and direct the flow of water into the study area. Dredged material from the conveyance channel will be used beneficially to create approximately 416 acres of marsh and ridge habitat. The recommended operational plan consists of pulsing diversion flows up to 35,000 cfs through the structure during March and April and maintaining maintenance flows up to 1,000 cfs the rest of the year. The recommended plan will improve habitat function by 13,353 AAHUs by creating and nourishing approximately 20,315 acres of fresh, intermediate, brackish, and saline wetlands. This project is one of the key components to demonstrating both the ability to stem or reverse the coastal land loss trend and provide a mechanism to combat relative sea level rise in coastal Louisiana. The recommended plan meets the LCA Program objectives and is within the scope of the WRDA authorization, however, it exceeds the authorized project cost. The State of Louisiana, acting as the non-Federal sponsor, supports the reporting officers' recommendation that Congress increase the total project cost to allow implementation of the recommended plan to fully address the restoration needs of the study area identified in this report. Supplemental environmental analysis will be performed prior to construction of the recommended plan to address potential impacts on water quality and fisheries, including coordination with Federal, State, and local agencies and other interested parties as appropriate. The estimated total first cost of the recommended plan is $365,201,000 and in accordance with the cost sharing provisions of WRDA of 1986, as amended by Section 210 of WRDA 1996, the project will be cost shared 65 percent Federal and 35 percent non-Federal. The Federal share of the estimated first cost of this project is $237,381,000 and the non-Federal share is estimated at $127,820,000. Post-construction monitoring and adaptive management of this ecosystem restoration project is projected to be conducted for no more than ten years at an estimated cost of $11,143,000. The operation, maintenance, repair, replacement, and rehabilitation costs of the project are estimated at $1,468,000 per year and are a 100-percent non-Federal responsibility. If further analysis determines that the project increases maintenance dredging requirements for the Mississippi River, Baton Rouge to the Gulf of Mexico project by inducing river shoaling, the incremental costs of any additional channel maintenance dredging would also be a 100-percent non-Federal responsibility. Based on a 4.375-percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated at $21,237,000, including operation, maintenance, repair, replacement, and rehabilitation.

6. The State of Louisiana supports the recommended plans for the six projects described herein. At October 2010 price levels, the estimated total first cost for the recommended plans for the six

projects is $1,422,089,000. The estimated total first costs for each of the six projects are summarized below in Table 1.

Table 1
LCA Section 7006(e)(3) Projects
Recommended Plan Cost and Benefit Summary
(October 2010 Price Level)

Project	Alternative	Total First Cost	Impacted Acres	Average Annual Habitat Units
Amite River Diversion Canal Modification	Alt. 33	$8,136,000	1,602	679
Convey Atchafalaya River Water to Northern Terrebonne Marshes	Alt. 2	$283,534,000	9,655	3,220
Houma Navigation Control Lock	Alt. 2	$1,496,000	0***	243
Small Diversion at Convent/Blind River	Alt. 2	$116,791,000	21,369	6,421
Terrebonne Basin Barrier Shoreline Restoration	Alt. 11*	$646,931,000	5,840	2,063
	(Alt. 5)**	($113,434,000)	(1,272)	(379)
Medium Diversion at White Ditch	Alt. 4*	$365,201,000	35,146	13,353
Total		**$1,422,089,000**	**73,612**	**25,979**

* Implementation of the recommended plan to fully address the restoration needs of the study area identified in this report requires additional authorization by Congress by raising the total project cost.
** Alternative 5 (Whiskey Island) is an increment of Alternative 11 (the recommended plan).
*** Impacted acres overlap with Convey Atchafalaya River Water to Northern Terrebonne Marshes

7. In accordance with the cost sharing provisions of WRDA of 1986, as amended by Section 210 of WRDA 1996, the Federal share of the first cost of the six projects is estimated at $924,358,000 (65 percent) and the non-Federal share is estimated at $497,731,000 (35 percent). The cost of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas is estimated at $13,454,000. The total cost includes an estimated $47,856,000 for environmental monitoring, and adaptive management. The State of Louisiana, the non-Federal sponsor, would be responsible for the OMRR&R of the projects after construction, a cost currently estimated at about $15,605,000 per year.

Table 2 shows the Federal and non Federal cost of the projects.

Table 2
LCA Section 7006(e)(3) Projects
Cost Apportionment (October 2010 Price Level)

Project	Total First Cost	Federal Cost (65%)	Non-Federal Cost (35%)	Total Monitoring	Total Adaptive Management	Annual OMRR&R
Amite River Diversion Canal Modification	$8,136,000	$5,288,000	$2,848,000	$2,113,000	$858,000	$10,000
Convey Atchafalaya River Water to Northern Terrebonne Marshes	$283,534,000	$184,298,000	$99,236,000	$18,874,000	$2,428,000	$73,000
Houma Navigation Control Lock*	$1,496,000	$972,000	$524,000	$98,000	$0	$0
Small Diversion at Convent/Blind River	$116,791,000	$75,914,000	$40,877,000	$4,284,000	$2,336,000	$2,754,000
Terrebonne Basin Barrier Shoreline Restoration	$646,931,000	$420,505,000	$226,426,000	$8,280,000	$1,680,000	$11,300,000
	($113,434,000)	($73,732,000)	($39,702,000)	($4,140,000)	($1,680,000)	($6,900,000)
Medium Diversion at White Ditch	$365,201,000	$237,381,000	$127,820,000	$8,807,000	$2,336,000	$1,468,000
Total LCA	**$1,422,089,000**	**$924,358,000**	**$497,731,000**	**$38,218,000**	**$9,638,000**	**$15,605,000**

8. In concert with the Corps Campaign Plan, the plans recommended in this report were developed utilizing a systematic and regional approach in formulating solutions and in evaluating the impacts and benefits of those solutions. Specifically the projects individually and collectively provide enduring and essential water resources management solutions. The plans were developed through a broad based collaborative process that resulted in wetland restoration that enhances the sustainability of, and is integrated with, the multiple socio-economic purposes supported by the coastal ecosystem. The development of these projects also demonstrates the Corps goal to cultivate competent, disciplined teams to deliver quality plans.

9. Independent External Peer Review (IEPR) of the six conditionally authorized LCA projects was coordinated through the Planning Center of Expertise for Ecosystem Restoration and performed by Battelle Corporation. Independent technical review teams were assembled for each project. The technical review considered all aspects of the project evaluations and the resulting output. The IEPR comments identified concerns in areas of the evaluations that would benefit from additional refinement. The IEPR reviews concurred with the project recommendations and all comments were satisfactorily resolved. Several significant recommendations will be further evaluated during project implementation. In concurrence with

IEPR comments, additional documentation of hydrodynamic model and land change evaluations were provided for the Amite River Diversion Canal Modification, Convey Atchafalaya River Water to Northern Terrebonne Marshes, Multipurpose Operation of the Houma Navigation Canal Lock, and Small Diversion at Convent / Blind River projects. Additional documentation to support the alternative comparison and plan selection process was provided for all the presented projects to address the comments. Other actions will be taken in response to IEPR comments during project preconstruction engineering and design (PED). For the Amite River Diversion Canal Modification project, additional model refinements will be used to improve the forecast of relative sea level rise (RSLR) effects and revise the adaptive management (AM) plan. For the Convey Atchafalaya River Water to Northern Terrebonne Marshes / Multipurpose Operation of the Houma Navigation Canal Lock Canal Lock project, additional refinements of land change, RSLR, and wetland benefit forecast tools to better correlate them to the high complexity of the project area will be undertaken. For the Convent / Blind river project, additional data collection and refinement of the hydrodynamic model will be undertaken to minimize potential local drainage effects and identify specific management actions for swamp enhancement, as well as refine the AM plan. For the Terrebonne Barrier Shoreline project, refined assessment of estuary-wide current and wave conditions and physical process modeling will be undertaken to better capture the systemic benefits and allow better coordination of project implementation and O&M. Specific construction effects will also be assessed and construction modifications applied to minimize critical habitat disruption. For the White Ditch project, a refinement of the land change evaluation, and an assessment of the effect of RSLR will be undertaken to allow a clearer understanding of potential adaptive management needs and revision of the AM plan. Finally, for the Small Diversion at Convent / Blind River and the Medium Diversion at White's Ditch projects a comprehensive assessment of cumulative diversion impacts on the Mississippi River will be undertaken prior to the initiation of construction to improve the assessments of cumulative project effects and help set operational criteria.

10. The LCA plans recommended by the reporting officers are environmentally justified, technically sound, cost-effective, and socially acceptable. The recommended plans conform to essential elements of the U.S. Water Resources Council's Economic and Environmental Studies and comply with other administration and legislative policies and guidelines. Also, the views of interested parties, including Federal, State, and local agencies have been considered.

11. I concur in the findings, conclusions, and recommendation of the reporting officers. Accordingly, I recommend implementation of these projects, in accordance with the reporting officers' recommendations with such modifications as in the discretion of the Chief of Engineers may be advisable. I further recommend, in accordance with the reporting officers recommendations, that the authorizations for Terrebonne Basin Barrier Shoreline Restoration and Medium Diversion at White Ditch be modified to raise the total project cost to allow for construction of the national ecosystem restoration plans for those projects. My recommendations are subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including WRDA 1986, as amended by Section 210 of

WRDA 1996. The State of Louisiana, acting as the non-Federal sponsor, would provide the non-Federal cost share and all lands, easements, relocations, right-of-ways and disposals. Further, the non-Federal sponsor would be responsible for all OMRR&R. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies, including but not limited to its agreeing to:

a. Provide a minimum of 35 percent of total project costs as further specified below:

(1) Enter into an agreement which provides, prior to execution of the project partnership agreement, 25 percent of design costs;

(2) Provide, during the first year of construction, any additional funds needed to cover the non-Federal share of design costs;

(3) Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material that the Government determines to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the project;

(4) Provide, during construction, any additional funds necessary to make its total contribution equal to 35 percent of the total project costs allocated to the project;

b. Provide the non-Federal share of that portion of the costs of mitigation and data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project;

c. Not use funds provided by a Federal agency under any other Federal program, to satisfy, in whole or in part, the non-Federal share of the cost of the project unless the Federal agency that provides the funds determines that the funds are authorized to be used to carry out the study or project;

d. Not use project or lands, easements, and rights-of-way required for the project as a wetlands bank or mitigation credit for any other project;

e. For as long as the project remains authorized, operate, maintain, repair, replace, and rehabilitate the project, or functional portion of the project, including mitigation, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and state laws and regulations and any specific directions prescribed by the Federal Government;

f. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor, now or hereafter, owns or controls for access to the project for the purpose of inspecting, operating, maintaining, repairing, replacing, rehabilitating, or completing the project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Federal Government shall relieve the non-Federal sponsor of responsibility to meet the non-Federal sponsor's obligations, or to preclude the Federal Government from pursuing any other remedy at law or equity to ensure faithful performance;

g. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the project and any project-related betterments, except for damages due to the fault or negligence of the United States or its contractors;

h. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for the initial construction, periodic nourishment, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

i. Assume, as between the Federal Government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the initial construction, periodic nourishment, operation, or maintenance of the project;

j. Agree that, as between the Federal Government and the non-Federal sponsor, the non-Federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, and repair the project in a manner that would not cause liability to arise under CERCLA;

k. Prevent obstructions of or encroachments on the project (including prescribing and enforcing regulations to prevent such obstruction or encroachments) which might reduce ecosystem restoration benefits, hinder operation and maintenance, or interfere with the project's proper function, such as any new developments on project lands or the addition of facilities which would degrade the benefits of the project;

l. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three years after completion of the accounting for which such books, records, documents, and other evidence is required, to the extent and in such detail as would properly reflect total costs of construction of the project, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations (CFR) Section 33.20;

m. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5), and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element;

n. Comply with all applicable Federal and state laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army," and all applicable Federal labor standards and requirements, including but not limited to 40 U.S.C. 3141-3148 and 40 U.S.C. 3701 – 3708 (revising, codifying, and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a et seq.), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 et seq.) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c et seq.); and

o. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way necessary for the initial construction, periodic nourishment, operation, and maintenance of the project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

12. The recommendations contained herein reflect the information available at this time and current departmental policies governing the formulation of individual projects. They do not reflect program and budgeting priorities inherent in the formulation of the national civil works construction program or the perspective of higher levels within the executive branch. Consequently, the recommendations may be modified before they are transmitted to Congress for authorization and/or implementation funding. However, prior to transmittal to Congress, the State of Louisiana, interested Federal agencies, and other parties will be advised of any significant modifications in the recommendations and will be afforded an opportunity to comment further.

R. L. VAN ANTWERP
Lieutenant General, US Army
Chief of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

CECW-MVD (1105-2-10a)

DEC 30 2011

SUBJECT: Minnesota River, Marsh Lake Ecosystem Restoration Project, Minnesota

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration along the Minnesota River at Marsh Lake, a part of the Lac qui Parle Reservoir, west of Appleton, Minnesota. It is accompanied by the report of the district and division engineers. These reports were completed under authorities granted by a May 10, 1962, resolution of the Committee on Public Works of the U.S. House of Representatives. This resolution requested the review of "the report of the Chief of Engineers on the Minnesota River, Minnesota, published as House Document 230, 74th Congress, First Session and other pertinent reports, with a view to determining the advisability of further improvements in the Minnesota River Basin for navigation, flood control, recreation, low flow augmentation, and other related water and land resources." Preconstruction engineering and design activities for the Marsh Lake Ecosystem Restoration Project will continue under the authority provided by the resolution above.

2. The Marsh Lake ecosystem function and connectivity has degraded over time primarily as a result of artificial changes to the hydrologic conditions at the site. The ecosystem significance of the area is demonstrated on the national, regional and local level. Marsh Lake provides critical stop-over refuge for migratory waterfowl moving through the Mississippi River flyway as well as breeding grounds for the largest white pelican population in North America. Many other fish and bird species are also dependent on the resource for life requisites including both migrating and nesting bald eagles. Ecosystem values provided by Marsh Lake have increased in importance over time as 90 percent of the wetland areas within the watershed have been drained.

3. The reporting officers recommend authorization of a plan to restore aquatic ecosystem structure and function as well as implementation of ancillary recreation features to Marsh Lake and surrounding resources in the upper portion of the Lac qui Parle reservoir. The recommended plan consists of ecosystem restoration features including returning the Pomme de Terre River to its historic channel, modifying the Marsh Lake Dam for fish passage, construction of a drawdown water control structure at the Marsh Lake Dam, installation of gated culverts at Louisburg Grade Road, and the breaching of a dike at an abandoned fish pond adjacent to the Marsh Lake Dam. The plan also contains recreation features including shoreline fishing access structures, interpretive signage, a canoe landing, benches, picnic tables, trash receptacles, toilets, and parking lot improvements. The project requires mitigation to offset adverse impacts to Marsh Lake Dam through photographic documentation of the existing site conditions prior to construction since Marsh Lake Dam was determined individually eligible to the National Register of Historic Places. The recommended plan is the National Ecosystem Restoration Plan. Implementation of the recommended plan will have a substantial beneficial impact on fish and

wildlife species in the area. While the project will not directly affect federally-listed endangered or threatened species, the reduction of the suspended sediments in the waters of Marsh Lake and improved water clarity will benefit a wide-range of fish and wildlife species including species of concern such as the bald eagle, that are known to use the Marsh Lake site.

4. Based on an October 2011 price level, the estimated project first cost is $9,967,000. The project first cost includes approximately $9,463,000 for ecosystem restoration and approximately $504,000 for recreation. In accordance with the cost sharing provisions of Section 103(c) of the Water Resources Development Act of 1986 (WRDA 1986), as amended (33 U.S.C. 2213(c)), ecosystem restoration features are cost-shared at a rate of 65 percent Federal and 35 percent non-Federal; and recreation features are cost-shared at a rate of 50 percent Federal and 50 percent non-Federal. Thus, the Federal share of the project first costs is estimated to be $6,403,000 and the non-Federal share is estimated at $3,564,000, which equate to 64 percent Federal and 36 percent non-Federal. The costs of lands, easements, rights-of-way, relocations, and excavated material disposal areas is estimated to have no cost, given the existing Federal ownership over the project area. The State of Minnesota, Department of Natural Resources is the non-Federal cost share sponsor for the recommended plan. The State of Minnesota, Department of Natural Resources would be responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction, a cost currently estimated at $35,000 per year.

5. Based on a 4.0-percent discount rate and a 50-year period of analysis, the total equivalent annual costs of the project, including OMRR&R, are estimated to be $490,000.

a. The equivalent average annual costs of ecosystem restoration features are estimated to be $464,000, including OMRR&R. The cost of the recommended aquatic ecosystem restoration features is justified by the restoration of about 8,400 average annual habitat units which includes restoration of approximately two linear miles of historic riverine habitat.

b. The equivalent average annual costs of recreation features are estimated to be $26,000, including OMRR&R. The annual benefits of the proposed recreation features are estimated at $230,000. The benefit-to-cost ratio for recreation is 8.9 to 1.

6. The recommended plan was developed in coordination and consultation with various Federal, State, and local agencies using a systems approach in formulating ecosystem restoration solutions and in evaluating the impacts and benefits of those solutions. Plan formulation evaluated a wide range of non-structural and structural alternatives under Corps policy and guidelines as well as consideration of a variety of economic, social and environmental goals. The recommended plan delivers a holistic, comprehensive approach to solve water resources challenges in a sustainable manner. The resulting recommended plan has received broad public support.

7. In accordance with EC 1165-2-209, all technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included Agency Technical Review (ATR) and a Corps Headquarters policy and legal review. All concerns of the ATR have been addressed and incorporated into the final report. An exclusion from the Independent External Peer Review (IEPR) was granted by the Director of Civil Works.

8. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan to restore the ecosystem of Marsh Lake be authorized in accordance with the reporting officers' recommended plan at an estimated project first cost of $9,967,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including Section 103 of WRDA 1986, as amended by Section 202 of WRDA 1996, and WRDA 1986, as amended by Section 210 of WRDA 1996. Accordingly, the non-Federal sponsor must agree with the following requirements prior to project implementation.

a. Provide 35 percent of total ecosystem restoration costs as further specified below:

1. Provide the non-Federal share of design costs allocated by the Government to ecosystem restoration in accordance with the terms of a design agreement entered into prior to commencement of design work for the ecosystem restoration features;

2. Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of the project;

3. Provide, during the design and implementation phase, any funds necessary to make its total contribution equal to 35 percent of total project costs;

b. Provide 50 percent of total recreation costs as further specified below:

1. Provide the non-Federal share of design costs allocated by the Government to recreation in accordance with the terms of a design agreement entered into prior to commencement of design work for the recreation features;

2. Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material

all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of the recreation features;

3. Provide, during construction, any additional funds necessary to make its total contribution for recreation equal to 50 percent of total recreation costs;

4. Provide, during construction, 100 percent of the total recreation costs that exceed an amount equal to 10 percent of the Federal share of total ecosystem restoration costs;

c. Provide, during the design and implementation phase, 100 percent of all costs of planning, design, and construction for the project that exceed the Federal share of the total project costs;

d. Shall not use funds from other Federal programs, including any non-Federal contribution required as a matching share therefore, to meet any of the non-Federal obligations for the project unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is authorized by Federal law;

e. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the project, hinder operation and maintenance of the project, or interfere with the project's proper function;

f. Shall not use the project or lands, easements, and rights-of-way required for the project as a wetlands bank or mitigation credit for any other project;

g. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 Code of Federal Regulations (CFR) Part 24, in acquiring lands, easements, and rights-of-way required for construction, operation, and maintenance of the project, including those necessary for relocations, the borrowing of materials, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act;

h. For so long as the project remains authorized, operate, maintain, repair, rehabilitate, and replace the project, or functional portions of the project, including any mitigation features, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

i. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor owns or controls for access to the project for

the purpose of completing, inspecting, operating, maintaining, repairing, rehabilitating, or replacing the project;

j. Hold and save the United States free from all damages arising from the design, construction, operation, maintenance, repair, rehabilitation, and replacement of the project and any betterments, except for damages due to the fault or negligence of the United States or its contractors;

k. Keep and maintain books, records, documents, or other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of 3 years after completion of the accounting for which such books, records, documents, or other evidence are required, to the extent and in such detail as will properly reflect total project costs, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 CFR Section 33.20;

l. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141- 3148 and 40 U.S.C. 3701 – 3708 (revising, codifying and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*), and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c *et seq.*);

m. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

n. Assume, as between the Federal Government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project;

o. Agree, as between the Federal Government and the non-Federal sponsor, that the non-Federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, repair, rehabilitate, and replace the project in a manner that will not cause liability to arise under CERCLA;

p. Provide, during the design and implementation phase, 35 percent of all costs that exceed $50,000 for data recovery activities associated with historic preservation for the project; and

q. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), and Section 103(j) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213(j)), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project or separable element.

9. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsor, the State, interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

MERDITH W. B. TEMPLE
Major General, U.S. Army
Acting Chief of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

CECW-SAD (1105-2-10a)

JAN 3 0 2012

SUBJECT: C-111 Spreader Canal Western Project, Comprehensive Everglades Restoration Plan, Central and Southern Florida Project, Miami-Dade County, Florida.

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration improvements for the C-111 Spreader Canal Western Project, located in Miami-Dade County, Florida. It is accompanied by the reports of the Jacksonville District Engineer and South Atlantic Division Engineer. These reports are in response to Section 601 of the Water Resources Development Act (WRDA) of 2000, which authorized the Comprehensive Everglades Restoration Plan (CERP) as a framework for modifications and operational changes to the Central and Southern Florida Project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. WRDA 2000 identified specific requirements for implementing components of the CERP, including the development of a decision document known as a Project Implementation Report (PIR). The requirements of a PIR are addressed in this report and are subject to review and approval by the Secretary of the Army. Preconstruction engineering and design activities for this project will be continued under the CERP Design Agreement.

2. The proposed C-111 Spreader Canal project was conditionally authorized by Section 601(b)(2)(C)(x) of WRDA 2000, but is not being recommended for implementation under that authority. The proposed C-111 Spreader Canal project was split into Western and Eastern Projects. Due to changes in scope and intended restoration area, the C-111 Spreader Canal Western project will be recommended for new specific Congressional authorization consistent with WRDA 2000, Section 601(d), Authorization of Future Projects. The Western Project focuses on the restoration of flows to Florida Bay via Taylor Slough as well as the restoration of the Southern Glades and Model Lands. Due to numerous uncertainties associated with the actual spreader canal feature, a spreader canal design test will be implemented to gain information that will guide planning efforts for the Eastern Project. The Eastern Project will address the restoration of the remainder of the project area through such features as a spreader canal, backfilling of the C-111 Canal, etc. It is expected that the Eastern Project will also seek authorization under 601(d). The reporting officers determined that the original authority for the C-111 Spreader Canal Project contained 601(b)(2)(C)(x) of WRDA 2000 is no longer needed. As such, the reporting officers recommend that C-111 Spreader Canal authorized in 601(b)(2)(C)(x) of WRDA 2000 be deauthorized.

3. Although cost sharing of the ecosystem restoration features for this project is governed by Section 601 of WRDA 2000, as amended, cost sharing of the recreation features is governed by Section 103 of the WRDA 1986, as amended. In particular, in accordance with Section 103(j) of WRDA 1986, 100 percent of the cost of operation, maintenance, repair, replacement and rehabilitation (OMRR&R) of the recreation features is the non-Federal sponsor's responsibility. In

addition, section 601(e)(5)(B) of WRDA 2000, as amended, governs credit for non-Federal sponsor design and construction work on the ecosystem restoration features of the project, whereas section 221(a)(4) of the Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b(a)(4)), governs credit for non-Federal sponsor design and construction work on the recreation features of the project.

4. The final PIR with integrated Environmental Impact Statement (EIS) recommends a project that contributes significantly to all of the ecological goals and objectives of the CERP: (1) increasing the spatial extent of natural areas; (2) improving habitat function and quality; and (3) improving native plant and animal abundance and diversity. In addition, it contributes to the economic values and social well being of the project area by providing recreational opportunities. Scientists have established that a mosaic of uplands, freshwater marsh, deep water sloughs, and estuarine habitats supporting a diverse community of fish and wildlife was one of the defining characteristics of the pre-drainage Everglades ecosystem. Currently in south Florida, habitat function and quality has significantly declined in remaining natural system areas due to water management projects and practices, resulting in a loss of suitable nesting, foraging, and fisheries habitat and a decline in native species diversity and abundance. The PIR confirms information in the CERP and provides project-level evaluation of costs and benefits associated with construction and operations of this ecosystem restoration project which will reverse the damaging trends and increase freshwater retention in Everglades National Park, restoring a natural deepwater slough and the surrounding freshwater marsh habitat. Water levels across the project area will be increased, boosting species abundance and diversity while providing suitable nesting and foraging areas for wading birds. Florida Bay and its estuaries will benefit from decreased salinity levels and improved health of the fisheries habitat. Overall, approximately 252,000 acres of wetlands and coastal habitat will benefit from the project. The South Florida Water Management District (SFWMD), the non-Federal sponsor, has begun land acquisition and construction of the project through its expedited construction program. As such, the C-111 Spreader Canal Western project can be implemented quickly, substantially advancing the realization of project benefits in an area that has been degraded by past water management practices.

5. The reporting officers recommend a plan for ecosystem restoration and recreation. The recommended C-111 Spreader Canal Western project would improve the ecological function of Everglades National Park by creating a hydraulic ridge that will reduce drainage of the area by the C-111 Canal. The Recommended Plan, Alternative 2DS, will consist of two above-ground detention areas, the approximately 590-acre Frog Pond Detention Area and an approximately 50-acre Aerojet Canal, which will serve to create a continuous and protective hydraulic ridge along the eastern boundary of Everglades National Park. Five additional features will be included that are intended to raise water levels in the eastern portion of the project area and restore wetlands in the Southern Glades and Model Lands. Major features of the detention areas include the construction of external levees and one approximately 225-cubic feet per second pump station for each detention area. The five additional features will include the following: incremental operational changes at existing structure S-18C; one new operable structure in the lower C-111 Canal; ten plugs in the C-110 Canal; operational changes at existing structure S-20; and, one plug in the existing L-31E Canal (near inoperable structure S-20A). Recreation components consist of a trailhead with parking, traffic controls, a shade shelter with interpretive board, and approximately 6.8 miles of multi-use levee trails atop impoundment levees. Restoration-compatible recreation includes hiking, biking, fishing, nature study, bird watching, state-managed hunts and equestrian use.

6. The cost of the initially authorized C-111 Spreader Canal component of the CERP, escalated to October 2011 (FY 12) price levels, is $143,540,000. The total first cost of the Recommended Plan

from the final PIR/EIS, based upon October 2011 price levels, is estimated at $165,098,000. Total first cost for the ecosystem restoration features is estimated to be $164,832,000 and for recreation is estimated to be $266,000. The proposed project costs have increased primarily due to the fact that the project has increased in scope to address ecological problems in Everglades National Park and Florida Bay as identified by the public and stakeholders.

7. In accordance with the cost-sharing requirements of Section 601(e) of the WRDA 2000, as amended, the Federal cost of the Recommended Plan is $82,549,000 and the non-Federal cost is $82,549,000. The estimated lands, easements, right-of-way, and relocation (LERRs) costs for the recommended plan are $68,451,000. LERRs valued at approximately $18,610,000 are already owned by the State of Florida. Based on October 2011 price levels, a 40-year period of economic evaluation and a 4.0 percent discount rate, the equivalent annual cost of the proposed project is estimated at $10,268,000, which includes OMRR&R, interest and amortization. The estimated annual costs for ecosystem restoration OMRR&R, including project monitoring costs, vegetation management, and endangered species monitoring, are $1,468,000. The estimated annual OMRR&R costs for recreation are $25,000. The project monitoring period is five years except for endangered species monitoring, which is 10 years. Any costs associated with project monitoring beyond 10 years after completion of construction of the Project (or a component of the Project) shall be a non-Federal responsibility.

8. As a component of the CERP program, the interagency/interdisciplinary scientific and technical team, formed to ensure that system-wide goals are met, will participate in the annual monitoring to assess system-wide changes. In accordance with Sections 601(e)(4) and 601(e)(5)(D) of WRDA 2000, as amended, OMRR&R costs and adaptive assessment and monitoring costs for ecosystem restoration will be shared equally between the Federal Government and the non-Federal sponsor. The Project Monitoring Plan was developed assuming that major, ongoing monitoring programs that are not funded by the Project would continue to supply data relevant to the Project. The Project Monitoring Plan shall not include items that are already required to be monitored by another Federal agency or other entity as part of their regular responsibilities or required by law. Should any of these monitoring programs (e.g. coastal water quality and seagrass monitoring) be discontinued or significantly curtailed, then monitoring priorities and funding options may be re-evaluated to ensure proper Project evaluation. In accordance with Section 103(j) of the WRDA 1986, as amended, OMRR&R costs related to recreation features will be funded 100 percent by the non-Federal sponsor.

9. To ensure that an effective ecosystem restoration plan was recommended, cost effectiveness/ incremental cost analysis techniques were used to evaluate alternative restoration plans. These techniques determined the selected alternative plan to be cost effective and incrementally justified. The hydraulic model and ecological model utilized to estimate the ecological outputs that were used in the economic analysis were both peer-reviewed and certified for use in the project. The plan recommended for implementation is the National Ecosystem Restoration (NER) plan, supports the Incremental Adaptive Restoration principles established by the National Research Council, and was prepared in a collaborative environment. The recommended plan provides benefits by: (1) restoring the quantity, timing, and distribution of water delivered to Florida Bay via Taylor Slough; (2) improving hydroperiods and hydropatterns in the Southern Glades and Model Lands; and, (3) restoring coastal zone salinities in Florida Bay and its tributaries.

10. In accordance with the WRDA 2000 Section 601(f)(2), individual CERP projects may be justified by the environmental benefits derived by the South Florida ecosystem. Similarly, Section

385.9(a) of the CERP Programmatic Regulations (33 CFR Part 385) requires that individual projects shall be formulated, evaluated, and justified based on their ability to contribute to the goals and purposes of the CERP and on their ability to provide benefits that justify costs on a next-added increment basis. Due to the project location at the terminus of the Everglades system, the C-111 Spreader Canal Western project does not depend on any other CERP or non-CERP projects to achieve the estimated ecological benefits. As such, the Next-Added Increment (NAI) is equivalent to the total, System-Wide benefits that were calculated for the proposed project. The Recommended Plan will produce an average annual increase of 8,271 habitat units per year at an annual cost of $10,268,000. In coordination with Fish and Wildlife Service, this project could benefit threatened and endangered species and migratory birds. The average annual cost per average annual habitat unit is $1,240. Based on restoration first cost, the cost per acre benefited is approximately $654 per acre. Based on these parameters, the C-111 Spreader Canal Western project is justified by the environmental benefits derived by the South Florida ecosystem. The recreation first cost of the recommended plan is $266,000. The average annual cost for recreation is $39,000 and the average annual recreation benefits are $122,000, providing a benefit cost ratio of 3.1 to 1.

11. Of the 12,176 acres of land identified for the Project, approximately 611 acres were provided as items of local cooperation for existing Federal projects and will be used for construction of C-111 Spreader Canal Western Project. Approximately 11,565 acres of land are predicted to be impacted by the Recommended Plan: Approximately 9,688 acres will be provided in fee and have already been purchased by the non-Federal sponsor. Approximately 146 acres of impacted lands will be provided under a supplemental agreement with the State of Florida and Miami-Dade County. Approximately 955 acres will be provided by perpetual flowage/conservation easements by the Florida Power and Light Company. The planning level model predicted that the remaining 776 acres of privately-owned land identified for the Project may be affected by operation of the Project, as indicated in the PIR. WRDA 2000 requires that implementation of the CERP shall not reduce existing levels of service for flood protection. The SFWMD is constructing the majority of the project under its State expedited construction program and as part of its independent effort to implement the Project, the SFWMD will monitor the impacts of the current construction and continually adjust operations to ensure the protection of privately-owned lands. If SFWMD is able to provide new information that these operations provide anticipated ecological benefits without reducing existing levels of service for flood protection for the 776 acres, the Corps will consider this information and accordingly document any changes to its takings analysis and the continued compliance with the statutory requirements regarding maintenance of level of service for flood protection. The reassessment of effects on existing levels of service for flood protection will utilize a method similar to the original method of determination. Like the analysis in the PIR, the reassessment will be conducted in a manner consistent with the CERP Programmatic Regulations and guidance. In addition, the takings analysis will be similarly reassessed. Any reassessment done will be completed prior to the execution of a Project Partnership Agreement (PPA). The new information must document that operational adjustments implemented to avoid a reduction of the level of service for flood protection on a particular property or properties can also provide the anticipated ecological benefits. After the documentation is complete, then those operations may be made permanent and incorporated into the Final Project Operating Manual of the Federally-authorized project. Otherwise, the non-Federal sponsor will acquire the necessary interests in the lands, and will provide real estate certification of those lands to the Corps.

12. In accordance with the Corps Engineering Circular on review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and vigorous review

385.9(a) of the CERP Programmatic Regulations (33 CFR Part 385) requires that individual projects shall be formulated, evaluated, and justified based on their ability to contribute to the goals and purposes of the CERP and on their ability to provide benefits that justify costs on a next-added increment basis. Due to the project location at the terminus of the Everglades system, the C-111 Spreader Canal Western project does not depend on any other CERP or non-CERP projects to achieve the estimated ecological benefits. As such, the Next-Added Increment (NAI) is equivalent to the total, System-Wide benefits that were calculated for the proposed project. The Recommended Plan will produce an average annual increase of 8,271 habitat units per year at an annual cost of $10,268,000. In coordination with Fish and Wildlife Service, this project could benefit threatened and endangered species and migratory birds. The average annual cost per average annual habitat unit is $1,240. Based on restoration first cost, the cost per acre benefited is approximately $654 per acre. Based on these parameters, the C-111 Spreader Canal Western project is justified by the environmental benefits derived by the South Florida ecosystem. The recreation first cost of the recommended plan is $266,000. The average annual cost for recreation is $39,000 and the average annual recreation benefits are $122,000, providing a benefit cost ratio of 3.1 to 1.

11. Of the 12,176 acres of land identified for the Project, approximately 611 acres were provided as items of local cooperation for existing Federal projects and will be used for construction of C-111 Spreader Canal Western Project. Approximately 11,565 acres of land are predicted to be impacted by the Recommended Plan: Approximately 9,688 acres will be provided in fee and have already been purchased by the non-Federal sponsor. Approximately 146 acres of impacted lands will be provided under a supplemental agreement with the State of Florida and Miami-Dade County. Approximately 955 acres will be provided by perpetual flowage/conservation easements by the Florida Power and Light Company. The planning level model predicted that the remaining 776 acres of privately-owned land identified for the Project may be affected by operation of the Project, as indicated in the PIR. WRDA 2000 requires that implementation of the CERP shall not reduce existing levels of service for flood protection. The SFWMD is constructing the majority of the project under its State expedited construction program and as part of its independent effort to implement the Project, the SFWMD will monitor the impacts of the current construction and continually adjust operations to ensure the protection of privately-owned lands. If SFWMD is able to provide new information that these operations provide anticipated ecological benefits without reducing existing levels of service for flood protection for the 776 acres, the Corps will consider this information and accordingly document any changes to its takings analysis and the continued compliance with the statutory requirements regarding maintenance of level of service for flood protection. The reassessment of effects on existing levels of service for flood protection will utilize a method similar to the original method of determination. Like the analysis in the PIR, the reassessment will be conducted in a manner consistent with the CERP Programmatic Regulations and guidance. In addition, the takings analysis will be similarly reassessed. Any reassessment done will be completed prior to the execution of a Project Partnership Agreement (PPA). The new information must document that operational adjustments implemented to avoid a reduction of the level of service for flood protection on a particular property or properties can also provide the anticipated ecological benefits. After the documentation is complete, then those operations may be made permanent and incorporated into the Final Project Operating Manual of the Federally-authorized project. Otherwise, the non-Federal sponsor will acquire the necessary interests in the lands, and will provide real estate certification of those lands to the Corps.

12. In accordance with the Corps Engineering Circular on review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and vigorous review

process to ensure technical quality. This included Agency Technical Review (ATR), and Independent External Peer Review (IEPR), and a Corps Headquarters policy and legal review. All concerns of the ATR have been addressed and incorporated into the final report. The IEPR was completed by Battelle Memorial Institute, a non-profit science and technology organization with experience in establishing and administering peer review panels for the Corps. A total of 23 comments were documented. The comments of high significance were related to current and future conditions, assessment of secondary effects and climatic cycles, and technical sections of the document such as Real Estate and Modeling. In response, sections in the PIR/EIS and appendices were expanded to include additional information. The final IEPR Report was completed in October 2009, and certification from the IEPR Panel was issued 25 November 2009.

13. The Final PIR/EIS was published for State and Agency Review on 4 February 2011. The majority of the comments received were favorable and in support of the project. A letter from the Florida Department of Agriculture and Consumer Services (FDACS), dated 10 March 2011, stated a concern that the proposed project would result in negative impacts to privately-owned agricultural lands in the vicinity of the project. Specifically, the concern was that a rise in groundwater elevations would result in root zone flooding that would be detrimental to crops. The FDACS also expressed concern that any adverse impacts identified after project implementation would be based upon criteria not specified in the Final PIR. In a 29 July 2011 reply letter, the Corps responded to these concerns by describing the monitoring being conducted by the SFWMD as part of its expedited construction program and the Corps' consideration of additional information to reassess the takings analysis and whether the project will reduce the existing levels of service for flood protection on the 776 acres, or a portion thereof, as described previously in Paragraph 11. The final PIR was revised to clarify this position.

14. Section 601(e)(5)(B) of WRDA 2000, as amended by Section 6004 of the WRDA 2007, authorizes credit toward the non-Federal share for non-Federal design and construction work completed during the period of design or construction, subject to execution of the design or project partnership agreement and subject to a determination by the Secretary that the work is integral to the project. As part of its initiative for early implementation of certain CERP projects, the non-Federal sponsor has stated that it is constructing the C-111 Spreader Canal Western project consistent with the PIR, in advance of Congressional authorization and the signing of a project partnership agreement. As such, a separate EIS has been completed and a Department of the Army permit has been issued to the non-Federal sponsor for expedited construction of this project, and construction of the project has already begun by the State of Florida. As required by the February 2008 Implementation Guidance for Section 6004 of WRDA 2007 – CERP Work In-Kind Credits, the non-Federal sponsor entered into a Pre-Partnership Credit Agreement for the C-111 Spreader Canal Western Project on 13 August 2009. The reporting officers believe that it is in the public interest for this Project to be implemented expeditiously due to the early restoration of Federal lands in Everglades National Park and ecological benefits to the wetlands and estuaries in other portions of the South Florida ecosystem. Therefore, the reporting officers recommend that the non-Federal sponsor be credited for all reasonable, allowable, necessary, auditable, and allocable costs applicable to the C-111 Spreader Canal Western project as may be authorized by law including those incurred prior to the execution of a PPA, subject to authorization of the Project by law, a determination by the Assistant Secretary of the Army (Civil Works) or his/her designee that the In-kind work is integral to the authorized CERP Project, that the costs are reasonable, allowable, necessary, auditable, and allocable, and that the In-kind work has been implemented in accordance with government standards and applicable Federal and state laws.

15. The non-Federal Sponsor and the U.S. Department of the Army entered into an agreement known as the Master Agreement Between the Department of the Army and South Florida Water Management District for Cooperation in Constructing and Operating, Maintaining, Repairing, Replacing and Rehabilitating Projects Authorized to be Undertaken Pursuant to the Comprehensive Everglades Restoration Plan dated 13 August 2009 (hereinafter "Master Agreement"). The Master Agreement sets forth the terms of participation in the construction and OMRR&R of projects under CERP that will apply to any future project for which the non-Federal sponsor and the Government have entered into a PPA. The uniform terms of the Master Agreement will be incorporated by reference into the C-111 Spreader Canal Western Project PPA.

16. Credits for non-Federal design and construction will be evaluated in accordance with the terms of the Master Agreement. All documentation provided by the non-Federal sponsor will be thoroughly reviewed by the Corps to determine reasonable, allowable, necessary, auditable, and allocable costs. Upon completion of this review, a financial audit will be conducted prior to granting final credit. Coordination between the Corps and the Sponsor will occur throughout design and construction via the Corps' Regulatory process. The credit afforded to the non-Federal sponsor will be limited to the lesser of the following: (1) actual costs that are reasonable, allowable, necessary, auditable, and allocable to the Project; or (2) the Corps estimate of the cost of the work allocable to the Project had the Corps performed the work. The non-Federal sponsor intends to implement this work using its own funds and would not use funds originating from other Federal sources unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute and in accordance with Section 601 (e)(3) of WRDA 2000 as amended and the Master Agreement.

17. Washington level review indicates that the plan recommended by the reporting officers is environmentally justified, technically sound, cost effective, and socially acceptable. The plan conforms to essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other administration and legislative policies and guidelines. The views of interested parties, including Federal, state and local agencies have been considered.

18. The Project complies with the following requirements of the WRDA 2000, as amended:

a. Project Implementation Report (PIR). The requirements of a PIR as defined by Section 601(h)(4)(A).

b. Reservation or Allocation of Water for the Natural System. Sections 601(h)(4)(A)(iii)(IV) and (V) require identification of the appropriate quantity, timing, and distribution of water dedicated and managed for the natural system and the amount of water to be reserved or allocated for the natural system. In accordance with the regulations, an analysis was conducted to identify water dedicated and managed for the natural system. Accordingly, the non-Federal sponsor will protect the water that was identified as necessary to achieve the benefits of the Project, using water reservation or allocation authority under Florida law.

c. Elimination or Transfer of Existing Legal Sources of Water. Section 601(h)(5)(A) states that existing legal sources of water shall not be eliminated or transferred until a new source

of water supply of comparable quantity and quality is available to replace the water to be lost as a result of the CERP. An analysis of project effects on existing legal sources of water was conducted and it was determined that implementation of the C-111 Spreader Canal Western project will not result in a transfer or elimination of existing legal sources of water.

d. Maintenance of Flood Protection. Section 601 (h)(5)(B) states that the Plan shall not reduce levels of service for flood protection that are in existence on the date of enactment of WRDA 2000 (December 2000) and in accordance with applicable law. Potential flooding effects as a result of the proposed project were analyzed and the results indicated that the proposed project would have an adverse impact on the level of service for flood protection in the project area. The analysis identified 776 acres of privately-owned lands that may be impacted as a result of the operation of the proposed project. Total impacted lands, including the 776 acres identified above, were approximately 11,565 acres. As such, the non-Federal sponsor will provide the 11,565 acres of lands either in fee, perpetual flowage easements, or by supplemental agreements, and will be responsible for those real estate interests as a project cost. Under the specific circumstances detailed in paragraph 11, the non-Federal sponsor may not be required to provide an interest in all or part of the 776 acres of privately-owned lands identified.

19. I generally concur with the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan described herein for ecosystem restoration and recreation be authorized for implementation as a Federal Project, with such modifications as in the discretion of the Chief of Engineers may be advisable, and subject to cost-sharing, financing, and other applicable requirements of Section 601 of WRDA 2000, as amended. In addition, I recommend that the non-Federal sponsor be authorized to receive credit for work accomplished prior to execution of a PPA for this Project, in accordance with the terms described in paragraphs 14 and 16 of this report.

Further, this recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and the following items of local cooperation:

a. Provide 50 percent of total project costs consistent with the provisions of Section 601(e) of the WRDA 2000, as amended, including authority to perform design and construction of project features consistent with Federal law and regulation.

b. Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations that the Government and the non-Federal sponsor jointly determine to be necessary for the construction and OMRR&R of the Project and valuation will be in accordance with the Master Agreement.

c. Shall not use the ecosystem restoration features or lands, easements, and rights-of-way required for such features as a wetlands bank or mitigation credit for any other non-CERP projects.

d. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land that the non-Federal sponsor owns or controls for access to the Project for the

purpose of inspection, and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project.

e. Assume responsibility for operating, maintaining, repairing, replacing, and rehabilitating the Project or completed functional portions of the Project in a manner compatible with the Project's authorized purposes and in accordance with applicable Federal and State laws and specific directions prescribed in the OMRR&R manuals and any subsequent amendments thereto. Notwithstanding Section 528(e)(3) of WRDA 1996 (110 Stat. 3770), the non-Federal sponsor shall be responsible for 50 percent of the cost of OMRR&R activities authorized under this section.

f. The non-Federal sponsor shall operate, maintain, repair, replace and rehabilitate the recreational features of the Project and is responsible for 100 percent of the costs.

g. Keep the recreation features, and access roads, parking areas, and other associated public use facilities, open and available to all on equal terms.

h. Unless otherwise provided for in the statutory authorization for this Project, comply with Section 221 of PL 91-611, Flood Control Act of 1970, as amended, and Section 103 of the WRDA of 1986, PL 99-662, as amended which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the Project or separable element.

i. Hold and save the Government free from all damages arising from the construction, OMRR&R of the Project, and any project-related betterments, except for damages due to the fault or negligence of the Government or the Government's contractors.

j. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the Project to the extent and in such detail as will properly reflect total project costs and comply with the provisions of the CERP Master Agreement between the Department of Army and the South Florida Water Management District for Cooperation in Constructing and Operating, Maintaining, Repairing, Replacing, and Rehabilitating Projects Authorized to be Undertaken Pursuant to the Comprehensive Everglades Restoration Plan, executed on 13 August 2009, including Article XI Maintenance of Records and Audit.

k. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601-9675, that may exist in, on, or under lands, easements or rights-of-way necessary for the construction and operation and maintenance (O&M) of the Project; except that the non-Federal sponsor shall not perform such investigations on lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude without prior specific written direction by the Government.

l. Assume complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on or under lands, easements, or right-of-ways

necessary for the construction and OMRR&R.

m. As between the Government and the non-Federal sponsor, the non-Federal sponsor shall be considered the operator of the Project for the purposes of CERCLA liability. To the maximum extent practicable, the non-Federal sponsor shall OMRR&R the Project in a manner that will not cause liability to arise under CERCLA.

n. Prevent obstructions of and encroachments on the Project (including prescribing and enforcing regulations to prevent such obstruction or encroachments) which might reduce ecosystem restoration benefits, hinder O&M, or interfere with the Project's proper function, such as any new developments on Project lands or the addition of facilities which would degrade the benefits of the Project.

o. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, PL 91-646, as amended by the title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (PL 100-17), and Uniform Regulations contained in 49 CFR part 24, in acquiring lands, easements, and rights-of-way, and performing relocations for construction, O&M of the Project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.

p. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, PL 88-352, and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled, "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army," and all applicable Federal labor standards and requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act [formerly 40 U.S.C. 276a et seq.], the Contract Work Hours and Safety Standards Act [formerly 40 U.S.C. 327 et seq.] and the Copeland Anti-Kickback Act [formerly 40 U.S.C. 276c]).

q. Comply with Section 106 of the National Historic Preservation Act in completion of all consultation with Florida's State Historic Preservation Office and, as necessary, the Advisory Council on Historic Preservation prior to construction as part of the Pre-construction Engineering and Design phase of the Project.

r. Provide 50 percent of that portion of total cultural resource preservation mitigation and data recovery costs attributable to the Project that are in excess of one percent of the total amount authorized to be appropriated for the Project.

s. Do not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized and in accordance with Section 601(e)(3) of WRDA 2000.

t. The non-Federal sponsor agrees to participate in and comply with applicable Federal floodplain management and flood insurance programs consistent with its statutory authority.

(1) Not less than once each year the non-Federal sponsor shall inform affected interests of the extent of protection afforded by the Project.

(2) The non-Federal sponsor shall publicize flood plain information in the area concerned and shall provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the flood plain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the Project.

(3) The non-Federal sponsor shall comply with Section 402 of WRDA 1986, as amended (33 U.S.C. 701b-12), which requires a non-Federal interest to have prepared, within one year after the date of signing a project partnership agreement for the Project, a floodplain management plan. The plan shall be designed to reduce the impacts of future flood events in the project area, including but not limited to, addressing those measures to be undertaken by non-Federal interests to preserve the level of flood protection provided by the Project. As required by Section 402, as amended, the non-Federal interest shall implement such plan not later than one year after completion of construction of the Project. The non-Federal sponsor shall provide an information copy of the plan to the Government upon its preparation.

(4) The non-Federal sponsor shall prescribe and enforce regulations to prevent obstruction of or encroachment on the Project or on the lands, easements, and rights-of-way determined by the Government to be required for the construction, operation, maintenance, repair, replacement, and rehabilitation of the Project, that could reduce the level of protection the Project affords, hinder operation or maintenance of the Project, or interfere with the Project's proper function.

u. The non-Federal Sponsor shall execute under State law the reservation or allocation of water for the natural system as identified in the PIR for this authorized CERP Project as required by Sections 601(h)(4)(B)(ii) of WRDA 2000 and the non-Federal Sponsor shall provide information to the Government regarding such execution. In compliance with 33 CFR 385, the District Engineer will verify such reservation or allocation in writing. Any change to such reservation or allocation of water shall require an amendment to the PPA after the District Engineer verifies in writing in compliance with 33 CFR 385 that the revised reservation or allocation continues to provide for an appropriate quantity, timing, and distribution of water dedicated and managed for the natural system after considering any changed circumstances or new information since completion of the PIR for the authorized CERP Project.

20. The recommendation contained herein reflects the information available at this time and current Departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation

may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding.

MERDITH W.B. TEMPLE
Major General, USA
Acting Chief of Engineers

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

MAY 2 2012

CECW-SAD (1105-2-10a)

SUBJECT: Biscayne Bay Coastal Wetlands Phase I Project, Comprehensive Everglades Restoration Plan, Central and Southern Florida Project, Miami-Dade County, Florida.

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration improvements for Phase I of the Biscayne Bay Coastal Wetlands (BBCW) Project, located in Miami-Dade County, Florida. It is accompanied by the reports of the Jacksonville District Engineer and the South Atlantic Division Engineer. These reports are in response to Section 601 of the Water Resources Development Act (WRDA) of 2000, which authorized the Comprehensive Everglades Restoration Plan (CERP) as a framework for modifications and operational changes to the Central and Southern Florida project that are needed to restore, preserve, and protect the South Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. WRDA 2000 identified specific requirements for implementing components of the CERP, including the development of a decision document known as a Project Implementation Report (PIR). The requirements of a PIR are addressed in this report and are subject to review and approval by the Secretary of the Army. Preconstruction engineering and design activities for this project will be continued under the CERP Design Agreement.

2. The proposed Biscayne Bay Coastal Wetlands project was previously identified in CERP and requires specific authorization under Section 601(d) of WRDA 2000. The original scope of the project has been altered in order to better address restoration goals in the study area and the BBCW project was split into two phases. Phase I is the first step toward meeting restoration goals in the study area. By rehydrating coastal wetlands and reducing damaging point source freshwater discharge to Biscayne Bay, the Phase I Recommended Plan is integral to the health of the south Florida ecosystem. Due to changes in scope and intended restoration area, Phase I of the proposed BBCW project is recommended for specific Congressional authorization consistent with WRDA 2000, Section 601(d). The second phase of the project would consider restoration of freshwater wetlands in the Model Lands/Barnes Sound area, the southernmost portion of the study area. It is expected that the second phase will also seek authorization under Section 601(d).

3. Although cost sharing of the ecosystem restoration features for this project is governed by Section 601 of WRDA 2000, as amended, cost sharing of the recreation features is governed by Section 103 of the WRDA 1986, as amended. In particular, in accordance with Section 103(j) of WRDA 1986, 100 percent of the cost of Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) of the recreation features is the non-Federal sponsor's responsibility. In addition, section 601(e)(5)(B) of WRDA 2000, as amended, governs credit for non-Federal sponsor design and construction work on the ecosystem restoration features of the project, whereas

section 221(a)(4) of the Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b(a)(4)), governs credit for non-Federal sponsor design and construction work on the recreation features of the project.

4. The final PIR and integrated Environmental Impact Statement (EIS) recommends a project that contributes significantly to all of the ecological goals and objectives of the CERP: (1) Increasing the spatial extent of natural areas; (2) improving habitat function and quality; and (3) improving native plant and animal abundance and diversity. In addition, it contributes to the economic values and social well being of the project area by providing recreational opportunities. The historical Everglades ecosystem was previously defined by a mosaic of uplands, freshwater marsh, deepwater sloughs, and estuarine habitats that supported a diverse community of fish and wildlife. Today nearly all aspects of south Florida's flora and fauna have been affected by development, altered hydrology, nutrient input and spread of non-native species that have resulted directly or indirectly from a century of water management for human needs. Significant areas within the project study boundary are characterized by a low-productivity dwarf mangrove forest, known as the "white zone" - due to its appearance on aerial photos - which are caused by salt deposits on the soil surface that are primarily a result of wide seasonal fluctuations in salinity and the absence of freshwater input from upstream sources. The PIR confirms information in the CERP and provides a project-level evaluation of costs and benefits associated with construction and operation of this ecosystem restoration project. The Recommended Plan will improve functional fish and wildlife habitat in Florida Bay and Biscayne Bay. The portion of the Everglades ecosystem directly affected by the BBCW project provides habitat for 21 Federally-listed endangered or threatened species, including the West Indian Manatee, Florida Panther, Cape Sable Seaside Sparrow, and the American Crocodile. Overall, approximately 11,000 acres will benefit from restored overland sheetflow. The South Florida Water Management District (SFWMD), the non-Federal sponsor, has begun land acquisition and construction of the project through its expedited construction program. As such, the BBCW Phase I project can be implemented quickly, substantially advancing the realization of project benefits in an area that has been degraded by past water management practices.

5. The reporting officers recommend a plan for ecosystem restoration and recreation. The Recommended Plan would improve the ecological function of coastal wetlands in Biscayne Bay by redirecting freshwater - currently discharged through man-made canals directly to the Bay - to coastal wetlands adjacent to the Bay. This will provide a more natural and historic flow and restore healthier salinity patterns in Biscayne Bay. Biscayne Bay is located in Miami-Dade County south of the city of Miami on the Atlantic coast and east of the city of Homestead, Florida. The Recommended Plan, Alternative O Phase I, encompasses a footprint of approximately 3,761 acres and includes features in three of the project's four sub-components (hydrologically distinct regions of the study area): Deering Estate, Cutler Wetlands, and L-31 East Flow Way. There are no features in the fourth region, Model Land Basin. A description of the features recommended for the sub-component areas is as follows:

Deering Estate: This region is in the northern part of the project area and includes an approximately 500-foot extension of the C-100A Spur Canal through the Power's Addition Parcel (Power's Parcel), construction of a freshwater wetland on the Power's Parcel and delivery of fresh water to Cutler Creek and ultimately to coastal wetlands along Biscayne Bay.

Cutler Wetlands: Features in this region, which is in the central portion of the project area, include a pump station, a conveyance canal, a spreader canal, culverts and mosquito control ditch plugs. The pump station, located on C-1, will deliver water to a 6,900-foot lined conveyance canal that will run under SW 97th Avenue, SW 87th Avenue (L-31E Levee), and across the L-31E Borrow Canal via concrete box culverts and deliver water to the spreader canal located in the saltwater wetlands. The spreader canal is divided into four segments.

L-31 East Flow Way: Features in this region, which is in the southem portion of the project area, will isolate the L-31E Borrow Canal from the major discharge canals (C-102, Military Canal and C-103) and allow freshwater flow through the L-31E Levee to the saltwater wetlands. Gated culverts and inverted siphon structures will isolate the L-31E Borrow Canal from these canals, allowing L-31E Borrow Canal to maintain higher water levels. Two pump stations and a series of culverts will move fresh water directly to the saltwater wetlands east of L-31E. Two more pump stations and a spreader canal will deliver water to the freshwater wetlands south of C-103.

Recreational opportunities are also provided at the site within the project footprint.

Recreation Features: The recreation activities proposed include biking/walking trails, environmental interpretation, canoeing/kayaking, bank fishing, tent camping and nature study. Proposed facilities include interpretive signage, shade shelter, handicapped accessible waterless restrooms, handicapped parking, tent platforms, pedestrian bridge, benches, bike rack, trash receptacles, park security gate, trail signage, potable water source and a bird watching platform.

6. The total first cost of the Recommend Plan from the final PIR/EIS, based upon October 2011 (FY12) price levels, is estimated to be $164,070,000. The total first cost for the ecosystem restoration features is estimated to be $162,229,000 and the recreation first cost is estimated to be $1,841,000. The total project cost being sought for authorization is $192,418,000, which includes all costs for construction; lands, easements, rights-of-way, and relocations; recreation facilities; pre-construction, engineering and design (PED) and construction management costs; and sunk PIR costs ($28,348,700).

7. In accordance with the cost-sharing requirements of Section 601(e) of the WRDA 2000, as amended, the Federal cost of the Recommended Plan is $96,209,000 and the non-Federal cost is $96,209,000. The estimated lands, easements, right-of-way, and relocation (LERRs) costs for the Recommended Plan are $80,985,000. Based on FY12 price levels, a 40-year period of economic evaluation and a 4.00% discount rate, the equivalent annual cost of the proposed project is estimated to be $11,126,000, which includes OMRR&R, monitoring, interest during construction and amortization, but not sunk costs. The estimated annual costs for ecosystem restoration OMRR&R, including vegetation management, is $1,873,000. The total project monitoring cost is estimated to be $1,917,000 with an average annual cost of $193,000. The project monitoring period is five years except for endangered species monitoring, which is 10 years. Any costs associated with project monitoring beyond 10 years after completion of construction of the Project (or a component of the Project) shall be a non-Federal responsibility. The annual OMRR&R costs for recreation are estimated at $25,000.

8. As a component of the CERP program, the interagency/interdisciplinary scientific and technical team, formed to ensure that system-wide goals are met, will participate in the annual monitoring to assess system-wide changes. In accordance with Sections 601(e)(4) and 601(e)(5)(D) of WRDA 2000, OMRR&R costs and adaptive assessment and monitoring costs for ecosystem restoration will be shared equally between the Federal Government and the non-Federal sponsor. The Project Monitoring Plan was developed assuming that major, ongoing monitoring programs that are not funded by the Project would continue to supply data relevant to the Project. The Project Monitoring Plan shall not include items that are already required to be monitored by another Federal agency or other entity as part of their regular responsibilities or required by law. Should any of these monitoring programs be discontinued or significantly curtailed, then monitoring priorities and funding options may be re-evaluated to ensure proper Project evaluation. In accordance with Section 103(j) of the WRDA 1986, as amended, OMRR&R costs related to recreation features will be funded 100 percent by the non-Federal sponsor.

9. To ensure that an effective ecosystem restoration plan was recommended, cost effectiveness/incremental cost analysis techniques were used to evaluate alternative restoration plans. These techniques determined the selected alternative plan to be cost-effective and incrementally justified. The hydraulic model and ecological model utilized to estimate the ecological outputs that were used in the economic analysis were both peer-reviewed and certified for use in the project. The plan recommended for implementation is the National Ecosystem Restoration (NER) plan, supports the Incremental Adaptive Restoration principles established by the National Research Council, and was prepared in a collaborative environment. The Recommended Plan provides benefits by: (1) restoring the quantity, timing, and distribution of water delivered to Biscayne Bay; (2) improving hydroperiods and hydropatterns in the project area; and, (3) restoring coastal zone salinities in Biscayne Bay and its tributaries. The project will restore the overland sheetflow in an approximately 11,000-acre area and improve the ecology of Biscayne Bay, including its freshwater and saltwater wetlands, nearshore bay habitat, marine nursery habitat, and the oyster reef community.

10. In accordance with the WRDA 2000 Section 601(f)(2), individual CERP projects may be justified by the environmental benefits derived by the South Florida ecosystem. Similarly, Section 385.9(a) of the CERP Programmatic Regulations (33 CFR Part 385) requires that individual projects shall be formulated, evaluated, and justified based on their ability to contribute to the goals and purposes of the Plan and on their ability to provide benefits that justify costs on a next-added increment (NAI) basis. Due to the project location at the terminus of the Everglades system, the BBCW Phase I project does not depend on any other CERP or non-CERP projects to achieve the estimated ecological benefits. The NAI analysis evaluates the effects, or outputs, of the Recommended Plan as the next project to be added to the group of already approved CERP projects. The results of the NAI analysis showed that as a stand-alone project, the BBCW Recommended Plan nearly doubles the spatial extent of the functional habitat expected to exist in the future without-project condition. The Recommended Plan will produce an average annual increase of 9,276 habitat units at an annual cost of $11,003,000 for a cost of $1,186 per habitat unit. Based on these parameters, the BBCW Phase I project is justified by the environmental benefits derived by the South Florida ecosystem. The average annual cost for recreation is $123,000 and average annual net benefits are $58,000. The benefit to cost ratio for the proposed recreation features is approximately 2.1 to 1.

11. Of the total 3,761 acres identified for the Project, approximately 1,421 acres would be required in fee and approximately 149 acres would require perpetual easement interest. Additionally, approximately 1,254 acres would be provided through the execution of Supplemental Agreements between the SFWMD, the State of Florida and local Miami-Dade County government entities. Approximately 937 acres are currently owned by the United States; National Park Service for Biscayne National Park (BNP) which will provide a Memorandum of Agreement to the SFWMD for the use of these lands.

12. In accordance with the Corps of Engineers' (Corps) Engineering Circular on review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and vigorous review process to ensure technical quality. This included Agency Technical Review (ATR), Independent External Peer Review (IEPR), and a Corps Headquarters policy and legal review. All concerns of the ATR have been addressed and incorporated into the final report. The IEPR was managed by Battelle Memorial Institute, a non-profit science and technology organization with experience in establishing and administering peer review panels for the Corps. A total of 19 comments were documented. Overall, the Panel found the BBCW PIR/EIS a well-written document that contained adequate information to interpret plan selection and recommendations. The panel also acknowledged the public involvement and collaborative efforts in the development of the report, and encouraged the Corps to document the usage of recent scientific data in the expansion of the project to include additional restoration opportunities. The comments of high significance included requests to expand the discussion and analysis of the future conditions relating to sea level rise and water availability. In response to these comments, the PIR was modified to include an expanded and more quantitative and graphical discussion of the potential impacts of sea level rise and clarification of the relationship between the water available for diversion and the hydrologic regimes needed to achieve the target level of wetlands area and function. The Final Report and Certification from the IEPR Panel was issued 1 December 2009.

13. The Final PIR/EIS was published for State and Agency Review on 7 January 2012. The majority of the comments received were favorable and in support of the project. In response to comments received from the Florida Department of Environmental Protection (FDEP), the Corps sent a letter in April 2012 that clarified the roles and responsibilities of the Corps and the non-Federal sponsor in addressing residual agricultural chemicals on project lands. The Corps also sent a letter in response to comments from Homestead Air Reserve Base (HARB). HARB requested additional information on the potential for bird strikes to aircraft operating from the airbase and expressed concerns regarding increases in bird populations, and specifically whether predatory birds, most implicated in aircraft strikes, would increase due to the ecological improvements. HARB requested that the Corps further research predator/prey avian relationships. The Corps has done this by soliciting information from avian experts at Everglades National Park, Biscayne Bay National Park, U.S. Fish and Wildlife Service, Audubon Florida, Fish and Wildlife Conservation Commission and the University of Florida, all of whom are familiar with the BBCW Phase I project area, the project objectives and the hydrological modeling predictions. There was agreement amongst resource agencies that there will not be an increase in predatory birds such as raptors and vultures as a result of the restoration. Specifically, wetland rehydration achieved by the BBCW Phase I project and resulting wading bird increase are not likely to serve as an additional attractant to predatory birds beyond the geographic features already serving to guide raptors and other migratory birds along Florida coasts. The Corps Jacksonville District staff met with HARB

representatives to discuss their concerns and the Recommended Plan. The Corps sent a response letter to HARB in April 2012 that provided the Corps' analysis and indicated the Corps' willingness to continue to work through the concerns of the airbase. The letter also requested that HARB continue to share information with the Corps in order to realize opportunities to minimize wildlife risks to aviation and human safety, as necessary, while protecting valuable environmental resources.

14. Section 601(e)(5)(B) of WRDA 2000, as amended by Section 6004 of the WRDA 2007, authorizes credit toward the non-Federal share for non-Federal design and construction work completed during the period of design or construction, subject to execution of the design or project partnership agreement and subject to a determination by the Secretary that the work is integral to the project. As part of its initiative for early implementation of certain CERP projects, the non-Federal sponsor has stated that it is constructing several features of Phase I of the BBCW project consistent with the PIR, in advance of Congressional authorization and the signing of a project partnership agreement. As such, a separate EIS has been completed and a Department of the Army permit has been issued to the non-Federal sponsor for expedited construction of this project; construction of the project has already begun by the State of Florida in the Deering Estates and L-31E Flow Way areas of the project. As required by the February 2008 Implementation Guidance for Section 6004 of WRDA 2007 – CERP Work In-Kind Credits, the non-Federal sponsor entered into a Pre-Partnership Credit Agreement for the BBCW project on 13 August 2009. The reporting officers believe that it is in the public interest for this Project to be implemented expeditiously due to the early restoration of Federal lands in Everglades National Park and ecological benefits to the wetlands and estuaries in other portions of the South Florida ecosystem. Therefore, the reporting officers recommend that the non-Federal sponsor be credited for all reasonable, allowable, necessary, auditable, and allocable costs applicable to the Biscayne Bay Coastal Wetlands Phase I Project, as may be authorized by law including those incurred prior to the execution of a project partnership agreement, subject to authorization of the Project by law, a determination by the Assistant Secretary of the Army (Civil Works) or his/her designee that the In-kind work is integral to the authorized CERP Project, that the costs are reasonable, allowable, necessary, auditable, and allocable, and that the In-kind work has been implemented in accordance with government standards and applicable Federal and state laws.

15. The Non-Federal Sponsor and the U.S. Department of the Army entered into an agreement known as the Master Agreement Between the Department of the Army and South Florida Water Management District for Cooperation in Constructing and Operating, Maintaining, Repairing, Replacing and Rehabilitating Projects Authorized to be Undertaken Pursuant to the Comprehensive Everglades Restoration Plan dated 13 August 2009 (hereinafter "Master Agreement"). The Master Agreement sets forth the terms of participation in the construction and OMRR&R of projects under CERP that will apply to any future project for which the non-Federal sponsor and the Government have entered into a PPA. The uniform terms of the Master Agreement will be incorporated by reference into the BBCW Project, Phase I, PPA.

16. Credits for non-Federal design and construction will be evaluated in accordance with the terms of the Master Agreement. All documentation provided by the non-Federal sponsor will be thoroughly reviewed by the Corps to determine reasonable, allowable, necessary, auditable, and allocable costs. Upon completion of this review, a financial audit will be conducted prior to

granting final credit. Coordination between Corps and the non-Federal sponsor will occur throughout design and construction via the Corps' Regulatory process. The credit afforded to the non-Federal sponsor will be limited to the lesser of the following: (1) actual costs that are reasonable, allowable, necessary, auditable, and allocable to the Project; or (2) the Corps' estimate of the cost of the work allocable to the Project had the Corps performed the work. The non-Federal sponsor intends to implement this work using its own funds and would not use funds originating from other Federal sources unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute and in accordance with Section 601 (e)(3) of WRDA 2000 as amended and the Master Agreement.

17. Washington level review indicates that the plan recommended by the reporting officers is environmentally justified, technically sound, cost effective, and socially acceptable. The plan conforms to essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other administration and legislative policies and guidelines. Also, the views of interested parties, including Federal, State and local agencies, have been considered.

18. The Project complies with the following requirements of the WRDA 2000, as amended:

a. Project Implementation Report (PIR). The requirements of a PIR as defined by Section 601(h)(4)(A).

b. Reservation or Allocation of Water for the Natural System. Sections 601(h)(4)(A)(iii)(IV) and (V) require identification of the appropriate quantity, timing, and distribution of water dedicated and managed for the natural system and the amount of water to be reserved or allocated for the natural system. In accordance with the regulations, an analysis was conducted to identify water dedicated and managed for the natural system. Accordingly, the non-Federal sponsor will protect the water that was identified as necessary to achieve the benefits of the Project, using water reservation or allocation authority under Florida law.

c. Elimination or Transfer of Existing Legal Sources of Water. Section 601(h)(5)(A) states that existing legal sources of water shall not be eliminated or transferred until a new source of water supply of comparable quantity and quality is available to replace the water to be lost as a result of the CERP. An analysis of project effects on existing legal sources of water was conducted and it was determined that implementation of the BBCW Phase I project will not result in a transfer or elimination of existing legal sources of water.

d. Maintenance of Flood Protection. Section 601 (h)(5)(B) states that the Plan shall not reduce levels of service for flood protection that are in existence on the date of enactment of this Act and in accordance with applicable law. Potential flooding effects as a result of the proposed project were analyzed and the results indicated that the proposed project would not have an adverse impact on the level of service for flood protection in the project area.

19. I generally concur with the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan described herein for ecosystem restoration and recreation be authorized for implementation as a Federal Project, with such modifications as in the

discretion of the Chief of Engineers may be advisable, and subject to cost-sharing, financing, and other applicable requirements of Section 601 of WRDA 2000, as amended. In addition, I recommend that the non-Federal sponsor be authorized to receive credit for work accomplished prior to execution of a PPA for this Project, in accordance with the terms described in paragraphs 14 and 16 of this report.

Further, this recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and the following items of local cooperation:

a. Provide 50 percent of total project costs consistent with the provisions of Section 601(e) of the WRDA 2000, as amended, including authority to perform design and construction of project features consistent with Federal law and regulation.

b. Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations that the Government and the non-Federal sponsor jointly determine to be necessary for the construction and OMRR&R of the Project and valuation will be in accordance with the Master Agreement.

c. Shall not use the ecosystem restoration features or lands, easements, and rights-of-way required for such features as a wetlands bank or mitigation credit for any other non-CERP projects.

d. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land that the non-Federal sponsor owns or controls for access to the Project for the purpose of inspection, and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project.

e. Assume responsibility for operating, maintaining, repairing, replacing, and rehabilitating the Project or completed functional portions of the Project in a manner compatible with the Project's authorized purposes and in accordance with applicable Federal and State laws and specific directions prescribed in the OMRR&R manuals and any subsequent amendments thereto. Notwithstanding Section 528(e)(3) of WRDA 1996 (110 Stat. 3770), the non-Federal sponsor shall be responsible for 50 percent of the cost of OMRR&R activities authorized under this section.

f. The non-Federal sponsor shall operate, maintain, repair, replace and rehabilitate the recreational features of the Project and is responsible for 100 percent of the costs.

g. Keep the recreation features, and access roads, parking areas, and other associated public use facilities, open and available to all on equal terms.

h. Unless otherwise provided for in the statutory authorization for this Project, comply with Section 221 of PL 91-611, Flood Control Act of 1970, as amended, and Section 103 of the WRDA of 1986, PL 99-662, as amended which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof,

until the non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the Project or separable element.

i. Hold and save the Government free from all damages arising from the construction, OMRR&R of the Project, and any project-related betterments, except for damages due to the fault or negligence of the Government or the Government's contractors.

j. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the Project to the extent and in such detail as will properly reflect total project costs and comply with the provisions of the CERP Master Agreement between the Department of Army and the South Florida Water Management District for Cooperation in Constructing and Operating, Maintaining, Repairing, Replacing, and Rehabilitating Projects Authorized to be Undertaken Pursuant to the Comprehensive Everglades Restoration Plan, executed on 13 August 2009, including Article XI Maintenance of Records and Audit.

k. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601-9675, that may exist in, on, or under lands, easements or rights-of-way necessary for the construction and operation and maintenance (O&M) of the Project; except that the non-Federal sponsor shall not perform such investigations on lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude without prior specific written direction by the Government.

l. Assume complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on or under lands, easements, or right-of-ways necessary for the construction and OMRR&R.

m. As between the Government and the non-Federal sponsor, the non-Federal sponsor shall be considered the operator of the Project for the purposes of CERCLA liability. To the maximum extent practicable, the non-Federal sponsor shall OMRR&R the Project in a manner that will not cause liability to arise under CERCLA.

n. Prevent obstructions of and encroachments on the Project (including prescribing and enforcing regulations to prevent such obstruction or encroachments) which might reduce ecosystem restoration benefits, hinder O&M, or interfere with the Project's proper function, such as any new developments on Project lands or the addition of facilities which would degrade the benefits of the Project.

o. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, PL 91-646, as amended by the title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (PL 100-17), and Uniform Regulations contained in 49 CFR part 24, in acquiring lands, easements, and rights-of-way, and performing relocations for construction, O&M of the Project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.

p. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, PL 88-352, and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled, "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army," and all applicable Federal labor standards and requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act [formerly 40 U.S.C. 276a et seq.], the Contract Work Hours and Safety Standards Act [formerly 40 U.S.C. 327 et seq.] and the Copeland Anti-Kickback Act [formerly 40 U.S.C. 276c]).

q. Comply with Section 106 of the National Historic Preservation Act in completion of all consultation with Florida's State Historic Preservation Office and, as necessary, the Advisory Council on Historic Preservation prior to construction as part of the Pre-construction Engineering and Design phase of the Project.

r. Provide 50 percent of that portion of total cultural resource preservation mitigation and data recovery costs attributable to the Project that are in excess of one percent of the total amount authorized to be appropriated for the Project.

s. Do not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized and in accordance with Section 601(e)(3) of WRDA 2000.

t. The non-Federal sponsor agrees to participate in and comply with applicable Federal floodplain management and flood insurance programs consistent with its statutory authority.

(1) Not less than once each year the non-Federal sponsor shall inform affected interests of the extent of protection afforded by the Project.

(2) The non-Federal sponsor shall publicize flood plain information in the area concerned and shall provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the flood plain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the Project.

(3) The non-Federal sponsor shall comply with Section 402 of WRDA 1986, as amended (33 U.S.C. 701b-12), which requires a non-Federal interest to have prepared, within one year after the date of signing a project partnership agreement for the Project, a floodplain management plan. The plan shall be designed to reduce the impacts of future flood events in the project area, including but not limited to, addressing those measures to be undertaken by non-Federal interests to preserve the level of flood protection provided by the Project. As required by Section 402, as amended, the non-Federal interest shall implement such plan not later than one year after completion of construction of the Project. The non-Federal

sponsor shall provide an information copy of the plan to the Government upon its preparation.

(4) The non-Federal sponsor shall prescribe and enforce regulations to prevent obstruction of or encroachment on the Project or on the lands, easements, and rights-of-way determined by the Government to be required for the construction, operation, maintenance, repair, replacement, and rehabilitation of the Project, that could reduce the level of protection the Project affords, hinder operation or maintenance of the Project, or interfere with the Project's proper function.

u. The non-Federal sponsor shall execute under State law the reservation or allocation of water for the natural system as identified in the PIR for this authorized CERP Project as required by Sections 601(h)(4)(B)(ii) of WRDA 2000 and the non-Federal Sponsor shall provide information to the Government regarding such execution. In compliance with 33 CFR 385, the District Engineer will verify such reservation or allocation in writing. Any change to such reservation or allocation of water shall require an amendment to the PPA after the District Engineer verifies in writing in compliance with 33 CFR 385 that the revised reservation or allocation continues to provide for an appropriate quantity, timing, and distribution of water dedicated and managed for the natural system after considering any changed circumstances or new information since completion of the PIR for the authorized CERP Project.

20. The recommendation contained herein reflects the information available at this time and current Departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities in the formulation of a national Civil Works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding.

MERDITH W.B. TEMPLE
Major General, USA
Acting Commander

DEPARTMENT OF THE ARMY
OFFICE OF THE CHIEF OF ENGINEERS
WASHINGTON, D.C. 20314-1000

CECW-SAD (1105-2-10a)

MAY 2 1 2012

SUBJECT: Broward County Water Preserve Areas Project, Comprehensive Everglades Restoration Plan, Central and Southern Florida Project, Broward and Miami-Dade Counties, Florida

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration improvements for the Broward County Water Preserve Areas (BCWPA) Project, located in Broward and Miami-Dade Counties, Florida. It is accompanied by the report of the Jacksonville District Engineer and South Atlantic Division Engineer. These reports are in response to Section 601 of the Water Resources Development Act (WRDA) of 2000, which authorized the Comprehensive Everglades Restoration Plan (CERP) as a framework for modifications and operational changes to the Central and Southern Florida Project that are needed to restore, preserve and protect the south Florida ecosystem while providing for other water-related needs of the region, including water supply and flood protection. WRDA 2000 identified specific requirements for implementing components of the CERP, including the development of a decision document known as a Project Implementation Report (PIR). The requirements of a PIR are addressed in this report and are subject to the review and approval by the Secretary of the Army. Preconstruction engineering and design activities for this project will be continued under the CERP Design Agreement.

2. The three components comprising the proposed BCWPA Project were conditionally authorized by Sections 601(b)(2)(C)(iv), 601(b)(2)(C)(v), and 601(b)(2)(C)(vi) of WRDA 2000, but are not being recommended for implementation under those authorities. The PIR recommends a project that combines implementation of three projects identified in the CERP. Due to changes in scope and combining of CERP components, the BCWPA Project is recommended for new specific Congressional authorization consistent with WRDA 2000, Section 601(d). The reporting officers determined that the original authorities for the individual components of the BCWPA Project contained in Sections 601(b)(2)(C)(iv), (v) and (vi) of WRDA 2000, are no longer needed. As such, the reporting officers recommend that the projects authorized in Section 601(b)(2)(C)(iv), (v) and (vi) of WRDA 2000 be deauthorized.

3. Although cost sharing of the ecosystem restoration features for the BCWPA Project is governed by Section 601 of WRDA 2000, as amended, cost sharing of recreation features is governed by Section 103 of WRDA 1986, as amended. In particular, in accordance with Section 103(j) of WRDA 1986, 100 percent of the cost of Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) of the recreation features is the non-federal sponsor's responsibility. In addition, section 601(e)(5)(B) of WRDA 2000, as amended, governs credit for non-federal sponsor design and construction work on the ecosystem restoration features of the project, whereas section 221(a)(4) of the Flood Control Act of 1970, as amended (42 U.S.C.

1962d-5b(a)(4)), governs credit for non-federal sponsor design and construction work on the recreation features of the project.

4. The final PIR and integrated Environmental Impact Statement (EIS) recommends a project that contributes significantly to all the ecological goals and objectives of the CERP: (1) increasing spatial extent of natural areas; (2) improving habitat function and quality; and (3) improving native plant and animal abundance and diversity. In addition, it contributes to the economic values and social well being of the project area by providing recreational opportunities. The historical Everglades ecosystem was previously defined by a mosaic of uplands, freshwater marsh, deepwater sloughs, and estuarine habitats that supported a diverse community of fish and wildlife. Today nearly all aspects of south Florida's flora and fauna have been affected by development, altered hydrology, nutrient input and spread of non-native species that have resulted directly or indirectly from a century of water management for human needs. Significant areas within the project study boundary are characterized by undesirable dense cattail (Typha spp.) stands, drydowns and degraded ridge and slough habitat. The BCWPA Project addresses loss of ecosystem function within the Everglades as a result of (1) damaging discharges of runoff from developed areas in western Broward County into the Everglades (Water Conservation Area 3A); (2) excessive nutrient loading to the Everglades, and; (3) excessive seepage of water out of the Everglades to developed areas in western Broward County. The project also addresses insufficient quantities of water available in the regional water management system during dry periods to meet municipal, agricultural, and environmental water supply demands. The PIR confirms information in the CERP and provides a project-level evaluation of costs and benefits associated with construction and operation of this ecosystem restoration project. The Recommended Plan will improve functional fish and wildlife habitat in Water Conservation Areas (WCA) 3A/3B, and in Everglades National Park. The portion of the Everglades ecosystem directly affected by the project provides habitat for five federally-listed species: West Indian manatee, Florida panther, wood stork, snail kite and Eastern indigo snake. Overall, an ecological lift of approximately 166,211 average annual habitat units will occur due to improved hydroperiods and hydropatterns in the project area. Overall, approximately 563,000 acres in Water Conservation Area 3 and 200,000 acres in the greater Everglades will benefit from project implementation.

5. The reporting officers recommend a plan for ecosystem restoration and recreation. The Recommended Plan would improve the ecological function of the Everglades ecosystem by capturing and storing the excess surface water runoff from the C-11 watershed and reducing excess releases to the WCA 3A/3B, and will minimize seepage losses during dry periods. The Recommended Plan, Alternative A4, would include a footprint of approximately 7,990 acres based on the three components: C-11 Impoundment, WCA 3A/3B Seepage Management Area (SMA), and C-9 Impoundment, as well as recreation features. A description of the individual components follows:

C-11 Impoundment: The C-11 Impoundment is located in the northern part of the project area and requires 1,830 acres to construct an above-ground impoundment (interior storage of 1,068 acres). Major elements include canals, levees, water control structures and buffer marsh. Water control structures consist of pump stations, a gated spillway, gated and non-gated culverts and a non-gated fixed weir. The purpose of the C-11 Impoundment is to capture and store surface runoff from the C-11 Basin, reduce pumping of surface water into the WCA 3A/3B, and provide releases for regional benefits.

WCA 3A/3B Seepage Management Area: The WCA 3A/3B SMA makes up the western project border and requires 4,353 acres. Elements include levees, canals, pumps, bridges and water control structures. The C-502A and C-502B conveyance canals are major components that will transfer water between the C-11 and C-9 impoundments, assist with creating a hydraulic ridge, and transfer water to the southern project region for future CERP Projects. The purpose of this rain-driven component is to establish a buffer, reduce seepage to and from the WCA 3A/3B by creating a hydraulic head, and maintain the level of service flood protection.

C-9 Impoundment: The C-9 Impoundment is located north and adjacent to the Snake Creek Canal (C-9) and requires approximately 1,807 acres to construct an above-ground impoundment (storage of 1,641 acres). Elements include levees, canals, pumps, bridges and water control structures. The purpose of the C-9 Impoundment is to capture and store surface runoff from the C-9 Basin, store C-11 Impoundment overflow, assist with WCA 3A/3B seepage management, and provide releases for regional benefits.

Recreation Features: The recreation amenities proposed are ancillary, work harmoniously with the Project and are on fee owned lands. The amenities include 14 miles of improved trail surface, parking areas with ADA accessible waterless toilets, walkway to canoe launch facilities, an information kiosk, shaded benches, footbridges, trash receptacles and signage. Walking, jogging and biking are proposed on the levee crowns. Equestrian use is proposed at the levee base. Nature-based activities and fishing would be allowed.

6. The total first cost of the Recommended Plan from the final PIR/EIS, based on February 2012 price levels, is estimated at $840,657,000. Total first cost for the ecosystem restoration features is estimated to be $834,211,000, and the recreation first cost is estimated to be $6,446,000. The total project cost being sought for authorization is $866,707,000, which includes all costs for construction; lands, easements, rights-of-way and relocations; recreation facilities; pre-construction, engineering and design (PED) and construction management costs; and sunk PIR costs ($26,050,000).

7. In accordance with cost sharing requirements of Section 601(e) of the WRDA 2000, as

amended, the federal cost of the Recommended Plan is $433,353,500 and the non-federal cost is $433,353,500. The estimated lands, easements, rights-of-way and relocation (LERRs) costs for the Recommended Plan are $380,633,000. Based on FY12 price levels, a 38-year period of economic evaluation and a 4.00% discount rate, the equivalent annual cost of the proposed project is estimated at $49,415,000 which includes OMRR&R, interest during construction and amortization, but not sunk costs. The estimated annual costs for ecosystem restoration OMRR&R, including project monitoring costs, vegetation management and endangered species monitoring, are $3,510,000. The project monitoring period is five years except for endangered species monitoring, which is 10 years. Any costs associated with project monitoring beyond 10 years after completion of the construction of the Project (or a component of the Project) shall be a non-federal responsibility. The estimated annual OMRR&R cost for recreation is $412,000.

8. As a component of the CERP program, the interagency/interdisciplinary scientific and technical team, formed to ensure that the system-wide goals are met, will participate in the annual monitoring to assess system-wide changes. In accordance with Section 601(e)(4) and 601(e)(5)(D) of WRDA 2000, as amended, OMRR&R costs and adaptive assessment and monitoring costs for ecosystem restoration will be shared equally between the federal government and the non-federal sponsor. The Project Monitoring Plan was developed assuming that major, ongoing monitoring programs that are not funded by the Project would continue to supply data relevant to the Project. The Project Monitoring Plan shall not include items that are already required to be monitored by another federal agency or other entity as part of their regular responsibilities or required by law. Should any of these monitoring programs be discontinued or significantly curtailed, then monitoring priorities and funding options may be re-evaluated to ensure proper Project evaluations. In accordance with Section 103(j) of the WRDA 1986, as amended, OMRR&R costs related to recreation features will be funded 100 percent by the non-federal sponsor.

9. To ensure that an effective ecosystem restoration plan was recommended, cost effectiveness/ incremental cost analysis (CE/ICA) techniques were used to evaluate alternative restoration plans. These techniques determined the selected alternative plan to be cost effective and incrementally justified. The hydraulic model and ecological model utilized to estimate the ecological outputs that were used in the economic analysis were both peer reviewed and certified for use in the project. The plan recommended for implementation is the National Ecosystem Restoration (NER) plan, supports the Incremental Adaptive Management principles established by the National Research Council and was prepared in a collaborative environment. The Recommended Plan provides benefits by: (1) restoring quantity, timing and distribution of water for the Water Conservation Areas 3A and 3B and Everglades National Park; (2) improving hydroperiods and hydropatterns in the project area; and (3) providing water for other CERP projects within the vicinity of the project area.

10. In accordance with the WRDA 2000 Section 601(f)(2), individual CERP projects may be justified by the environmental benefits realized in the south Florida ecosystem. Similarly, Section 385.9(a) of the CERP Programmatic Regulations (33 CFR Part 385) requires that individual projects shall be formulated, evaluated, and justified based on their ability to contribute to the goals and purposes of the CERP and on their ability to provide benefits that justify costs on a next-added increment (NAI) basis. Due to the project location at the terminus of the Everglades system, the BCWPA Project does not depend on any other CERP or non-CERP projects to achieve estimated ecological benefits. The NAI analysis evaluates the effects, or outputs, of the Recommended Plan as the next project to be added to the group of already approved CERP projects. The results of the NAI analysis show that as a stand-alone project, the BCWPA Recommended Plan greatly increases the ecological function of the Everglades ecosystem in project area habitats over the expected future without project condition. The Recommended Plan will produce an average annual increase of 166,211 habitat units at an annual cost of $49,415,000, for a cost of $297.00 per habitat unit. The average annual cost for the recreation features is $748,000, the average annual benefit is $1,376,000, and the average annual net benefit of approximately $628,000. The benefit to cost ratio for the recommended recreation plan is approximately 1.8.

11. Of the total 7,990.47 acres of land identified for the Project, approximately 6,607.58 acres would be required in fee, approximately 851.39 acres owned by FPL would be required in perpetual flowage easements, 42 acres owned by FDOT would be provided by Supplemental Agreement, and 490 acres acquired as part of the original Central & Southern Florida Project would be recertified for this Project. No credit shall be afforded and no reimbursement shall be provided for the value of any lands, easements, rights-of-way, or relocations that have been provided previously as an item of cooperation for another federal project. The Recommended Plan will result in some unavoidable impacts to existing mitigation sites required by Department of the Army (DA) Section 404 Permits that are located within both of the impoundment footprints. The Recommended Plan addresses this issue through the acquisition of mitigation bank credits from an established mitigation bank to replace established DA mitigation areas within the impoundment. However, should mitigation bank credits not be available at the time of construction, the optional FDOT wetland mitigation area described in this paragraph and further detailed in the PIR will be constructed. The original plan called for the rehydration of wetland areas on FDOT lands as mitigation to offset wetland impacts resulting from the project. Due to USFWS concerns about selenium tainted soils on the FDOT land and their ecological risk to USFWS trust species, the project will not use these lands for the purpose of wetland mitigation at this time. The current mitigation plan will avoid the FDOT lands, and calls for the purchase of wetland mitigation bank credits (estimated 54 FCUs) to offset the loss of the FDOT lands that would have been used to satisfy project wetland impacts. In order to be ecologically successful, the mitigation areas within the impoundments need additional water (above and beyond what would be provided in a rainfall driven system) which will be supplied by the BCWPA Project.

The ecological lift that would occur as a result of the replacement mitigation in the impoundments is not being counted for Project benefits. The storage provided by the replacement mitigation areas, though not used to justify federal participation in the Project, would contribute to provide downstream benefits.

12. In accordance with the Corps of Engineers' Engineering Circular on review of decision documents, all technical, engineering, and scientific work underwent an open, dynamic, and vigorous review process to ensure technical quality. This included Agency Technical Review (ATR), external scientific review of CERP through the National Academy of Science at the programmatic level, and Corps Headquarters policy and legal review. Independent External Peer Review is not required for this Project because the study was initiated and an array of alternatives was selected over two years prior to the enactment of WRDA 2007. All concerns have been addressed and incorporated into the final PIR. The final PIR/EIS was published for state and agency review on 4 May 2007. In response to comments received from the Florida Department of Environmental Protection (FDEP), the Corps sent a letter in May 2012 that clarified the roles and responsibilities of the Corps and the non-federal sponsor in addressing residual agricultural chemicals on project lands and a parcel known as the Naval Bomb Target, the same parcel is sometimes referred to as the Fort Lauderdale Bombing Target #7 (tract #W92000-001). The Corps clarified that based on past investigations, concurred in by FDEP, that there is no known contamination requiring remediation at the Naval Bomb Target. A number of interest parties commented on the mitigation plan. The Corps has revised the PIR to further clarify that in accordance with Section 2036(c) of WRDA 2007, the mitigation plan is to purchase mitigation bank credits. However, should mitigation bank credits be unavailable at the time of construction, the mitigation will be accomplished by creating the optional FDOT wetland mitigation area described in the PIR and explained in paragraph 11 of this Report. The agencies supported implementation of the recommended plan. The revised final PIR/EIS was also published in the Federal Register and sent to federal and state agencies in April 2012.

13. Section 601(e)(5)(B) of WRDA 2000, as amended by Section 6004 of WRDA 2007, authorizes credit toward the non-federal share for non-federal design and construction work completed during the period of design or construction, subject to execution of the design or project partnership agreement (PPA) and subject to a determination by the Secretary that the work is integral to the Project. As part of its initiative for early implementation of certain CERP projects, the BCWPA Project was included in the "State Expedited Projects and Program" to allow the non-federal sponsor to execute work expeditiously. The work completed by the non-federal sponsor prior to a PPA has focused on engineering and design aspects now a part of the PIR. At this time, the non-federal sponsor does expect to commence construction prior to signing a PPA. The reporting officers believe that it is in the public interest for the Project to be implemented expeditiously due to the regional restoration of federal lands in the Everglades National Park, Water Conservation Areas 3A/3B, and ecological benefits to the south Florida

ecosystems. Therefore, the reporting officers recommend that the non-federal sponsor be credited for all reasonable, allowable, necessary, auditable and allocable costs applicable to the BCWPA Project as may be authorized by law, including those incurred prior to the execution of a PPA, subject to authorization of the Project by law, a determination by the Assistant Secretary of the Army (Civil Works) or his/her designee that the in-kind work is integral to the authorized CERP project, that the costs are reasonable, allowable, necessary, auditable and allocable, and that the in-kind work has been implemented in accordance with government standards and applicable federal and state laws.

14. The non-federal sponsor and the U.S. Department of the Army entered into an agreement known as the Master Agreement Between the Department of the Army and South Florida Water Management District for Cooperation in Constructing and Operating, Maintaining, Repairing, Replacing and Rehabilitating Projects Authorized to be Undertaken Pursuant to the Comprehensive Everglades Restoration Plan, dated 13 August 2009 (hereinafter "Master Agreement"). The Master Agreement sets forth the terms of participation in the construction and OMRR&R of projects under CERP that will apply to any future project for which the non-federal sponsor and the Government have entered into a PPA. The uniform terms of the Master Agreement will be incorporated by reference into the BCWPA Project PPA.

15. Credits for the non-federal sponsor's design and construction work will be evaluated in accordance with the terms of the Master Agreement and Design Agreement. All documentation provided by the non-federal sponsor will be thoroughly reviewed by the Corps to determine reasonable, allowable, necessary, auditable, and allocable costs. Upon completion of this review, a financial audit will be conducted prior to granting final credit. The credit afforded to the non-federal sponsor will be limited to the lesser of the following: (1) actual costs that are reasonable, allowable, necessary, auditable, and allocable to the Project; or (2) the Corps estimate of the cost of the work allocable to the Project had the Corps performed the work. The non-federal sponsor has completed design work using its own funds and would not use funds originating from other federal sources unless the federal granting agency verifies in writing that the expenditure of such funds is expressly authorized by statute and in accordance with Section 601(e)(3) of WRDA 2000 as amended by the Master Agreement.

16. Washington level review indicates that the plan recommended by the reporting officers is environmentally justified, technically sound, cost effective, and socially acceptable. The plan conforms to essential elements of the U.S. Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies and complies with other administration and legislative policies and guidelines. Also, the views of interested parties, including federal, state and local agencies, have been considered.

17. The Project complies with the following requirements of the WRDA 2000, as amended:

a. Project Implementation Report (PIR). The requirements of a PIR as defined by Section 601(h)(4)(A).

b. Reservation or Allocation of Water for the Natural System. Sections 601(h)(4)(A)(iii)(IV) and (V) require identification of the appropriate quantity, timing, and distribution of water dedicated and managed for the natural system and the amount of water to be reserved or allocated for the natural system. In accordance with the regulations, an analysis was conducted to identify water dedicated and managed for the natural system. Accordingly, the non-federal sponsor will protect the water that was identified as necessary to achieve the benefits of the Project, using water reservation or allocation authority under Florida law.

c. Elimination or Transfer of Existing Legal Sources of Water. Section 601(h)(5)(A) states that existing legal sources of water shall not be eliminated or transferred until a new source of water supply of comparable quantity and quality is available to replace the water to be lost as a result of the CERP. An analysis of project effects on existing legal sources of water was conducted and it was determined that implementation of the Broward County Water Preserve Areas Project will not result in a transfer or elimination of existing legal sources of water.

d. Maintenance of Flood Protection. Section 601 (h)(5)(B) states that the Plan shall not reduce levels of service for flood protection that are in existence on the date of enactment of this Act and in accordance with applicable law. Potential flooding effects as a result of the proposed project were analyzed and the results indicated that the proposed project would not have an adverse impact on the level of service for flood protection in the project area.

18. I generally concur with the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan described herein for ecosystem restoration and recreation be authorized for implementation as a federal project, with such modifications as in the discretion of the Chief of Engineers may be advisable, and subject to cost-sharing, financing, and other applicable requirements of Section 601 of WRDA 2000, as amended. In addition, I recommend that the non-federal sponsor be authorized to receive credit for work accomplished prior to execution of a PPA for this project, in accordance with the terms described in paragraphs 13 and 15 of this report.

Further, this recommendation is subject to the non-federal sponsor agreeing to comply with all applicable federal laws and the following items of local cooperation:

a. Provide 50 percent of total project costs consistent with the provisions of Section 601(e) of the WRDA 2000, as amended, including authority to perform design and construction of project features consistent with federal law and regulation.

b. Provide all lands, easements, and rights-of-way, including suitable borrow and dredged or excavated material disposal areas, and perform or assure the performance of all relocations that the Government and the non-Federal sponsor jointly determine to be necessary for the construction and OMRR&R of the Project and valuation will be in accordance with the Master Agreement.

c. Shall not use the ecosystem restoration features or lands, easements, and rights-of-way required for such features as a wetlands bank or mitigation credit for any other non-CERP projects.

d. Give the Government a right to enter, at reasonable times and in a reasonable manner, upon land that the non-Federal sponsor owns or controls for access to the Project for the purpose of inspection and, if necessary, for the purpose of completing, operating, maintaining, repairing, replacing, or rehabilitating the Project.

e. Assume responsibility for operating, maintaining, repairing, replacing, and rehabilitating the Project or completed functional portions of the Project, including mitigation features, in a manner compatible with the Project's authorized purposes and in accordance with applicable Federal and State laws and specific directions prescribed in the OMRR&R manuals and any subsequent amendments thereto. Notwithstanding Section 528(e)(3) of WRDA 1996 (110 Stat. 3770), the non-Federal sponsor shall be responsible for 50 percent of the cost of OMRR&R activities authorized under this section.

f. The non-Federal sponsor shall operate, maintain, repair, replace and rehabilitate the recreational features of the Project and is responsible for 100 percent of the costs.

g. Keep the recreation features, and access roads, parking areas, and other associated public use facilities, open and available to all on equal terms.

h. Unless otherwise provided for in the statutory authorization for this Project, comply with Section 221 of PL 91-611, Flood Control Act of 1970, as amended, and Section 103 of the WRDA of 1986, PL 99-662, as amended which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the Project or separable element.

i. Hold and save the Government free from all damages arising from the construction, OMRR&R of the Project, and any project-related betterments, except for damages due to the fault or negligence of the Government or the Government's contractors.

j. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the Project to the extent and in such detail as will properly reflect total project costs and comply with the provisions of the CERP Master Agreement between the Department of Army and the South Florida Water Management District for Cooperation in Constructing and Operating, Maintaining, Repairing, Replacing, and Rehabilitating Projects Authorized to be Undertaken Pursuant to the Comprehensive Everglades Restoration Plan, executed on 13 August 2009, including Article XI Maintenance of Records and Audit.

k. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 USC 9601-9675, that may exist in, on, or under lands, easements or rights-of-way necessary for the construction and operation and maintenance (O&M) of the Project; except that the non-Federal sponsor shall not perform such investigations on lands, easements, or rights-of-way that the Government determines to be subject to the navigation servitude without prior specific written direction by the Government.

l. Assume complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on or under lands, easements, or right-of-ways necessary for the construction and OMRR&R.

m. As between the Government and the non-Federal sponsor, the non-Federal sponsor shall be considered the operator of the Project for the purposes of CERCLA liability. To the maximum extent practicable, the non-Federal sponsor shall OMRR&R the Project in a manner that will not cause liability to arise under CERCLA.

n. Prevent obstructions of and encroachments on the Project (including prescribing and enforcing regulations to prevent such obstruction or encroachments) which might reduce ecosystem restoration benefits, hinder O&M, or interfere with the Project's proper function, such as any new developments on Project lands or the addition of facilities which would degrade the benefits of the Project.

o. Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, PL 91-646, as amended by the title IV of the Surface Transportation and Uniform Relocation Assistance Act of 1987 (PL 100-17), and Uniform Regulations contained in 49 CFR part 24, in acquiring lands, easements, and rights-of-way, and performing relocations for construction, O&M of the Project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.

p. Comply with all applicable Federal and State laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, PL 88-352, and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled, "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army," and all applicable Federal labor standards and requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701-3708 (revising, codifying and enacting without substantive change the provisions of the Davis-Bacon Act [formerly 40 U.S.C. 276a et seq.], the Contract Work Hours and Safety Standards Act [formerly 40 U.S.C. 327 et seq.] and the Copeland Anti-Kickback Act [formerly 40 U.S.C. 276c]).

q. Comply with Section 106 of the National Historic Preservation Act in completion of all consultation with Florida's State Historic Preservation Office and, as necessary, the Advisory Council on Historic Preservation prior to construction as part of the Pre-construction Engineering and Design phase of the Project.

r. Provide 50 percent of that portion of total cultural resource preservation mitigation and data recovery costs attributable to the Project that are in excess of one percent of the total amount authorized to be appropriated for the Project.

s. Do not use Federal funds to meet the non-Federal sponsor's share of total project costs unless the Federal granting agency verifies in writing that the expenditure of such funds is expressly authorized and in accordance with Section 601(e)(3) of WRDA 2000.

t. The non-Federal sponsor agrees to participate in and comply with applicable Federal floodplain management and flood insurance programs consistent with its statutory authority.

(1) Not less than once each year the non-Federal sponsor shall inform affected interests of the extent of protection afforded by the Project.

(2) The non-Federal sponsor shall publicize flood plain information in the area concerned and shall provide this information to zoning and other regulatory agencies for their use in preventing unwise future development in the flood plain and in adopting such regulations as may be necessary to prevent unwise future development and to ensure compatibility with protection levels provided by the Project.

(3) The non-Federal sponsor shall comply with Section 402 of WRDA 1986, as amended (33 U.S.C. 701b-12), which requires a non-Federal interest to have prepared, within one year after the date of signing a project partnership agreement for the Project, a floodplain management plan. The plan shall be designed to reduce the impacts of future flood events in the project area, including but not limited to, addressing those measures to be undertaken by non-

Federal interests to preserve the level of flood protection provided by the Project. As required by Section 402, as amended, the non-Federal interest shall implement such plan not later than one year after completion of construction of the Project. The non-Federal sponsor shall provide an information copy of the plan to the Government upon its preparation.

(4) The non-Federal sponsor shall prescribe and enforce regulations to prevent obstruction of or encroachment on the Project or on the lands, easements, and rights-of-way determined by the Government to be required for the construction, operation, maintenance, repair, replacement, and rehabilitation of the Project, that could reduce the level of protection the Project affords, hinder operation or maintenance of the Project, or interfere with the Project's proper function.

u. The non-federal sponsor shall execute under State law the reservation or allocation of water for the natural system as identified in the PIR for this authorized CERP Project as required by Sections 601(h)(4)(B)(ii) of WRDA 2000 and the non-Federal sponsor shall provide information to the Government regarding such execution. In compliance with 33 CFR 385, the District Engineer will verify such reservation or allocation in writing. Any change to such reservation or allocation of water shall require an amendment to the PPA after the District Engineer verifies in writing in compliance with 33 CFR 385 that the revised reservation or allocation continues to provide for an appropriate quantity, timing, and distribution of water dedicated and managed for the natural system after considering any changed circumstances or new information since completion of the PIR for the authorized CERP Project.

19. The recommendation contained herein reflects the information available at this time and current Departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities in the formulation of a national Civil Works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to the Congress as a proposal for authorization and implementation funding.

MERDITH W.B. TEMPLE
Major General, USA
Acting Commander

DEPARTMENT OF THE ARMY
CHIEF OF ENGINEERS
2600 ARMY PENTAGON
WASHINGTON, DC 20310-2600

REPLY TO
ATTENTION OF

22 JUN 2012

CECW-MVD (1105-2-10a)

SUBJECT: Louisiana Coastal Area (LCA), Barataria Basin Barrier Shoreline Restoration Project, Lafourche, Jefferson, and Plaquemines Parishes, Louisiana

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration for Barataria Basin Barrier Shoreline (BBBS) in Lafourche, Jefferson, and Plaquemines Parishes, Louisiana. It is accompanied by the report of the New Orleans District Engineer and the Mississippi Valley Division Engineer. These reports are in final response to the authorization for BBBS contained in Section 7006(c)(1)(C) of the Water Resources Development Act of 2007 (WRDA 2007).

2. Section 7006(c)(1) of WRDA 2007 authorizes the Secretary to carry out five projects, including the BBBS project, substantially in accordance with the Report of the Chief of Engineers for ecosystem restoration for the Louisiana Coastal Area dated January 31, 2005. Section 7006(c)(3) states that before beginning construction of any project under Section 7006(c), the Secretary shall submit a report documenting any modifications to the project, including cost changes, to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Environment and Public Works of the Senate. Section 7006(c)(4) states that notwithstanding Section 902 of the Water Resources Development Act of 1986, the cost of a project under Section 7006(c), including any modifications to the project, shall not exceed 150 percent of the cost of such project set forth in Section 7006(c)(1). Preconstruction engineering and design activities on the BBBS project will be continued under the authority provided by Section 7006(c)(1)(C). Construction of the recommended plan for BBBS will be undertaken under the Section 7006(c)(1)(C) authority as well, except for construction of the Shell Island component.

3. The Report of the Chief of Engineers for ecosystem restoration for the Louisiana Coastal Area, dated January 31, 2005, (hereinafter referred to as the LCA Chief's report), describes a plan to address the most critical restoration needs in coastal Louisiana. Congress authorized these projects for construction in WRDA 2007 Title VII. This report addresses BBBS, one of the 15 near-term ecosystem restoration features described in the LCA Chief's report.

4. In accordance with Section 7006(c)(1)(C), the reporting officers recommend that the Secretary carry out the Caminada Headland component of the recommended plan for BBBS under the existing authorization. The reporting officers also recommend that the Congress raise the total project cost for the recommended plan for BBBS. The recommended plan for BBBS is consistent

with the authorization in Section 7006(c)(1)(C) of WRDA 2007, but modification of that authorization is required because the total costs for the recommended plan for BBBS, including both the Caminada Headland component and Shell Island component, exceeds the authorized cost for the BBBS project as defined in Section 7006(c)(4) of WRDA 2007.

5. The BBBS is located approximately 55 miles south of New Orleans, Louisiana. It is a key component in regulating estuary hydrology and slowing the rate of wetland loss. Caminada Headland, forming the western portion of the barrier shoreline, has experienced some of the highest rates of shoreline retreat on the Gulf coast. Shell Island forms the eastern portion of the barrier and has disintegrated into several smaller islands and shoals and is gradually converting to a series of bays directly connected to the Gulf of Mexico. The two reaches were identified in the LCA Chief's Report as the most critical to maintaining Barataria shoreline integrity and protecting the interior coast from further degradation. The BBBS project described in the LCA Chief's report consisted of dredging and placing sediments to restore barrier dunes and marshes. At Caminada Headland, about 9-10 million cubic yards (mcy) of sand would be placed to create a dune approximately 6 feet high with a shoreward berm about 1000 feet wide and13 miles long. Approximately 6 mcy of material would be placed to create about 3,000 acres of marsh. The project would provide a net increase of 640 acres of dune/berm habitat and 1,780 acres of saline marsh habitat at Caminada Headland. Shell Island would be restored to a two-island configuration. At Shell Island (west) approximately 3.4 mcy of sand would be placed to create about 139 acres of dune and about 74 acres of marsh. Approximately 6.6 mcy of sand would be placed at Shell Island (east) to create about 223 acres of dune/berm and about 191 acres of marsh. The project would provide about 147 acres of shoreline habitat on Shell Island.

6. The reporting officers reviewed the BBBS project described in the LCA Chief's report, as well as the changed physical conditions of the shoreline. Since 2005 it has continued to degrade and has been heavily impacted by hurricanes and tropical storms. Based on this review the reporting officers developed the recommended plan presented in this report to respond to the changed conditions and to be consistent with the direction provided in WRDA 2007. As in the LCA Chief's Report, this recommended plan includes dune and marsh restoration at Caminada Headland and Shell Island, the barrier system's most critical components. The recommended plan is the National Ecosystem Restoration (NER) plan. It will restore the barrier system's geomorphic and hydrologic form. It will restore critical habitat for the threatened piping plover, as well as valuable stopover habitats for migratory birds and Essential Fish Habitats for a variety of fish and shellfish. It will protect the interior coast from further degradation, and the sediment input will supplement long shore sediment transport processes, increasing the restored area's sustainability.

7. The recommended plan consists of dredging and placing approximately 5.1 mcy of sand to restore and create about 880 acres of dune at Caminada Headland. Dune height would be + 7 feet North American Vertical Datum of 1988 (NAVD88) with a crown width of 290 feet and

slopes of 20 feet horizontal to 1 foot vertical. The proposed borrow source for Caminada dune material is Ship Shoal, located about 40 miles from the project site. Approximately 5.4 mcy of material would be placed landward of the dune to restore and create approximately 1,186 acres of marsh at an elevation of +2.0 feet NAVD88. The proposed borrow source for Caminada marsh material is located approximately 1.5 miles south of the Headland. Approximately 71,500 feet of sand fencing would be installed and a variety of native vegetation species would be planted on approximately 8 foot centers. Shell Island would be restored to its pre-Hurricane Bob (1979) single island configuration. About 5.6 mcy of sand and 23,800 feet of sand fencing would be placed to build approximately 317 acres of dunes to a height of +6 feet NAVD88 with a crown width of 189 feet and slopes of 45 feet horizontal to 1 foot vertical. The proposed borrow source for Shell Island dune material is the Mississippi River, about 11 miles north of the project site. Approximately 2.1 mcy of sediment would be placed to restore about 466 acres of marsh at an elevation of +2 feet NAVD88. The proposed borrow source for marsh material is an offshore site south of the Empire Jetties. A variety of native vegetation species would be planted on approximately 8 foot centers.

8. The recommended plan includes renourishment at staggered intervals to maintain the headland and island over time. As part of the non-Federal sponsor's Operation, Maintenance, Repair, Replacement and Rehabilitation (OMRR&R) responsibilities, renourishment of the Caminada Headland would be implemented every 1.5 to 2 years in conjunction with Corps operation and maintenance dredging of the Bayou Lafourche, Louisiana (Belle Pass) navigation project. Shell Island would be renourished by the non-Federal sponsor 20 and 40 years after initial construction to the original construction template, as part of its OMRR&R responsibilities.

9. The recommended plan contains post-construction monitoring and adaptive management at an estimated cost of $1,300,000 to be conducted for a period of no more than ten years to ensure project performance. Monitoring may be cost-shared for a period of no more than ten years. The non-Federal sponsor is responsible for monitoring required beyond ten years. Because the recommended plan is an ecosystem restoration plan, it does not have any significant adverse effects, and no mitigation measures would be required.

10. The State of Louisiana is the non-Federal cost-sharing sponsor for all features and supports the recommended plan described herein. Based on October 2011 price levels, the estimated project first cost for the recommended plan is $428,000,000. In accordance with the cost sharing provisions in WRDA 1986, as amended by Section 210 of WRDA 1996 the Federal share of the total first cost would be about $278,000,000 (65 percent) and the non-Federal share would be about $150,000,000 (35 percent). The project first cost includes an estimated $1,300,000 for environmental monitoring and adaptive management. The State of Louisiana, acting as the non-Federal sponsor, is required to provide all lands, easements, relocations, right-of-ways and dredged or excavated material disposal areas (LERRDs), the costs of which are estimated at $3,660,000. Further, the non-Federal sponsor is responsible for OMRR&R of the project after

construction, including renourishment, currently estimated at about $6,180,000 annually. Based on a 4 percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the recommended plan are estimated to be $27,000,000 including OMRR&R.

11. The reporting officers recommend that the Caminada Headland component of the NER plan be implemented under the existing authority provided in Section 7006(c)(1)(C) of WRDA 2007. The reporting officers also recommend that the Congress increase the authorized total project cost so that the entire recommended (NER) plan can be implemented. Modification of the authorization provided by Section 7006(c)(1)(C) is required because the cost of the recommended NER plan, including both the Caminada Headland and Shell Island components, exceeds the authorized cost limit as defined in Section 7006(c)(4). Costs to accomplish the original goals of the BBBS project have increased because the shoreline system has continued to degrade since the LCA Chief's report was completed. In addition, the cost of dredging and placing material, the largest component of this project, has increased because of increases in fuel and construction costs post-hurricane Katrina. The State of Louisiana, acting as the non-Federal sponsor, supports immediate implementation of the Caminada component.

12. Based on October 2011 price levels, the estimated first cost for the Caminada Headland component is $224,000,000. In accordance with the cost sharing provisions in WRDA 1986, as amended by Section 210 of WRDA 1996, the Federal share of the first cost would be about $146,000,000 (65 percent) and the non-Federal share would be about $78,000,000 (35 percent). The first cost includes an estimated $630,000 for environmental monitoring and adaptive management. The State of Louisiana, acting as the non-Federal sponsor, is required to provide all LERRDs, the costs of which are estimated at $1,650,000. Further, the non-Federal sponsor is responsible for OMRR&R of the project after construction, including renourishment, currently estimated at about $4,250,000 annually. Based on a 4 percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the recommended plan are estimated to be $14,600,000 including OMRR&R.

13. The reporting officers found the recommended plan and each of the components to be cost effective, technically sound, and environmentally and socially acceptable. The cost of the recommended aquatic ecosystem restoration features is justified by the decrease in shoreline erosion and loss of wetlands; the restored barrier system's regulation of salinity gradients and maintenance of the estuary critical to fish and wildlife, such as white and brown shrimp; the maintenance of geomorphic form that attenuates storm surge for interior wetlands and surrounding coastal communities, including Port Fourchon, major oil and gas infrastructure and the regional hurricane evacuation route for residents of southern Lafourche Parish; and the approximately 1719 AAHUs of beach/dune and marsh habitats provided 988 AAHUs on Caminada Headland and 731 AAHUs on Shell Island. The recommended plan conforms to essential elements of the U.S. Water Resources Council's Economic and Environmental Studies and complies with other administration and legislative policies and guidelines. The

recommended plan was developed in coordination and consultation with various Federal, State and local agencies using a systems approach in formulating ecosystem restoration solutions and in evaluating the impacts and benefits of those solutions. Study formulation looked at a wide range of structural and non-structural alternatives. Further refinement and additional analysis of the project will be performed during preconstruction engineering and design, and modifications will be made, as appropriate, prior to project implementation. Such analysis or modifications will continue to be coordinated with Federal, State, and local agencies and other parties.

14. In accordance with the Engineering Circular on review of decision documents, all technical, engineering and scientific work underwent an open, dynamic and rigorous review process to ensure technical quality. This included an independent Agency Technical Review (ATR), an Independent External Peer Review (IEPR), and a Corps Headquarters policy and legal review. All concerns of the ATR have been addressed and incorporated into the report. The IEPR was conducted by the Battelle Memorial Institute. IEPR of the draft report was completed on December 2, 2011. A total of 16 comments were generated. No comments were rated high significance, 15 were rated medium, and 1 was rated low significance. All comments from this review have been addressed and incorporated into the final project documents and recommendation as appropriate.

15. I concur in the findings, conclusions, and recommendation of the reporting officers. Accordingly, I recommend project implementation, in accordance with the reporting officers' recommendations with such modifications as in the discretion of the Chief of Engineers may be advisable. I further recommend, in accordance with the reporting officers recommendations, that the authorization be modified to raise the total project cost to allow for construction of the entire NER plan. My recommendations are subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including WRDA 1986, as amended by Section 210 of WRDA 1996. The State of Louisiana, acting as the non-Federal sponsor, would provide the non-Federal cost share and all lands, easements, relocations, right-of-ways and disposals. Further, the non-Federal sponsor would be responsible for all OMRR&R. This recommendation is subject to the non-Federal sponsor agreeing to comply with all applicable Federal laws and policies, including but not limited to its agreeing to:

a. Provide 35 percent of ecosystem restoration project costs as further specified below:

(1) Provide the non-Federal share of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

(2) Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material that

the Government determines to be necessary for the construction, operation, maintenance, repair, replacement, and rehabilitation of the project;

(3) Provide, during construction, any additional funds necessary to make its total contribution equal to 35 percent of the total project costs allocated to the project;

b. Provide the non-Federal share of that portion of the costs of mitigation and data recovery activities associated with historic preservation, that are in excess of 1 percent of the total amount authorized to be appropriated for the project;

c. Not use funds provided by a Federal agency under any other Federal program, to satisfy, in whole or in part, the non-Federal share of the cost of the project unless the Federal agency that provides the funds determines that the funds are authorized to be used to carry out the study or project;

d. Not use the project or lands, easements, and rights-of-way required for the project as a wetlands bank or mitigation credit for any other project;

e. For as long as the project remains authorized, operate, maintain, repair, replace, and rehabilitate the project, or functional portion of the project, including mitigation, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

f. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor, now or hereafter, owns or controls for access to the project for the purpose of inspecting, operating, maintaining, repairing, replacing, rehabilitating, or completing the project. No completion, operation, maintenance, repair, replacement, or rehabilitation by the Federal Government shall relieve the non-Federal sponsor of responsibility to meet the non-Federal sponsor's obligations, or to preclude the Federal Government from pursuing any other remedy at law or equity to ensure faithful performance;

g. Hold and save the United States free from all damages arising from the construction, operation, maintenance, repair, replacement, and rehabilitation of the project and any project-related betterments, except for damages due to the fault or negligence of the United States or its contractors;

h. Perform, or cause to be performed, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or

under lands, easements, or rights-of-way that the Federal Government determines to be required for the initial construction, periodic nourishment, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigations unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

i. Assume, as between the Federal Government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any CERCLA regulated materials located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be necessary for the initial construction, periodic nourishment, operation, or maintenance of the project;

j. Agree that, as between the Federal Government and the non-Federal sponsor, the non-Federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, and repair the project in a manner that would not cause liability to arise under CERCLA;

k. Prevent obstructions of or encroachments on the project (including prescribing and enforcing regulations to prevent such obstruction or encroachments) which might reduce ecosystem restoration benefits, hinder operation and maintenance, or interfere with the project's proper function, such as any new developments on project lands or the addition of facilities which would degrade the benefits of the project;

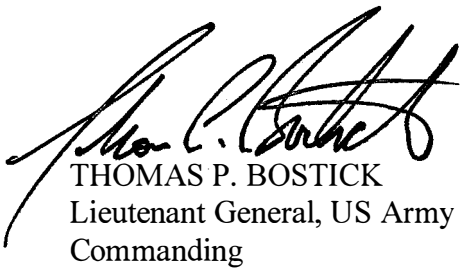
l. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three years after completion of the accounting for which such books, records, documents, and other evidence is required, to the extent and in such detail as would properly reflect total costs of construction of the project, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 Code of Federal Regulations (CFR) Section 33.20;

m. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5), and Section 103 of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until the non-Federal sponsor has entered into a written agreement to furnish its required cooperation for the project or separable element;

n. Comply with all applicable Federal and state laws and regulations, including, but not limited to, Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d), and Department of Defense Directive 5500.11 issued pursuant thereto, as well as Army Regulation 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army," and all applicable Federal labor standards and requirements, including but not limited to 40 U.S.C. 3141- 3148 and 40 U.S.C. 3701 – 3708 (revising, codifying, and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a et seq.), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 et seq.) and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c et seq.); and

o. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 CFR Part 24, in acquiring lands, easements, and rights-of-way necessary for the initial construction, periodic nourishment, operation, and maintenance of the project, including those necessary for relocations, borrow materials, and dredged or excavated material disposal, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.

16. The recommendations contained herein reflect the information available at this time and current departmental policies governing the formulation of individual projects. They do not reflect program and budgeting priorities inherent in the formulation of the national civil works construction program or the perspective of higher levels within the executive branch. Consequently, the recommendations may be modified before they are transmitted to Congress for additional authorization and/or implementation funding. However, prior to transmittal to Congress, the State of Louisiana, interested Federal agencies, and other parties will be advised of any significant modifications in the recommendations and will be afforded an opportunity to comment further.



THOMAS P. BOSTICK
Lieutenant General, US Army
Commanding

DEPARTMENT OF THE ARMY
CHIEF OF ENGINEERS
2600 ARMY PENTAGON
WASHINGTON, D.C. 20310-2600

DAEN

APR 2 3 2013

SUBJECT: Neuse River Basin, Ecosystem Restoration Project, North Carolina

THE SECRETARY OF THE ARMY

1. I submit for transmission to Congress my report on ecosystem restoration in the Neuse River Basin, North Carolina. It is accompanied by the report of the district and division engineers. These reports are in final response to two resolutions by the Committee of Public Works of the United States House of Representatives, adopted April 15, 1966, and the Committee on Transportation and Infrastructure, adopted July 23, 1997. The 1966 resolution requested a review of the report of the Chief of Engineers on the Neuse River Basin, North Carolina, published as House Document Numbered 175, Eighty-ninth Congress, and other pertinent reports to determine whether any modifications to the recommendations contained in the report are advisable. The 1997 resolution further requested a review of House Document 175 to determine where modifications of the recommendations are advisable in the interest of flood control (flood risk management), environmental protection and restoration, and related purposes. Preconstruction engineering and design activities for the Neuse River Basin ecosystem restoration project will continue under the authority adopted in July 1997.

2. The Neuse River Basin, the third-largest river basin in North Carolina contains a total area of 6,234 square miles, is one of only four watersheds entirely within the state. It originates at the confluence of the Eno and Flat Rivers in north central North Carolina near the city of Durham and flows southeasterly until reaching tidal waters upstream of the city of New Bern, North Carolina where the river broadens dramatically and changes from a unidirectional freshwater regime to a mixed tidal regime of the Neuse River Estuary before flowing out into Pamlico Sound and the Atlantic Ocean. The Neuse River Basin has experienced severe flooding in the past; consequently elements of the Basin ecosystem have shown signs of significant stress and degradation.

The ecosystem significance of the area is demonstrated on the national, regional, and local level. The Neuse River Basin includes 7 essential fish habitats and 12 significant natural heritage areas. The Neuse River Basin feeds one of the nation's largest and most productive coastal estuaries (Albemarle-Pamlico Sounds). The Albemarle-Pamlico estuary system, which is in the National Estuary Program, is a nursery for 90 percent of the commercial seafood species caught in North Carolina. In 2011 the value of seafood landed in North Carolina had an estimated dockside value of $72.8 million.

The federally listed shortnosed sturgeon will directly benefit from the opening of the dam which will improve passage for migration. The Neuse River Basin is also home to 17 species of rare freshwater mussels, two of which are federally listed as endangered, and a rare snail species. The federally listed dwarf wedgemussel and Tar River spinymussel will benefit from the restoration by increasing fish host for transportation. The Neuse River basin also provides habitat for 7 other federally listed

endangered species which include, the West Indian manatee, Red-cockaded woodpecker, Leatherback sea turtle and the Kemp's Ridley sea turtle.

3. The reporting officers recommend authorization of a plan to restore four components of the Neuse River Basin ecosystem. The plan includes construction of rock sills approximately 3,500 feet long at Gum Thicket Creek and 5,200 feet long at Cedar Creek, built at distances of about 60 feet offshore; regrading a previously filled area within the Kinston East wetland complex to the approximate elevation of the adjacent bottomland hardwood forest and allowing natural revegetation of the site by bottomland hardwood species and limited planting; modifying the Low-head Dam on the Little River to allow migration of anadromous fish; and the creation of 10 acres of 4 foot-high oyster reef within an 80 acre service area. The recommended plan is the National Ecosystem Restoration Plan. Implementation of the recommended plan will have a substantial beneficial impact on biological integrity, freshwater mussel populations, anadromous fish populations, emergent wetlands, and the quantity and quality of oyster reef habitat.

4. Based on an October 2012 (FY13) price level the estimated project first cost is $35,774,000. In accordance with the cost sharing provisions contained in Section 103(c) of the Water Resources Development Act of 1986 (WRDA 1986), as amended (33 U.S.C. 2213(c)), ecosystem restoration features are cost-shared at a rate of 65 percent Federal and 35 percent non-Federal. Thus the Federal share of the project first cost is estimated to be $23,253,100 and the non-Federal share is estimated at $12,520,900, which includes the costs of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRD) estimated at $254,000. The non-Federal will receive credit for the costs of LERRD towards the non-Federal share. The North Carolina Department of Environment and Natural Resources (NCDENR) Division of Water Resources (NCDWR) is the non-Federal cost-sharing sponsor for the recommended plan. The State of North Carolina would be responsible for the operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) of the project after construction, an average annual cost currently estimated at $24,000.

5. Based on a 3.75 percent discount rate and a 50-year period of analysis, the total equivalent average annual costs of the project are estimated to be $1,671,000, including monitoring estimated at $312,000 and OMRR&R. All project costs are allocated to the authorized purpose of ecosystem restoration and are justified by the restoration of 241 average annual functional units in the Basin. The plan would restore the habitats in the most cost-effective manner. The restoration would include 1) creating 80 acres of oyster reef sanctuary with approximately 10 acres of reef top resulting in improved water quality and habitat for commercial and recreational seafood, 2) increasing wetland habitat by 14.5 acres of bottomland hardwoods, creating 15 acres of estuarine marsh, preventing degradation of another 60 acres of estuarine march and protecting a 240 acre wetland conservation easement area for wetland species and improved water resource function, and 3) restoring hydrologic connectivity for 46 miles of important spawning habitat for anadromous fish species.

6. The recommended plan was developed in coordination and consultation with various Federal, State, and local agencies using cost effectiveness and incremental cost analysis techniques to formulate ecosystem restoration solutions and evaluate the impacts and benefits of those solutions. Plan formulation evaluated a wide range of non-structural and structural alternatives under Corps policy and guidelines as well as consideration of a variety of economic, social and environmental

goals. The recommended plan delivers a holistic, comprehensive approach to solve water resources challenges in a sustainable manner.

7. In accordance with the Corps Engineering Circular on sea level change, the study performed an analysis of three Sea Level Rise rates, a baseline estimate representing the minimum expected sea level change, an intermediate estimate, and a high estimate representing the maximum expected sea level change. Projecting the three rates of change over a 50 year period provides a predicted low level rise of 0.42 feet (ft), an intermediate level rise of 0.85 ft and a high level rise of 2.2 ft. Accelerated sea level rise is expected to impact only one part of the recommended plan, which is the Gum Thicket/Cedar Creek site. Accelerated rates of future sea level rise may lead to drowning scenarios of North Carolinas tidal coastal wetlands. It is estimated in the without project condition, at the Gum Thicket reach up to 450 ft of erosion could occur under the historical rate of sea level rise, 671 ft of erosion could occur under the baseline estimate and up to 1,381 ft of erosion could occur under the high estimate over the 50 year period of analysis. At the Cedar Creek reach, 100 ft, 149 ft and 306 ft of erosion could occur under historical sea level rise and for baseline, intermediate and high scenarios, respectively, over the 50 year period of analysis. The environmental benefits of the recommended were based on erosion occurring at the historical rate of sea level rise, this means that the environmental benefits from the plan would actually increase with the accelerated sea level rise scenarios. Average annual habitat benefits for the recommended plan at Gum Thicket/Cedar Creek under the baseline scenario are estimated at 52.7 habitat units (a 10.0 habitat unit increase as compared to the historical sea level rate). Both the shoreline stabilization and marsh creation at Gum Thicket and Cedar Creeks would be affected by sea level rise. The project is designed based upon a historical rate of sea level rise. To reduce risks from potential accelerated sea level rise on the plantings, marsh restoration would include both low and high marshes allowing upslope mitigation of low-lying marshes. The sill design accounts for the historical rate of sea level rise applied over 50 years.

8. In accordance with Corps Engineering Circular on review of decision documents, all technical, engineering and scientific work underwent an open, dynamic and vigorous review process to ensure technical quality. This included District Quality Control, Agency Technical Review (ECO-PCX), Policy and Legal Compliance Review, Cost Engineering Directory of Expertise Review and Certification, and Model Review and Approval. Given the nature of the project, an exclusion from the requirement to conduct a Type I Independent External Peer Review was granted on 18 May 2012. Concerns expressed by the ECO-PCX team have been addressed and incorporated in the final report.

9. Washington level review indicates the plan recommended by the reporting officers is technically sound, environmentally and socially acceptable, and on the basis of Congressional directives, economically justified. The plan complies with all essential elements of the U.S. Water Resources Council's Economic and Environmental Principal and Guidelines for Water and Land Related Resources Implementation Studies. The recommended plan complies with other administration and legislative policies and guidelines. The views of interested parties including Federal, State and local agencies have been considered. State and Agency comments received during review of the final report and environmental assessment included concerns raised by the North Carolina Clearinghouse, the Environmental Protection Agency and the United States Coast Guard with design refinements for compliance with regulations and benefit improvements, as well as a request for continued coordination during the Preconstruction, Engineering and Design phase. The concerns were addressed through USACE response letters dated 7 March 2013, 12 February 2013,

and 26 February 2013, respectively.

10. I concur in the findings, conclusions, and recommendations of the reporting officers. Accordingly, I recommend that the plan for ecosystem restoration in the Neuse River Basin, North Carolina be authorized in accordance with the reporting officers' recommended plan at an October 2012 (FY13) estimated cost of $35,774,000 with such modifications as in the discretion of the Chief of Engineers may be advisable. My recommendation is subject to cost sharing, financing, and other applicable requirements of Federal and State laws and policies, including Section 103 of the Water Resources Development Act (WRDA) of 1986, as amended (33 U.S.C. 2213). Accordingly, the non-Federal sponsor must agree with the following requirements prior to project implementation.

a. Provide 35 percent of total ecosystem restoration costs as further specified below:

(1) Provide 35 percent of design costs in accordance with the terms of a design agreement entered into prior to commencement of design work for the project;

(2) Provide all lands, easements, and rights-of-way, including those required for relocations, the borrowing of material, and the disposal of dredged or excavated material; perform or ensure the performance of all relocations; and construct all improvements required on lands, easements, and rights-of-way to enable the disposal of dredged or excavated material all as determined by the Government to be required or to be necessary for the construction, operation, and maintenance of the project;

(3) Provide, during construction, any additional funds necessary to make its total contribution equal to 35 percent of total project costs;

b. Shall not use funds from other Federal programs, including any non-Federal contribution required as a matching share therefore, to meet any of the non-Federal obligations for the project unless the Federal agency providing the Federal portion of such funds verifies in writing that expenditure of such funds for such purpose is authorized by Federal law;

c. Prevent obstructions or encroachments on the project (including prescribing and enforcing regulations to prevent such obstructions or encroachments) such as any new developments on project lands, easements, and rights-of-way or the addition of facilities which might reduce the outputs produced by the project, hinder operation and maintenance of the project, or interfere with the project's proper function;

d. Shall not use the project or lands, easements, and rights-of-way required for the project as a wetlands bank or mitigation credit for any other project;

e. Comply with all applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, as amended (42 U.S.C. 4601-4655), and the Uniform Regulations contained in 49 Code of Federal Regulations (CFR) Part 24, in acquiring lands, easements, and rights-of-way required for construction, operation, and maintenance of the project, including those necessary for relocations, the borrowing of materials, or the disposal of dredged or excavated material; and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act;

f. For so long as the project remains authorized, operate, maintain, repair, rehabilitate, and replace the project, or functional portions of the project, including any mitigation features, at no cost to the Federal Government, in a manner compatible with the project's authorized purposes and in accordance with applicable Federal and State laws and regulations and any specific directions prescribed by the Federal Government;

g. Give the Federal Government a right to enter, at reasonable times and in a reasonable manner, upon property that the non-Federal sponsor owns or controls for access to the project for the purpose of completing, inspecting, operating, maintaining, repairing, rehabilitating, or replacing the project;

h. Hold and save the United States free from all damages arising from the design, construction, operation, maintenance, repair, rehabilitation, and replacement of the project and any betterments, except for damages due to the fault or negligence of the United States or its contractors;

i. Keep and maintain books, records, documents, and other evidence pertaining to costs and expenses incurred pursuant to the project, for a minimum of three years after completion of the accounting for which such books, records, documents, and other evidence are required, to the extent and in such detail as will properly reflect total project costs, and in accordance with the standards for financial management systems set forth in the Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments at 32 CFR Section 33.20;

j. Comply with all applicable Federal and State laws and regulations, including, but not limited to: Section 601 of the Civil Rights Act of 1964, Public Law 88-352 (42 U.S.C. 2000d) and Department of Defense Directive 5500.11 issued pursuant thereto; Army Regulations 600-7, entitled "Nondiscrimination on the Basis of Handicap in Programs and Activities Assisted or Conducted by the Department of the Army"; and all applicable Federal labor standards requirements including, but not limited to, 40 U.S.C. 3141-3148 and 40 U.S.C. 3701 – 3708 (revising, codifying and enacting without substantial change the provisions of the Davis-Bacon Act (formerly 40 U.S.C. 276a *et seq.*), the Contract Work Hours and Safety Standards Act (formerly 40 U.S.C. 327 *et seq.*), and the Copeland Anti-Kickback Act (formerly 40 U.S.C. 276c *et seq.*));

k. Perform, or ensure performance of, any investigations for hazardous substances that are determined necessary to identify the existence and extent of any hazardous substances regulated under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), Public Law 96-510, as amended (42 U.S.C. 9601-9675), that may exist in, on, or under the lands, easements, or rights-of-way that the Federal Government determines to be required for construction, operation, and maintenance of the project. However, for lands that the Federal Government determines to be subject to the navigation servitude, only the Federal Government shall perform such investigation unless the Federal Government provides the non-Federal sponsor with prior specific written direction, in which case the non-Federal sponsor shall perform such investigations in accordance with such written direction;

l. Assume, as between the Federal Government and the non-Federal sponsor, complete financial responsibility for all necessary cleanup and response costs of any hazardous substances regulated under CERCLA that are located in, on, or under lands, easements, or rights-of-way that the Federal Government determines to be required for construction or operation and maintenance of the project;

m. Agree, as between the Federal Government and the non-Federal sponsor, that the non-Federal sponsor shall be considered the operator of the project for the purpose of CERCLA liability, and to the maximum extent practicable, operate, maintain, repair, rehabilitate, and replace the project in a manner that will not cause liability to arise under CERCLA;

n. Comply with Section 221 of Public Law 91-611, Flood Control Act of 1970, as amended (42 U.S.C. 1962d-5b), and Section 103(j) of the Water Resources Development Act of 1986, Public Law 99-662, as amended (33 U.S.C. 2213(j)), which provides that the Secretary of the Army shall not commence the construction of any water resources project or separable element thereof, until each non-Federal interest has entered into a written agreement to furnish its required cooperation for the project or separable element.

11. The recommendation contained herein reflects the information available at this time and current departmental policies governing formulation of individual projects. It does not reflect program and budgeting priorities inherent in the formulation of a national civil works construction program or the perspective of higher review levels within the executive branch. Consequently, the recommendation may be modified before it is transmitted to Congress as a proposal for authorization and implementation funding. However, prior to transmittal to Congress, the sponsor, the State, interested Federal agencies, and other parties will be advised of any significant modifications and will be afforded an opportunity to comment further.

THOMAS P. BOSTICK
Lieutenant General, USA
Chief of Engineers

such construction is in compliance with the plans approved by the Secretary and that the costs are reasonable.

[(4) LIMITATION ON REIMBURSEMENTS.—No reimbursement shall be made under this section unless and until the Secretary has certified that the work for which reimbursement is requested has been performed in accordance with applicable permits or approved plans.]

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[SEC. 225. CHALLENGE COST-SHARING PROGRAM FOR THE MANAGEMENT OF RECREATION FACILITIES.]

SEC. 225. CONTRIBUTIONS BY NON-FEDERAL INTERESTS FOR MANAGEMENT OF CORPS OF ENGINEERS FACILITIES.

(a) IN GENERAL.—The Secretary is authorized to develop and implement a program to share the cost of [managing recreation facilities] *operating, maintaining, and managing inland navigational facilities, recreational facilities,* and natural resources at water resource development projects under the Secretary's jurisdiction.

(b) COOPERATIVE AGREEMENTS.—To implement the program under this section, the Secretary is authorized to enter into cooperative agreements with non-Federal public and private entities to provide for operation [and management of recreation facilities], *maintenance, and management of inland navigation facilities, recreational facilities,* and natural resources at civil works projects under the Secretary's jurisdiction where such facilities and resources are being maintained at complete Federal expense.

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WATER RESOURCES DEVELOPMENT ACT OF 1990

SECTION 1. SHORT TITLE; TABLE OF CONTENTS.

(a) * * *

(b) TABLE OF CONTENTS.—

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TITLE IV—MISCELLANEOUS PROVISIONS

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[Sec. 404. Demonstration of construction of Federal project by non-Federal interests.]

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TITLE IV—MISCELLANEOUS PROVISIONS

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[SEC. 404. DEMONSTRATION OF CONSTRUCTION OF FEDERAL PROJECT BY NON-FEDERAL INTERESTS.

[(a) IN GENERAL.—For purposes of demonstrating the safety benefits and economic efficiencies which would accrue as a consequence of non-Federal management of harbor improvement

projects, the Secretary shall enter into agreements with 2 non-Federal interests pursuant to which the non-Federal interests will undertake part or all of a harbor project authorized by law, by utilizing their own personnel or by procuring outside services, if the cost of doing so will not exceed the cost of the Secretary undertaking the project. If proposals for such agreements meet the criteria of section 204 of the Water Resources Development Act of 1986, the agreements shall be entered into not later than 1 year after the date of the enactment of this Act.

[(b) LIMTATION.—At least 1 project carried out pursuant to this section shall pertain to improvements to a major ship channel which carries a substantial volume of both passenger and cargo traffic.

[(c) REPORT.—The Secretary shall transmit to Congress a report regarding the safety benefits and economic efficiencies accrued from entering into agreements with non-Federal interests under this section.]

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ACT OF JUNE 22, 1936

AN ACT Authorizing the construction of certain public works on rivers and harbors for flood control, and for other purposes.

* * * * * * *

FLOOD CONTROL ACT OF 1936

SEC. 5. That pursuant to the policy outlined in sections 1 and 3, the following works of improvement, for the benefit of navigation and the control of destructive flood waters and other purposes, are hereby adopted and authorized to be prosecuted, in order of their emergency as may be designated by the President, under the direction of the Secretary of War and supervision of the Chief of Engineers in accordance with the plans in the respective reports and records hereinafter designated: *Provided*, That penstocks or other similar facilities, adapted to possible future use in the development of adequate electric power may be installed in any dam herein authorized when approved by the Secretary of War upon the recommendation of the Chief of Engineers. *Provided further*, That the Secretary of War is authorized to receive [from States and political subdivisions thereof,] *from a non-Federal interest (as defined in section 221 of the Flood Control Act of 1970 (42 U.S.C. 1962d–5b))* such funds as may be contributed by them for work[, which includes planning and design], to be expended in connection with funds appropriated by the United States for any authorized water resources development study or project, *including a project for navigation on the inland waterways,* whenever such work and expenditure may be considered by the Secretary of War, on recommendation of the Chief of Engineers, as advantageous in the public interest, and the plans for any reservoir project may, in the discretion of the Secretary of War, on recommendation of the Chief of Engineers, be modified to provide additional storage capacity for domestic water supply or other conservation storage, on condition

that the cost of such increased storage capacity is contributed by local agencies and that the local agencies agree to utilize such additional storage capacity in a manner consistent with Federal uses and purposes: *And provided further,* That when contributions made [by States and political subdivisions thereof,] *by a non-Federal interest* are in excess of the actual cost of the work contemplated and properly chargeable to such contributions, such excess contributions may, with the approval of the Secretary of War, be returned to the proper representatives of the contributing interests[: *Provided further*, That the term "States" means the several States, the District of Columbia, the commonwealths, territories, and possessions of the United States, and Federally recognized Indian tribes]: *And provided further, That the term "work" means the planning, design, or construction of an authorized water resources development study or project, or the repair, restoration, or replacement of an authorized water resources development project that has been damaged by an event or incident that results in a declaration by the President of a major disaster or emergency pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (42 U.S.C. 5121 et seq.).*

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ENERGY AND WATER DEVELOPMENT AND RELATED AGENCIES APPROPRIATIONS ACT, 2012

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DIVISION B—ENERGY AND WATER DEVELOPMENT APPROPRIATIONS ACT, 2012

TITLE I—CORPS OF ENGINEERS—CIVIL

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GENERAL PROVISIONS—CORPS OF ENGINEERS—CIVIL

(INCLUDING TRANSFERS OF FUNDS)

* * * * * * *

SEC. 111. (a) * * *

[(b) The Secretary shall notify the appropriate committees of Congress prior to initiation of negotiations for accepting contributed funds under 33 U.S.C. 701h.]

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ACT OF MARCH 4, 1915

AN ACT Making appropriations for the construction, repair, and preservation of certain public works on rivers and harbors, and for other purposes.

* * * * * * *

[SEC. 4. That the Secretary of War is hereby authorized to receive from private parties such funds as may be contributed by them to be expended in connection with funds appropriated by the United States for any authorized work of public improvement of rivers and harbors whenever such work and expenditure may be considered by the Chief of Engineers as advantageous to the interests of navigation: *Provided,* That when contributions heretofore or hereafter made by local interests for river and harbor improvements, in accordance with specific requirements or under general authority of Congress, are in excess of the actual cost of the work contemplated and properly chargeable to such contributions, such excess contributions may, with the approval of the Secretary of War, be returned to the proper representatives of the contributing interests, unless the provision of law under which the contribution is made requires that the entire contribution be retained by the United States.]

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SECTION 221 OF THE FLOOD CONTROL ACT OF 1970

SEC. 221. WRITTEN AGREEMENT REQUIREMENT FOR WATER RESOURCES PROJECTS.

(a) COOPERATION OF NON-FEDERAL INTEREST.—

(1) * * *

* * * * * * *

(4) CREDIT FOR IN-KIND CONTRIBUTIONS.—

(A) * * *

* * * * * * *

(C) WORK PERFORMED BEFORE PARTNERSHIP AGREEMENT.—[In any case in which the non-Federal interest is to receive credit under subparagraph (A)(ii) for the cost of work carried out by the non-Federal interest and such work has not been carried out as of the date of enactment of this subparagraph, the Secretary and the non-Federal interest shall enter into an agreement under which the non-Federal interest shall carry out such work, and only work carried out following the execution of the agreement shall be eligible for credit.]

(i) CONSTRUCTION.—

(I) IN GENERAL.—In any case in which the non-Federal interest is to receive credit under subparagraph (A) for the cost of construction carried out by the non-Federal interest before execution of a partnership agreement and that construction has not been carried out as of the date of enactment of

this clause, the Secretary and the non-Federal interest shall enter into an agreement under which the non-Federal interest shall carry out such work and shall do so prior to the non-Federal interest initiating construction or issuing a written notice to proceed for the construction.

(II) ELIGIBILITY.—Construction that is carried out after the execution of an agreement under subclause (I) and any design activities that are required for that construction, even if the design activity is carried out prior to the execution of the agreement, shall be eligible for credit.

(ii) PLANNING.—

(I) IN GENERAL.—In any case in which the non-Federal interest is to receive credit under subparagraph (A) for the cost of planning carried out by the non-Federal interest before execution of a feasibility cost sharing agreement, the Secretary and the non-Federal interest shall enter into an agreement under which the non-Federal interest shall carry out such planning and shall do so prior to the non-Federal interest initiating that planning.

(II) ELIGIBILITY.—Planning that is carried out by the non-Federal interest after the execution of an agreement under subclause (I) shall be eligible for credit.

* * * * * * *

(E) APPLICABILITY.—

(i) * * *

[(ii) LIMITATION.—In any case in which a specific provision of law provides for a non-Federal interest to receive credit toward the non-Federal share of the cost of a study for, or construction or operation and maintenance of, a water resources project, the specific provision of law shall apply instead of this paragraph.**]**

(ii) LIMITATION.—In any case in which a specific provision of law provides for a non-Federal interest to receive credit toward the non-Federal share of the cost of a study for, or construction or operation and maintenance of, a water resources project, the Secretary shall apply—

(I) the specific provision of law instead of this paragraph; or

(II) at the request of the non-Federal interest, the specific provision of law and such provisions of this paragraph as the non-Federal interest may request.

(iii) STATUTORY CONSTRUCTION.—Nothing in this subparagraph may be construed to affect the applicability of subparagraph (C).

[(b) DEFINITION OF NON-FEDERAL INTEREST.—**]**

(b) DEFINITIONS.—

(1) NON-FEDERAL INTEREST.—The term "non-Federal interest" means—

[(1)**]** *(A)* a legally constituted public body (including a federally recognized Indian tribe); or

[(2)**]** *(B)* a nonprofit entity with the consent of the affected local government,

that has full authority and capability to perform the terms of its agreement and to pay damages, if necessary, in the event of failure to perform.

(2) WATER RESOURCES PROJECT.—The term "water resources project" includes projects studied, reviewed, designed, constructed, operated and maintained, or otherwise subject to Federal participation under the authority of the civil works program of the Secretary of the Army for the purposes of navigation, flood damage reduction, ecosystem restoration, hurricane and storm damage reduction, water supply, recreation, hydroelectric power, fish and wildlife conservation, water quality, environmental infrastructure, resource protection and development, and related purposes.

(c) Every agreement entered into pursuant to this section shall be **[**enforcible**]** *enforceable* in the appropriate district court of the United States.

* * * * * * *

NATIONAL DAM SAFETY PROGRAM ACT

SECTION 1. SHORT TITLE.

This Act may be cited as the "National Dam Safety Program Act".

SEC. 2. DEFINITIONS.

In this Act, the following definitions apply:

(1) * * *

(2) DAM.—The term "dam"—

(A) * * *

(B) does not include—

(i) * * *

(ii) a barrier described in subparagraph (A) that—

(I) * * *

* * * * * * *

unless the barrier, because of the location of the barrier or another physical characteristic of the barrier, is likely to pose a significant threat to human life or property if the barrier fails (as determined by the **[**Director**]** *Administrator*).

(3) **[**DIRECTOR**]** *ADMINISTRATOR.*—The term "**[**Director**]** *Administrator*" means the **[**Director**]** *Administrator* of FEMA.

* * * * * * *

SEC. 3. INSPECTION OF DAMS.

(a) * * *

(b) STATE PARTICIPATION.—On request of a State dam safety agency, with respect to any dam the failure of which would affect the State, the head of a Federal agency shall—

(1) provide information to the State dam safety agency on the construction, operation, [or maintenance] *maintenance, condition, or provision for emergency operations* of the dam; or

* * * * * * *

SEC. 7. INTERAGENCY COMMITTEE ON DAM SAFETY.

(a) ESTABLISHMENT.—There is established an Interagency Committee on Dam Safety—

(1) * * *

(2) chaired by the [Director] *Administrator*.

* * * * * * *

SEC. 8. NATIONAL DAM SAFETY PROGRAM.

(a) IN GENERAL.—The [Director] *Administrator*, in consultation with ICODS and State dam safety agencies, and the Board shall establish and maintain, in accordance with this section, a coordinated national dam safety program. The Program shall—

(1) * * *

* * * * * * *

(b) DUTIES.—The [Director] *Administrator* shall prepare a strategic plan—

(1) * * *

* * * * * * *

(c) OBJECTIVES.—The objectives of the Program are to—

(1) * * *

* * * * * * *

[(4) develop and encourage public awareness projects to increase public acceptance and support of State dam safety programs;]

(4) develop and implement a comprehensive dam safety hazard education and public awareness initiative to assist the public in mitigating against, preparing for, responding to, and recovering from dam incidents;

* * * * * * *

(e) ASSISTANCE FOR STATE DAM SAFETY PROGRAMS.—

(1) IN GENERAL.—To encourage the establishment and maintenance of effective State programs intended to ensure dam safety, to protect human life and property, and to improve State dam safety programs, the [Director] *Administrator* shall provide assistance with amounts made available under section 13 to assist States in establishing, maintaining, and improving dam safety programs in accordance with the criteria specified in paragraph (2).

* * * * * * *

(3) WORK PLANS.—The [Director] *Administrator* shall enter into a agreement with each State receiving assistance under paragraph (2) to develop a work plan necessary for the

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State dam safety program to reach a level of program performance specified in the agreement.

(4) MAINTENANCE OF EFFORT.—Assistance may not be provided to a State under this subsection for a fiscal year unless the State enters into such agreement with the [Director] *Administrator* as the [Director] *Administrator* requires to ensure that the State will maintain the aggregate expenditures of the State from all other sources for programs to ensure dam safety for the protection of human life and property at or above a level equal to the average annual level of such expenditures for the 2 fiscal years preceding the fiscal year.

(5) APPROVAL OF PROGRAMS.—

(A) SUBMISSION.—For a State to be eligible for assistance under this subsection, a plan for a State dam safety program shall be submitted to the [Director] *Administrator* for approval.

(B) APPROVAL.—A State dam safety program shall be deemed to be approved 120 days after the date of receipt by the [Director] *Administrator* unless the [Director] *Administrator* determines within the 120-day period that the State dam safety program fails to meet the requirements of paragraphs (1) through (3).

(C) NOTIFICATION OF DISAPPROVAL.—If the [Director] *Administrator* determines that a State dam safety program does not meet the requirements for approval, the [Director] *Administrator* shall immediately notify the State in writing and provide the reasons for the determination and the changes that are necessary for the plan to be approved.

(6) REVIEW OF STATE DAM SAFETY PROGRAMS.—Using the expertise of the Board, the [Director] *Administrator* shall periodically review State dam safety programs. If the Board finds that a State dam safety program has proven inadequate to reasonably protect human life and property and the [Director] *Administrator* concurs, the [Director] *Administrator* shall revoke approval of the State dam safety program, and withhold assistance under this subsection, until the State dam safety program again meets the requirements for approval.

(f) BOARD.—

(1) ESTABLISHMENT.—The [Director] *Administrator* shall establish an advisory board to be known as the "National Dam Safety Review Board" to monitor the safety of dams in the United States, to monitor State implementation of this section, and to advise the [Director] *Administrator* on national dam safety policy.

* * * * * * *

(3) VOTING MEMBERSHIP.—The Board shall consist of 11 voting members selected by the [Director] *Administrator* for expertise in dam safety, of whom—

(A) * * *

* * * * * * *

(F) 5 members shall be selected by the [Director] *Administrator* from among State dam safety officials; and

(G) 1 member shall be selected by the [Director] *Administrator* to represent the private sector.

(4) NONVOTING MEMBERSHIP.—The [Director] *Administrator*, in consultation with the Board, may invite a representative of the National Laboratories of the Department of Energy and may invite representatives from Federal or State agencies, *representatives from nongovernmental organizations,* or dam safety experts, as needed, to participate in meetings of the Board.

* * * * * * *

(6) WORK GROUPS.—The [Director] *Administrator* may establish work groups under the Board to assist the Board in accomplishing its goals. The work groups shall consist of members of the Board and other individuals selected by the [Director] *Administrator*.

* * * * * * *

SEC. 9. RESEARCH.

(a) IN GENERAL.—The [Director] *Administrator*, in cooperation with the Board, shall carry out a program of technical and archival research to develop and support—

(1) * * *

* * * * * * *

(b) CONSULTATION.—The [Director] *Administrator* shall provide for State participation in research under subsection (a) and periodically advise all States and Congress of the results of the research.

SEC. 10. DAM SAFETY TRAINING.

At the request of any State that has or intends to develop a State dam safety program, the [Director] *Administrator* shall provide training for State dam safety staff and inspectors.

SEC. 11. REPORTS.

Not later than 90 days after the end of each odd-numbered fiscal year, the [Director] *Administrator* shall submit a report to Congress that—

(1) * * *

* * * * * * *

(4) includes any recommendations for legislative and other action that the [Director] *Administrator* considers necessary.

* * * * * * *

SEC. 13. AUTHORIZATION OF APPROPRIATIONS.

(a) NATIONAL DAM SAFETY PROGRAM.—

(1) * * *

(2) ALLOCATION.—

(A) * * *

* * * * * * *

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(C) DETERMINATION.—The [Director] *Administrator* and the Board shall determine the amount allocated to States.

* * * * * * *

FREEDOM TO FISH ACT

* * * * * * *

SEC. 2. RESTRICTED AREAS AT CORPS OF ENGINEERS DAMS.

(a) * * *

(b) EXISTING RESTRICTED AREA.—If the Secretary has established a restricted area or modified an existing restricted area during the period beginning on August 1, 2012, and ending on the day before the date of enactment of this Act, the Secretary shall—

(1) cease implementing and enforcing the restricted area [until the date that is 2 years after the date of enactment of this Act]; and

* * * * * * *

(c) ESTABLISHING NEW *OR MODIFIED* RESTRICTED AREA.—If, on or after the date of enactment of this Act, the Secretary establishes any *new or modified* restricted area, the Secretary shall—

(1) * * *

* * * * * * *

(3) not implement or enforce the restricted area [until the date that is 2 years after the date of enactment of this Act] *until the Secretary has complied with the provisions of this subsection*; and

* * * * * * *

WATER RESOURCES DEVELOPMENT ACT OF 1974

* * * * * * *

SEC. 22. (a) * * *

* * * * * * *

(e) LEVEE SAFETY.—

(1) IN GENERAL.—At the request of a State or political subdivision thereof, and in consultation with that State and appropriate non-Federal interests, the Secretary may provide technical assistance to a State to—

(A) encourage effective State or local programs intended to ensure levee safety to protect human life and property;

(B) assist the State or political subdivision in establishing and carrying out a levee safety program; or

(C) improve an existing State or local levee safety program.

(2) PURPOSES.—The purposes of technical assistance provided under this subsection shall be—

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(A) to ensure that human lives and property that are protected by new and existing levees are safe;

(B) to encourage the use of appropriate engineering policies and procedures for levee site investigation, design, construction, operation and maintenance, and emergency preparedness;

(C) to encourage effective levee safety programs in a State;

(D) to develop and support public education and awareness projects to increase public acceptance and support of levee safety programs;

(E) to build public awareness of the residual risks associated with living in levee protected areas; and

(F) to develop technical assistance materials, seminars, and guidelines to improve the security of levees in the United States.

(3) FEDERAL GUIDELINES.—

(A) IN GENERAL.—In carrying out this subsection, the Secretary, in consultation with States and non-Federal interests, shall establish Federal guidelines relating to levee safety.

(B) INCORPORATION OF FEDERAL ACTIVITIES.—The guidelines established under subparagraph (A) shall encompass, to the maximum extent practicable, activities and practices carried out by appropriate Federal agencies.

(C) INCORPORATION OF STATE AND LOCAL ACTIVITIES.—The guidelines established under subparagraph (A) shall encompass, to the maximum extent practicable—

(i) the activities and practices carried out by States, local governments, and the private sector to safely build, regulate, operate, and maintain levees; and

(ii) Federal activities that facilitate State efforts to develop and implement effective State programs for the safety of levees, including levee inspection, levee rehabilitation, locally developed flood plain management, and public education and training programs.

(D) REVIEW.—The Secretary shall allow States and non-Federal interests, including appropriate stakeholders, to review and comment on the guidelines established under subparagraph (A) before the guidelines are made final.

(4) ASSISTANCE FOR STATE LEVEE SAFETY PROGRAMS.—

(A) ELIGIBILITY.—To be eligible for technical assistance under this subsection, a State shall—

(i) be in the process of establishing or have in effect a State levee safety program under which a State levee safety agency, in accordance with State law, carries out the guidelines established under paragraph (3); and

(ii) allocate sufficient funds in the budget of that State to carry out such State levee safety program.

(B) WORK PLANS.—The Secretary shall enter into an agreement with each State receiving technical assistance under this subsection to develop a work plan necessary for the State levee safety program of that State to reach a level

of program performance that meets the guidelines established under paragraph (3).

(C) INSPECTION PROGRAMS.—The Secretary shall work with States receiving technical assistance under this subsection to develop State technical guidelines for levee inspection programs that—

(i) address hazard classifications and technically based frameworks for levee assessment; and

(ii) are incorporated into State levee safety programs.

(D) MAINTENANCE OF EFFORT.—Technical assistance may not be provided to a State under this subsection during a fiscal year unless the State enters into an agreement with the Secretary to ensure that the State will maintain during that fiscal year aggregate expenditures for programs to ensure levee safety that are at or above the average annual level of such expenditures for the State for the 2 fiscal years preceding that fiscal year.

[(e)] *(f)* For the purposes of this section, the term "State" means theseveral States of the United States, Indian tribes, the Commonwealth of PuertoRico, Guam, American Samoa, the Virgin Islands, the Commonwealthof the Northern Marianas, and the Trust Territory of thePacific Islands.

RIVER AND HARBOR ACT OF 1958

TITLE I—RIVERS AND HARBORS

* * * * * * *

SEC. 104. (a) There is hereby authorized a comprehensive program to provide for control and progressive eradication of noxious aquatic plant growths *and aquatic invasive species* from the navigable waters, tributary streams, connecting channels, and other allied waters of the United States, in the combined interest of navigation, flood control, drainage, agriculture, fish and wildlife conservation, public health, and related purposes, including continued research for development of the most effective and economic control measures, to be administered by the Chief of Engineers, under the direction of the Secretary of the Army, in cooperation with other Federal and State agencies. Local interests shall agree to hold and save the United States free from claims that may occur from control operations and to participate to the extent of 30 per centum of the cost of such operations. Costs for research and planning undertaken pursuant to the authorities of this section shall be borne fully by the Federal Government.

* * * * * * *

INTERNAL REVENUE CODE OF 1986

* * * * * * *

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Subtitle I—Trust Fund Code

* * * * * * *

CHAPTER 98—TRUST FUND CODE

* * * * * * *

Subchapter A—Establishment of Trust Funds

* * * * * * *

SEC. 9505. HARBOR MAINTENANCE TRUST FUND.

(a) * * *

* * * * * * *

(c) EXPENDITURES FROM HARBOR MAINTENANCE TRUST FUND.—Amounts in the Harbor Maintenance Trust Fund shall be available, as provided by appropriation Acts, for making expenditures—

(1) to carry out section 210 of the Water Resources Development Act of 1986 **[**(as in effect on the date of the enactment of the Water Resources Development Act of 1996)**]**,

* * * * * * *

PAUL RYAN, WISCONSIN
CHAIRMAN

AUSTIN SMYTHE, STAFF DIRECTOR
(202)226-7270

(113)

CHRIS VAN HOLLEN, RANKING MEMBER

THOMAS S. KAHN, MINORITY STAFF DIRECTOR
(202) 226-7200

U.S. House of Representatives

COMMITTEE ON THE BUDGET

Washington, DC 20515

September 27, 2013

The Honorable Bill Shuster
Chairman
Committee on Transportation and Infrastructure
2165 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Shuster,

I am writing concerning H.R. 3080, the *Water Resources Reform and Development Act of 2013 (WRRDA)*, which was marked-up by the Committee on Transportation and Infrastructure on September 19, 2013.

In order to expedite House consideration of H.R. 3080, the Committee on the Budget will forgo action on the bill. This is being done with the understanding that it does not in any way prejudice the Committee with respect to the appointment of conferees or its jurisdictional prerogatives on this or similar legislation.

I would appreciate your response to this letter, confirming this understanding with respect to H.R. 3080, and would ask that a copy of our exchange of letters on this matter be included in the *Congressional Record* during Floor consideration.

Sincerely,

Paul Ryan
Chairman

(14)

Committee on Transportation and Infrastructure
U.S. House of Representatives

Washington, DC 20515

Bill Shuster
Chairman

Nick J. Rahall, II
Ranking Member

Christopher P. Bertram, Staff Director

James H. Zoia, Democrat Staff Director

September 30, 2013

The Honorable Paul Ryan
Chairman
Committee on the Budget
207 Cannon House Office Building
Washington, DC 20515

Dear Mr. Chairman:

Thank you for your letter regarding H.R 3080, the *Water Resources Reform and Development act of 2013* (WRRDA), which was ordered to be reported by the Committee on Transportation and Infrastructure on September 19, 2013. I appreciate your willingness to support expediting floor consideration of this legislation.

I acknowledge that by forgoing action on this legislation, the Committee on the Budget will not in any way be prejudiced with respect to the appointment of conferees or its jurisdictional prerogatives on this or similar legislation.

I appreciate your cooperation regarding this legislation and I will include our letters on H.R. 3080 in the *Congressional Record* during floor consideration of this bill.

Sincerely,

Bill Shuster

Bill Shuster
Chairman

cc: The Honorable John Boehner
The Honorable Nick J. Rahall, II
The Honorable Chris Van Hollen
Mr. Thomas J. Wickham, Jr., Parliamentarian

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U.S. House of Representatives
Committee on Natural Resources
Washington, DC 20515

October 3, 2013

The Honorable Bill Shuster
Chairman
Committee on Transportation and Infrastructure
2165 Rayburn HOB
Washington, D.C. 20515

Dear Mr. Chairman:

Thank you for the opportunity to review the relevant provisions of the text of H.R. 3080, the Water Resources Reform and Development Act of 2013. As you are aware, the bill was primarily referred to the Committee on Transportation and Infrastructure, while the Committee on Natural Resources received an additional referral.

I recognize and appreciate your desire to bring this legislation before the House in an expeditious manner, and, accordingly, I agree to discharge H.R. 3080 from further consideration by the Committee on Natural Resources. I do so with the understanding that by discharging the bill, the Committee on Natural Resources does not waive any future jurisdictional claim on this or similar matters. Further, the Committee on Natural Resources reserves the right to seek the appointment of conferees, if it should become necessary.

I ask that you insert a copy of our exchange of letters into the bill report filed by the Committee on Transportation and Infrastructure, as well as in the Congressional Record during consideration of this measure on the House floor.

Thank you for your courtesy in this matter and I look forward to continued cooperation between our respective committees.

Sincerely,

Doc Hastings
Chairman

(11b)

cc: The Honorable John A. Boehner, Speaker
The Honorable Peter A. DeFazio
The Honorable Nick J. Rahall, II
The Honorable Thomas J. Wickham, Parliamentarian

(113)

Committee on Transportation and Infrastructure
U.S. House of Representatives

Washington, DC 20515

Bill Shuster
Chairman

Nick J. Rahall, II
Ranking Member

Christopher P. Bertram, Staff Director

James H. Zoia, Democrat Staff Director

October 4, 2013

The Honorable Doc Hastings
Chairman
Committee on Natural Resources
1324 Longworth House Office Building
Washington, DC 20515

Dear Mr. Chairman:

Thank you for your letter regarding H.R 3080, the *Water Resources Reform and Development Act of 2013* (WRRDA), which was ordered to be reported by the Committee on Transportation and Infrastructure on September 19, 2013. I appreciate your willingness to support expediting the consideration of this legislation on the House floor.

I acknowledge that by discharging the bill, the Committee on Natural Resources does not waive any future jurisdictional claim on this or similar matters. In addition, I recognize that the Committee on Natural Resources reserves the right to seek the appointment of conferees.

I appreciate your cooperation regarding this legislation and I will include our letters on H.R. 3080 in the bill report filed by the Committee on Transportation and Infrastructure, as well as in the *Congressional Record* during consideration of this measure on the House floor.

Sincerely,

Bill Shuster

Bill Shuster
Chairman

cc: The Honorable John Boehner
The Honorable Nick J. Rahall, II
The Honorable Peter A. DeFazio
Mr. Thomas J. Wickham, Jr., Parliamentarian

Congress of the United States

U.S. House of Representatives

COMMITTEE ON WAYS AND MEANS

1102 LONGWORTH HOUSE OFFICE BUILDING
(202) 225-3625

Washington, DC 20515-6348

http://waysandmeans.house.gov

October 17, 2013

The Honorable Bill Shuster
Chairman
Committee on Transportation and Infrastructure
2165 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Shuster,

I am writing concerning H.R. 3080, the "Water Resources Reform and Development Act of 2013," which may be scheduled for floor consideration as early as next week.

As you know, the Committee on Ways and Means has jurisdiction over the Internal Revenue Code 1986. Section 201 of this bill amends the Internal Revenue Code by modifying the Harbor Maintenance Trust Fund expenditure authority. However, in order to expedite this legislation for floor consideration, the Committee will forgo action on this bill. This is being done with the understanding that it does not in any way prejudice the Committee with respect to the appointment of conferees or its jurisdictional prerogatives on this or similar legislation.

I would appreciate your response to this letter, confirming this understanding with respect to H.R. 3080, and would ask that a copy of our exchange of letters on this matter be included in the

Congressional Record during floor consideration.

Sincerely,

DAVE CAMP
Chairman

cc: The Honorable John Boehner
The Honorable Eric Cantor
The Honorable Kevin McCarthy
The Honorable Nancy Pelosi
The Honorable Steny Hoyer
The Honorable Nick J. Rahall, II
The Honorable Sander M. Levin
Mr. Thomas J. Wickham, Jr., Parliamentarian

(120)

Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

Bill Shuster
Chairman

Nick J. Rahall, II
Ranking Member

Christopher P. Bertram, Staff Director

October 18, 2013

James H. Zoia, Democrat Staff Director

The Honorable Dave Camp
Chairman
Committee on Ways and Means
1102 Longworth House Office Building
Washington, DC 20515

Dear Mr. Chairman:

Thank you for your letter regarding H.R 3080, the *Water Resources Reform and Development Act of 2013* (WRRDA), which was ordered to be reported by the Committee on Transportation and Infrastructure on September 19, 2013. I appreciate your willingness to support expediting the consideration of this legislation on the House floor.

I acknowledge that by forgoing action on this bill, the Committee on Ways and Means will not in any way be prejudiced with respect to the appointment of conferees or its jurisdictional prerogatives on this or similar legislation.

I appreciate your cooperation regarding this legislation and I will include our letters on H.R. 3080 in the bill report filed by the Committee on Transportation and Infrastructure, as well as in the *Congressional Record* during consideration of this measure on the House floor.

Sincerely,

Bill Shuster

Bill Shuster
Chairman

cc: The Honorable John Boehner
The Honorable Nick J. Rahall, II
The Honorable Sander M. Levin
Mr. Thomas J. Wickham, Jr., Parliamentarian

(121)

SUPPLEMENTAL VIEWS

H.R. 3080 is a good bill, and one that I am grateful to Chairman Shuster, Ranking Member Rahall, and Subcommittee Chairman Gibbs for the opportunity to participate in drafting. It is a bill that I supported during the Committee markup, and one that I expect to support during consideration on the House Floor.

It is not the bill that my caucus would have written on its own, and I am certain it is not the bill that others on the Committee would have independently written, either. However, H.R. 3080 does reflect the better traditions of this Committee, where members from both sides of the aisle come to the table, with a blank sheet of paper, to actively participate in the creation of legislation. That is how this Committee was so often successful in the past, and how it can be effective going forward into larger and more complex issues. The process our Chairman used in the creation of H.R. 3080 should be a model on how the rest of Congress should operate.

In addition, this bill shows that Congress still can roll-up-our-sleeves, on a bipartisan basis, and get things done when it chooses to do so.

Finally, H.R. 3080 is a bill that moves us forward to enactment of a water resources development act – something that has been lamentably absent over the past 6 years.

I am providing these supplemental views to highlight one area where, in my view, continued Congressional and administration attention needs to be placed – addressing the challenges facing the Harbor Maintenance Trust Fund and the Inland Waterways Trust Fund.

Over the past few years, the Subcommittee on Water Resources and Environment has held numerous hearings and roundtables on the challenges facing these user-funded navigation trust funds, which, ironically, are facing the exact opposite problems – one that is spending-down far less than it is collecting, growing a sizable surplus of unspent harbor maintenance revenues at the same time there is a growing backlog of unmet maintenance needs, and the other with insufficient resources to address ongoing inland waterways construction projects.

When Congress created these trust funds, it entered into an agreement with shippers and other industries that the fees and taxes collected from these interests would be used to support the nation's network of ports and inland waterways. Yet, shippers, users, and our nation's ports argue that the Federal government has not held up its end of the agreement.

Over the past few years, Federal investments in inland waterways and coastal ports, both in terms of real and inflationary-adjusted value, have declined. This lack of adequate investment has impacted the availability and reliability of domestic ports (large and small) and waterways, and is having significant short- and long-term implications on our national, regional, and local economies and global competitiveness. On this point, I believe we all agree.

H.R. 3080 will provide *some relief* to our inland and coastal harbors; however, this legislation does not solve the challenges facing these two trust funds, and more work remains.

Specifically, H.R. 3080 includes provisions encouraging increased appropriations from the Harbor Maintenance Trust Fund for necessary operation and maintenance activities at our nation's ports – starting at 65 percent of collections in 2014 and increasing to 80 percent of collections by 2020. This is a step in the right direction, but does not accomplish the goal of full utilization of annual Harbor Maintenance Tax collections for which many members strongly advocate. Even at the upper limit of utilization in H.R. 3080, more revenues will be collected into the Harbor Maintenance Trust Fund than are expended for harbor maintenance needs.

In addition, because the mechanism in H.R. 3080 for expending additional revenues relies on the current budgetary and appropriations process, this Committee must remain vigilant that the changes proposed in this bill do not further erode the ability of the Corps to carry out construction projects, such as those necessary to deepen our nation's ports to accommodate the post-Panamax vessels that will come once the Panama Canal expansion is complete.

As a result of discretionary budget caps on appropriations bills, any increase in one account of the Corps (such as the operation and maintenance account) would cause a corresponding decrease in other Corps' accounts (including the largest remaining account of the Corps – the construction account). To address the proposed increase in Harbor Maintenance Trust Fund expenditures, H.R. 3080 includes "Sense of the Congress" language that "any increase in harbor maintenance programs …shall result from an overall increase in appropriations from the civil works program of the Corps of Engineers and not from similar reductions in the appropriations for other programs, projects, and activities" of the Corps. Without such protections, according to the Corps, any increase in Trust Fund expenditures "would have to be offset elsewhere, in either the Civil Works program or another program in the Energy and Water Development Appropriations Act." (*See attached letter from Assistant Secretary of the Army, Jo-Ellen Darcy, dated February 21, 2012*)

At the Committee markup of H.R. 3080, I urged stakeholders and members, alike, to lock arms and encourage our colleagues on the Budget and Appropriations Committees to fully fund both the Corps' operation and maintenance account as well as its construction account, otherwise, members may awake to the unintended consequences of our efforts in this bill.

Yet, in the long term, rather than "robbing Peter to pay Paul," Congress should instead pursue a strategy that ensures both full-utilization of the Harbor Maintenance Trust Fund collections as well as robust appropriations for the Corps' construction account.

One way to accomplish this would be to designate some or all of the annual collections to the Fund as mandatory spending. Congress could direct the Secretary to expend Harbor Maintenance Trust Fund collections outside of the normal discretionary budget caps, as it has for other transportation trust funds, such as the Highway Trust Fund. In practice, if Congress were to designate some portion of Harbor Maintenance Trust Fund expenditures as outside the normal discretionary budget caps, any such expenditure would not have to compete with other appropriations within the Corps' discretionary budget allocation. In essence, Congress would be using the Harbor Maintenance Trust Fund as a real trust fund, where user fees are dedicated and expended for their intended purposes.

In previous years, this Committee has reported bipartisan legislation (H.R. 842, the Truth in Budgeting Act, 104th Congress) that would have accomplished this same goal – putting the "trust" back in the transportation trust funds. What was said about that bill is equally as important today – that using the unspent Trust Fund balances to achieve savings within the overall unified budget of the United States breaks faith with the transportation users who have paid into the trust funds with the expectation that they will be used for transportation purposes.

As both Chairman Shuster and I noted during the Committee markup, taking some or all of the Harbor Maintenance Trust Fund collections off-budget will have a budgetary cost – the scope of which depends on how this is accomplished; however, if we truly want to ensure that Harbor Maintenance Trust Fund collections are used, in a timely manner, to promote efficiency at our nation's harbors, and to avoid having this occur at the expense of the Corps' construction accounts, a logical way to do this is to take all or portions of the Harbor Maintenance Trust Fund off budget.

Similarly, H.R. 3080 includes several reforms for the development and implementation of navigation projects on the inland waterways system. However, H.R. 3080 makes little headway in addressing the leading concern raised by users of the inland waterway system at multiple hearings held before the Subcommittee on Water Resources and Environment – the lack of available funding to carry out projects on the inland system.

As several witnesses before Subcommittee testified, the largest limiting factor in carrying out inland waterways projects is the lack of readily-available resources in the Inland Waterways Trust Fund to carry out the backlog of construction and rehabilitation projects. For example, when a representative of an inland waterways user group was recently asked the question of what single recommendation could be made to speed up navigation projects, his response was simple – funding.

It is without question that failure to fund projects in a sufficient and timely fashion at critical stages of development results in construct delays, inefficient utilization of resources, and increased total costs of completed projects. As Major General Michael Walsh recently testified before the Subcommittee, if Congress inefficiently provides funding to the Corps, projects take longer to complete and wind up costing more than they would if funding were provided in a more consistent manner. However, when the opposite is true and the Corps is provided with all the necessary resources, such as was the case in the aftermath of Hurricane Katrina in the reconstruction of flood control structures for the City of New Orleans, projects generally came in on-time and under budget.

The reality is that, based on current revenues to the Inland Waterways Trust Fund, the administration (regardless of party) is limited in what it can do to accelerate project delivery other than constrain the pipeline of ongoing projects. For example, in the fiscal year 2014 budget request, the administration provides a total of $176 million for a limited number of inland waterways projects – including a transfer of the entire $93 million balance from the Inland Waterways Trust Fund. According to hearing testimony from the Assistant Secretary of the Army (Civil Works), Jo-Ellen Darcy, this is the "maximum amount that is affordable within the projected Trust Fund revenue under existing law."

To reverse this trend, we must ensure that sufficient resources are made available for Corps' projects throughout the study, design, and construction phases.

While H.R. 3080 does touch on this concern through multiple studies looking at long-term options for funding inland waterways projects, a short-term fix to this challenge, and one endorsed by the users of the inland system and others, is to increase the current user fee on fuel used while operating on the inland system.

In September, 2013, a significant number of business interests, inland waterways users, and agricultural commodity groups cosigned a letter to the Chairman and Ranking Member of the Committee on Ways and Means calling for a 6-to-9 cent increase in the current 20-cent-per-gallon user fee that funds the Inland Waterways Trust Fund. (*See attached letter from several inland waterways stakeholders, dated September 24, 2013.*) This would represent a 30 to 45 percent increase in the current user fee, and, at the 9-cent per gallon increase, would just be sufficient to restore the inflationary-adjusted value of the current 20-cent-per-gallon to the level when it was established in 1995.

In addition, other organizations, such as the American Society of Civil Engineers, have urged Congress in testimony to go even further and ensure that, in addition to increasing the current user fee, Congress also include a provision to index the user fee to the Consumer Price Index, and that the fee be adjusted every two years to avoid any future erosion of the value as a result of inflation.

I recognize the concerns raised by Chairman Shuster that increasing the current user fee involves the participation of other Congressional committees and was not possible in the Committee markup of H.R. 3080. However, I am also encouraged by the Chairman's willingness to examine options to address funding in the Inland Waterways Trust Fund in the future.

In my view, the fact that we continue to rely on user fee rates that were established almost 20 years ago to finance critical investments on our inland system is not sustainable.

I also believe that much of the hand-wringing about the causes of project delay, both in the inland waterway system and beyond, would be resolved if sufficient funding were made available for these projects at critical times during project study and delivery.

The solutions for many project development and implementation challenges are readily apparent – the question, then, is how Congress will respond to these solutions, and whether we will take the steps necessary to achieve what I believe we all want – an efficient and sustainable system of water resources projects to serve the needs of our nation.

Tim Bishop, Ranking Member
Subcommittee on Water Resources and Environment

Waterways Council, Inc.
801 N. Quincy Street, Suite 200
Arlington, VA 22203; (703) 373-2261
waterwayscouncil@vesselalliance.com

(125)

September 24, 2013

The Honorable Dave Camp
Chairman
House Ways & Means Committee
1102 Longworth House Office Building
Washington, DC 20515

The Honorable Sander Levin
Ranking Member
House Ways & Means Committee
110 Longworth House Office Building
Washington, DC 20515

Dear Chairman Camp and Ranking Member Levin:

Now that the House Transportation & Infrastructure Committee has acted on a Water Resources Reform and Development Act (WRRDA), there is an urgent need for the revenue committees to act to increase the user fee for modernizing our nation's inland waterways.

The undersigned organizations strongly support an increase in the user fee that barge and towing companies pay into the Inland Waterways Trust Fund.

This user fee – currently 20-cents-per-gallon of fuel used while operating on the inland system — should be increased to 26- to 29-cents-per-gallon. This amount is matched by General Treasury Funds and is dedicated to new construction and major rehabilitation of the inland system. This user fee increase is supported by those who pay it – just 300 commercial operators – while the entire nation benefits, from hydropower, municipal water supply, recreational boating and fishing, flood control, national security, and waterfront property development.

The inland waterways provide the most cost-competitive transportation option for our bulk commodities used in America and exported to marketplaces worldwide. The facts are clear:

- 60% of the nation's export-bound grain is transported on the inland waterways.
- An effective and efficient water transport system is essential to supply American farmers with fertilizer for Spring and Fall planting seasons.
- Farmers depend on our waterways' infrastructure to compete and win against producers outside the USA.
- The soon to be completed Panama Canal expansion will create opportunities for increased American trade, but not if our channels are not dredged and our locks and dams are not functioning.
- American family-wage jobs depend on operational ports and inland waterways.
- The waterways are vital to our manufacturing sectors and to the construction industry.
- American consumers benefit from transportation cost-savings made possible by the inland waterways; for every $1 invested in our inland waterways, $10 is returned in national benefits.

Most of America's locks and dams were built in the 1920s and 1930s, yet are used to transport 21st century cargoes that fuel our modern economy. This critical component of the transportation supply chain needs reinvestment and recapitalization, and a WRRDA bill that joins industry supported project delivery reforms with an industry sought increase in the user fee it pays is fiscally responsible.

We hope that the Members of the House Ways & Means Committee support inclusion of a user fee increase in the WRRDA bill that passes the House.

Sincerely,

U.S. CHAMBER OF COMMERCE
NATIONAL ASSOCIATION OF Manufacturers
WATERWAYS COUNCIL, INC.
U.S. CANOLA ASSOCIATION
INDIANA SOYBEAN ALLIANCE
NOPA NATIONAL OILSEED PROCESSORS ASSOCIATION
INDIANA CORN GROWERS ASSOCIATION
MissouriCorn GrowersAssociation PLANTING OPPORTUNITY
NCFC National Council of Farmer Cooperatives
NORTH AMERICA'S BUILDING TRADES UNIONS Value on Display. Every Day.
National Barley Growers Association
Pennsylvania Farm Bureau




National Organizations: Agricultural Retailers Association • American Farm Bureau Federation • American Soybean Association • American Waterways Operators • Associated General Contractors of America • Building and Construction Trades Department, AFL-CIO • Carpenters' District Council of St. Louis & Vicinity • The Fertilizer Institute • GROWMARK, Inc. • International Union of Operating Engineers • National Association of Manufacturers • National Association of Wheat Growers • National Barley Growers Association • National Corn Growers Association • National Council of Farmer Cooperatives • National Grain & Feed Association • National Oilseed Processors Association • The United Association of Plumbers & Pipefitters • United Brotherhood of Carpenters • US Canola Association • US Chamber of Commerce • US Dry Bean Council • Waterways Council, Inc.

State Organizations: Alabama Soybean and Corn Association • Colorado Corn Growers Association • Corn Producers Association of Texas • Illinois Corn Growers Association • Illinois Farm Bureau • Indiana Corn Growers Association • Indiana Soybean Alliance • Iowa Corn Growers Association • Kentucky Corn Growers Association • Missouri Corn Growers Association • Nebraska Corn Board • Ohio Corn & Wheat Growers Association • Ohio Soybean Association • Pennsylvania Farm Bureau

City/County Organizations: Greater New Orleans, Inc. • Adams County (Illinois) Farm Bureau • Brown County (Illinois) Farm Bureau • Calhoun County (Illinois) Farm Bureau • Cass County (Illinois) Farm Bureau • Christian County (Illinois) Farm Bureau • Cook County (Illinois) Farm Bureau • Crawford County (Illinois) Farm Bureau • Cumberland County (Illinois) Farm Bureau • Ford-Iroquois County (Illinois) Farm Bureau • Hancock County (Illinois) Farm Bureau • Henry County (Illinois) Farm Bureau • Jackson County (Illinois) Farm Bureau • Kankakee County (Illinois) Farm Bureau • Knox County (Illinois) Farm Bureau • LaSalle County (Illinois) Farm Bureau • Lawrence County (Illinois) Farm Bureau • Lee County (Illinois) Farm Bureau • Livingston County (Illinois) Farm Bureau • Marshall-Putnam County (Illinois) Farm Bureau • Mason County (Illinois) Farm Bureau • Massac County (Illinois) Farm Bureau • McHenry County (Illinois) Farm Bureau • McLean County (Illinois) Farm Bureau • Menard County (Illinois) Farm Bureau • Mercer County (Illinois) Farm Bureau • Monroe County (Illinois) Farm Bureau • Morgan County (Illinois) Farm Bureau • Moultrie County (Illinois) Farm Bureau • Peoria County (Illinois) Farm Bureau • Pike County (Illinois) Farm Bureau • Pulaski-Alexander County (Illinois) Farm Bureau • Richland County (Illinois) Farm Bureau • Rock Island County (Illinois) Farm Bureau • Sangamon County (Illinois) Farm Bureau • Scott County (Illinois) Farm Bureau • St. Clair County (Illinois) Farm Bureau • Union County (Illinois) Farm Bureau • Vermilion County (Illinois) Farm Bureau • Wayne County (Illinois) Farm Bureau • White County (Illinois) Farm Bureau • Will County (Illinois) Farm Bureau • Winnebago-Boone County (Illinois) Farm Bureau

cc: Members of the House Ways & Means Committee

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DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

FEB 21 2012

Honorable Timothy H. Bishop
United States House of Representatives
306 Cannon House Office Building
Washington, D.C. 20314

Dear Representative Bishop:

This is in response to your letter dated February 14, 2012 to Major General Michael Walsh, Deputy Commanding General, Civil and Emergency Operations. You asked if the substantive provisions of H.R. 104, "Realizing America's Maritime Promise" (RAMP) were enacted, as currently drafted, would the legislation have an adverse impact on other business lines and missions of the Civil Works program of the Army Corps of Engineers. I am responding on behalf of Major General Walsh.

Let me be clear that I am responding to your request for information on the potential impacts of H.R. 104, but I am not providing a statement of an Army or Administration position on the bill, because no Army or Administration position has been developed at this time.

First, under current law, spending from the Harbor Maintenance Trust Fund (HMTF) is included in the President's Budget and is dependent on Congressional appropriations. The funds are not automatically available, so mandating that they be spent would not be effective without a supporting appropriations action.

Second, if the level of spending from the HMTF that RAMP envisions were to be appropriated, one cannot assume that the President's Budget for the Civil Works program would be increased by a comparable amount. Indeed, in today's economic and fiscal climate, it is extremely unlikely that the Civil Works budget would be so increased. As a result, as you stated in your letter, reductions would need to be taken in flood risk management, environmental restoration, hydropower, recreation, and the other Civil Works mission areas.

Third, under the Congressional budget process, the Energy and Water Development Appropriations Subcommittee's 302(b) allocation would have to be increased by an amount comparable to the increase in spending from the HMTF. Otherwise, that increase would have to be offset elsewhere, in either the Civil Works program or another program in the Energy and Water Development Appropriations Act.

I hope this answers your question. Thank you for your interest in and support for the Army Civil Works program.

Very truly yours,

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

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Additional Views

While we support H.R. 3080, we have concerns with Section 103—a modified version of streamlining provisions that were included in MAP-21 and previous amendments to Title 23 that relate to transportation projects. While not as broad, the provisions will still undermine the environmental protection and public participation processes that are provided for under National Environmental Policy Act (NEPA) and other laws, such as the Endangered Species Act and the Fish and Wildlife Coordination Act. When considered with other provisions in the bill that strictly limit the timeline for and the amount of funds that can be spent on feasibility studies, Section 103 could limit the quality of information available to the Corps in planning projects that often have broad environmental impacts.

While we support the timely delivery of water resources projects, there is no question that the biggest obstacle to the construction of Corps of Engineers' projects is a lack of funding. There are literally tens of billions of dollars of authorized projects that have not initiated construction, and H.R. 3080 would authorize an additional $8 billion in new projects. The estimated cost for completion of Corps projects currently under construction is about $20 billion. At the same time, the most recent appropriation for the Corps' construction budget was $1.2 billion. This is not a new problem. In 1986, GAO did a study of the causes of delay in Corps construction projects and found that the $60 billion backlog in Corps construction was caused by a lack of funding given an annual construction appropriation of only $1.6 billion. Corps officials also stated that delays were due to a lack of local support or the project no longer being economically feasible. All of these reasons remain applicable today, and it is unfortunately beyond the scope of this bill to address them.

One thing that is clear, at least from the hearing record developed in support of this bill, there has been no demonstration that the public participation or environmental review process is the cause of delay in implementation of Corps' studies and projects. In the hearings that preceded Committee markup of H.R. 3080, no witness called before the Committee identified a single project where the public participation or environmental review processes caused the project implementation to be delayed. In fact, when asked direct questions about why Corps' projects typically take years to implement, the common answer from witnesses before the Committee was simple – lack of available appropriations at critical times during project development and construction. In the words of one witness, "[w]hen projects are fully funded or they have a steady funding stream, they tend to be completed more expeditiously and more efficiently."

Further, it remains unclear whether simply taking language that was developed for highway projects and applying it part and parcel to water resources projects will improve decision making and not, instead, hamper agency collaboration and slow decisions. Additionally, there seems to be no distinction in this language between the "streamlining" of reviews for projects or activities that might be considered a repair or a replacement, versus the wholesale construction of a large scale, complex project in a previously undisturbed area. While trying to expedite the review process might make sense in some situations, we are not convinced that you can apply arbitrary schedules, review deadlines and penalties with no regard for the scale, complexity and impacts of a project as this bill would do.

As one example, we have serious concerns with the provision that would limit to 150 days, the ability of the public to seek judicial review of a final Environmental Impact Statement (EIS) issued by the Corps, or any other permits that might be issued for a water resources project. Imposing an arbitrary time limit on judicial review –that is years shorter than current law— ignores the large-scale and very complex nature of many Corps projects. When you consider this provision in light of the already very short comments periods that the bill imposes throughout the environmental review process, and the elimination of the comment period that typically exists between the publication of the final EIS and the record of decision, there is a real likelihood that the bill could short circuiting the public's ability to participate in the decision making process.

In short, while we strongly support timely delivery of water resources projects, we have concerns as to whether the changes made in this bill in the name of streamlining will actually achieve that goal, particularly given the real world funding issues that we face, and we remain very concerned about the impacts these changes will have on the public participation process and the assessment of impacts to the environment. The Senate environmental review language was ultimately adopted as a ten year pilot program. We believe a meaningful pilot program would ensure a review of whether this process is actually working and has not undermined environmental protections or precluded public participation in the project development process.

Peter DeFazio

Eleanor Holmes Norton

Michael Capuano

Mike Michaud

(130)

Grace Napolitano

Albio Sires

Elizabeth Esty

(131)

Rick Nolan

Additional Views on Water Resources Reform and Development Act
Concerns About Streamlining Provisions and Need For Pilot Program

We first want to commend Chairman Shuster and Ranking Member Rahall for their leadership and hard work with Subcommittee Chairman Gibbs and Ranking Member Bishop. The Water Resources Reform and Development Act (WRRDA) demonstrates that compromise and collaboration is still possible in the People's House.

We would, however, like to express concerns about the environmental streamlining provisions included in this bill. While the goal of accelerating the pace at which we are putting projects on the ground is certainly admirable, looking at these provisions through the lens of the Economic Development, Public Buildings and Emergency Management Subcommittee, on which some of us are honored to serve, we believe that limiting environmental review is not the answer to that problem. It is possible that the streamlining provisions will not accelerate the pace of project construction, but could actually lead to projects that are more costly and environmentally destructive.

Specifically, we remain concerned that Sections 101 (Vertical Integration and Acceleration of Studies) and 103 (Environmental Streamlining) in the bill as reported could have an unintended effect of undermining effective environmental reviews of water projects and the critical protections provided by the National Environmental Policy Act (NEPA) and other vitally important environmental laws. These provisions were drafted on the assumption that the environmental review process is a root cause of project delays.

However, evidence suggests that environmental reviews are not responsible for delaying construction of economically and environmentally sound projects. In most cases, the terrible delays in too many Corps projects are the result of the huge project backlog, lack of consistent and robust federal funding, and poor project planning.

During a September 18th hearing in the Senate Environment and Public Works on similar streamlining provisions included in MAP-21, witnesses testified that streamlining provisions have not been as successful as we hoped in accelerating project delivery. The major reason for project delay is not onerous review requirements, but unrealistic budgeting and high project cost. We have

offered into the record an article and letter that describe some of these concerns in more detail [attached].

During the Senate hearing, the U.S. Fish and Wildlife Service testified that, "instead of getting to 'yes' faster, we believe these 'streamlining' provisions may serve to get to 'no' faster." While it is heartening to see that the Fish and Wildlife Service would not rubber-stamp projects, these circumstances seem contrary to the very idea of project acceleration. It is possible that by including the streamlining provisions as they are currently drafted in the WRRDA bill, we could actually be slowing down Corps projects instead of speeding them up.

Before we begin to fundamentally change the way the federal government—and the public—reviews water resources projects, we should make sure that this concept actually works effectively and does not have unintended consequences – especially those that could damage our environmental resources. The taxpayer investment in Corps projects is substantial, and we should be ensuring we're spending their money as wisely as possible.

Unfortunately, the Corps has too often relied on flawed analyses and has been known for constructing projects that are often complex, large-scale and costly. Since 1994, more than 35 reports from independent experts have revealed major flaws in Corps project planning and implementation. In light of this history, I believe that we should only make changes to the project review process if we are certain that such changes will ensure better projects that protect the safety and well-being of our communities and our environment.

Poorly planned Corps projects can lead to incomprehensible losses, like the flooding of New Orleans during Hurricane Katrina—and can destroy natural systems that provide free and effective flood protection. We need robust project review to help ensure better, more resilient projects to protect our communities from storms, floods and other disasters. Rigorous review of projects being built with federal dollars is critical to protect people, restore ecosystems and ensuring the movement of commerce.

NEPA reviews have saved taxpayers hundreds of millions of dollars and have produced better projects with more public support. It is not prudent in today's fiscal environment to undermine these longstanding protections in the hopes that the proposed changes will somehow speed up project construction. Before making permanent changes to a process that has served the nation well for

decades. We should have a firm understanding of how these provisions will actually work.

We agree with the conclusions reached by eight past chairs of the Council on Environmental Quality from both Republican and Democratic administrations: NEPA is "not an impediment to responsible government action; it is a prerequisite for it." [1] Indeed, NEPA is "essential to responsible government decision-making."[2]

Effective environmental reviews protect people, wildlife, and taxpayer dollars by ensuring construction of better projects that serve the national good. In fact, with limited funds available to the Army Corps diminishing year by year, it is all the more critical that these reviews exist to ensure that only the best, most justified projects proceed to construction phase.

We believe that the Sections 101 and 103 should be reevaluated, and at a minimum, include language that would establish sections 101 and 103 as a Pilot Program with a look-back mechanism to assess their effectiveness before making these provisions permanent.

The Carson amendment was submitted that would frame these streamlining provisions as a Pilot Program with a mechanism to assess their effectiveness. Unfortunately, the Pilot Program amendment was not accepted into the manager's amendment. We sincerely hope that the bill sponsors will commit to working with us as we prepare this bill for floor action to find a suitable compromise that meets all our objectives. It is past time for a good Water Resources bill and we are very close to something that we can all support.

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[1] September 19, 2005 Letter to the Honorable Cathy McMorris, Chair of the Task Force on Improving the National Environmental Policy Act from Russell E. Train (CEQ Chair 1970-1973), Russell W. Peterson (CEQ Chair 1973-1976), John Busterud (CEQ Chair 1976-1977), Charles W. Warren (CEQ Chair 1977-1979), J. Gustave Speth (CEQ Chair 1979-1981), Michael R. Deland (CEQ Chair 1989-1993), Kathleen A. McGinty (CEQ Chair 1995-1998), George T. Frampton Jr. (CEQ Chair 1998-2001), Gary Widman (CEQ General Counsel 1974-1976), Nick Yost (CEQ General Counsel 1977-1981) (emphasis added).

[2] September 19, 2005 Letter to the Honorable Cathy McMorris, Chair of the Task Force on Improving the National Environmental Policy Act from Russell E. Train (CEQ Chair 1970-1973), Russell W. Peterson (CEQ Chair 1973-1976), John Busterud (CEQ Chair 1976-1977), Charles W. Warren (CEQ Chair 1977-1979), J. Gustave Speth (CEQ Chair 1979-1981), Michael R. Deland (CEQ Chair 1989-1993), Kathleen A. McGinty (CEQ Chair 1995-1998), George T. Frampton Jr. (CEQ Chair 1998-2001), Gary Widman (CEQ General Counsel 1974-1976), Nick Yost (CEQ General Counsel 1977-1981) (emphasis added).

André Carson, *Ranking Member*
Subcommittee on Economic Development, Public Buildings and Emergency Management

Eleanor Holmes Norton

Donna Edwards

Janice Hahn

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ATTACHMENTS
Sept. 18, 2013 – 11:30 a.m.

White House Official Says Environmental Reviews Wrongly Blamed for Project Delays
By Nathan Hurst, CQ Roll Call

Legally mandated environmental reviews are often wrongly blamed for delays in transportation infrastructure projects, the top White House environmental official said Wednesday in prepared testimony to a Senate subcommittee.

Council on Environmental Quality Chairwoman Nancy Sutley told a Senate Environment and Public Works subcommittee that provisions in last year's surface transportation law (PL 112-141) designed to consolidate environmental reviews have succeeded in speeding up some major projects, such as replacement of the Tappan Zee Bridge north of New York.

But she also said that changes to the 1970 National Environmental Protection Act (PL 91-190), a 1970 law that allows public input on projects, will not necessarily address the causes of many project delays.

"While it can be true that litigation over NEPA documents or an overly detailed NEPA process due to the fear of litigation may result in project delays, many other realities of major project development often are incorrectly attributed to the NEPA process," Sutley said in prepared testimony. "Challenges such as securing project funding, low priority, local opposition to a project, project complexity, or changes in project scope are more often responsible for delays in building projects. However, because these issues are frequently identified during the NEPA process, NEPA itself is often targeted as the culprit."

Environmental groups such as the National Wildlife Federation complained that the changes to NEPA reviews required by the surface transportation authorization were intended to shut them out of the pre-building planning process. Supporters of the changes in the law complain that environmental groups frequently draw out the legal process to stall unwanted construction projects.

Sutley's testimony reiterates earlier criticism from environmental groups that changing NEPA protections would have little practical effect on many projects. The Federal Highway Administration, for instance, has only about 30 projects per year out of 9,700 — roughly 0.3 percent — that require full environmental impact statement, the most intense level of federal review under NEPA. The Federal Transit Administration averages about five projects out of more than 3,000 annually, or about 0.2 percent, that need complete environmental impact statements.

Sutley delivered her testimony on the eve of a House Transportation and Infrastructure Committee markup Thursday of a water resources bill (HR 3080) that also includes provisions designed to expedite project reviews. Environmental groups objected to language in the Senate water bill (S 601) that would speed up project reviews.

nathanhurst@cqrollcall.com

Source: **CQ News**
Round-the-clock coverage of news from Capitol Hill.

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REGIONAL GROUPS:

Ad Hoc Downstream Group • Alabama Rivers Alliance • Amigos de Bolsa Chica • Apalachicola Riverkeeper • Arkansas Wildlife Federation • Atlantic States Legal Foundation, Inc. • Audubon Society of New Hampshire • Center for a Sustainable Coast • Chattahoochee Riverkeeper • Chesapeake Climate Action Network • Colorado Mountain Club • Committee on the Middle Fork of the Vermilion River • Conservation Council for Hawai'i • Delaware Nature Society • Endangered Habitats League • Environmental Action Committee of West Marin • Float Fishermen of Virginia • Freshwater Future • Friends for our Riverfront • Friends of Clear Creek • Friends of Perdido Bay • Friends of the Kaw • Friends of the North Fork and White Rivers • Friends of the River • Friends of the Rivers of Virginia • Friends of the Weskeag • Galveston Bay Foundation • Georgia River Network • Great Old Broads for Wilderness • Great Rivers Environmental Law Center • GreenLaw • Gulf Restoration Network • Hackensack Riverkeeper, Inc. • Hands Across the Lake • Help Save the Apalachicola River Group • Highway J Citizens Group • Hoosier Environmental Council • Illinois Council of Trout Unlimited • Iowa Environmental Council • Iowa Wildlife Federation • Izaak Walton League of America • Kalamath Forest Alliance • Kansas Wildlife Federation • Kentucky Resources Council • Kentucky Sierra Club • Kentucky Waterways Alliance • Labadie Environmental Organization • Lake Champlain Committee • Lake Erie Region Conservancy • Levees.Org • Louisiana Audubon Council • Lower Mississippi Riverkeeper • Mankato Area Environmentalists • Matilija Coalition • Mid South Fly Fishers • Midshore Riverkeeper Conservancy • Milwaukee Riverkeeper • Missouri Coalition for the Environment • MnDak Upstream Coalition • Montana Audubon • National Committee for the New River • New York/New Jersey Baykeeper • NJ/NY Environmental Watch • Northwest Environmental Advocates • Ohio Environmental Council • The Ozark Society • Palm Beach County Reef Rescue • Planning and Conservation League • Prairie Rivers Network • Raritan Riverkeeper • The River Project • Rivers Unlimited • San Diego Coastkeeper • San Juan Citizens Alliance • Save Our Farmland Coalition • Save Our Saugahatchee, Inc. • Save Our Wild Salmon Coalition • Save the American River Association • Save the Cape, Inc. • South Carolina Coastal Conservation League • South Dakota Wildlife Federation • Southern Environmental Law Center • Southern Illinois University • SouthWings • Surfrider Foundation • Tennessee Clean Water Network • Tennessee Parks and Greenways Foundation • Tennessee RIVERKEEPER • Texas Conservation Alliance • Tip of the Mitt • Tualatin Riverkeepers • University of Tennessee at Martin • Upper Cumberland Watershed Watch • Upper St. Lawrence Riverkeeper, Save The River • Utah Rivers Council • Virgin Islands Conservation Society • Wilderness Workshop • Yell County Wildlife Federation

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NATIONAL GROUPS

Alliance for Sustainability • American Rivers • Audubon • Center for Biological Diversity • Center for Environmental Law & Policy • Clean Water Action • Clean Water Network • The Climate Reality Project • Coalition for Alternative Wastewater Treatment • Defenders of Wildlife • Earthjustice • Environmental Defense Action Fund • Friends of the Earth • Greenpeace USA • League of Conservation Voters • National Wildlife Federation • Natural Resources Defense Council • Public Employees for Environmental Responsibility • Sierra Club • Union of Concerned Scientists • Water Advocates • Water Protection Network •

September 10, 2013

The Honorable Bill Shuster
Chairman
Transportation & Infrastructure Committee
United States House of Representatives
Washington, DC 20515

The Honorable Nick Rahall
Ranking Member
Transportation & Infrastructure Committee
United States House of Representatives
Washington, DC 20515

Re: Do Not Weaken the Environmental Review Process for Corps of Engineers Projects; Protect Public Safety, the Environment, and Taxpayers

Dear Chairman Shuster and Ranking Member Rahall:

On behalf of the undersigned organizations and our millions of members and supporters, we urge you to ensure that the Water Resources Development Act of 2013 (WRDA) does not undermine the environmental review and public input and participation process for federal water resources projects. For four decades, environmental laws enacted with strong bipartisan support have produced better and less costly projects, providing critical protections for communities, taxpayers, and the environment. We urge you to maintain these vital, good government protections.

So called, "environmental streamlining" provisions such as those included in the recently passed Senate WRDA (S.601) and in last year's transportation package (MAP-21) strike at the very core of the environmental review process, placing communities and fragile ecosystems in harm's way. Our organizations strongly oppose applying such provisions to U.S. Army Corps of Engineers (Corps) project planning.

To shorten the review, proposals have been made to weaken the opportunity for affected citizens to have a say in Corps of Engineers projects. Democracy demands that when the

federal government is spending millions or billions of dollars to alter the economies and environment of affected communities, those citizens receive a fair opportunity to hear what is contemplated and be heard.

Robust environmental review is especially vital for Corps projects, which affect the health, safety, and wellbeing of millions of Americans. Poorly planned Corps projects can damage rivers, coasts, and wetlands that provide free and effective flood protection for communities; support jobs and businesses that rely on these resources; and provide vital habitat for fish and wildlife. Poor planning can also lead to incomprehensible losses like those caused by the flooding of New Orleans during Hurricane Katrina. Robust environmental review is also critical given the Corps' long and well documented history of flawed analyses revealed by dozens of major reports from the National Academy of Sciences, Army Inspector General, Government Accountability Office, National Academy of Public Administration, and others. The Army Inspector General found that the Corps had intentionally manipulated data in an attempt to justify a $1.2 billion project and that the Corps has an institutional bias for constructing costly, large scale structural projects. (Army Inspector General, Case No. 00-019).

The National Environmental Policy Act and coordination with agencies like the U.S. Fish and Wildlife Service disclose the true environmental and economic costs of Corps projects and allow decision makers and the public to determine whether those projects deserve investment by federal taxpayers. They lead to more effective, less damaging projects and have prevented fundamentally ill-conceived projects from moving forward. This has saved many hundreds of millions in taxpayer dollars while protecting wetlands vital to flood protection, migratory waterfowl, and clean water. In the face of increasing fiscal challenges, severe storms, floods, droughts, and sea level rise, we simply cannot afford to undermine these critical safeguards.

What's more, undermining environmental reviews will not address the real reasons for delays in planning and constructing Corps projects. Such delays are driven by funding limitations, the Corps' existing $60 to $80 billion project backlog, and poor project planning and design. There is no study, report, or credible evidence showing that effective environmental reviews are the reason why meritorious Corps projects are not constructed more quickly.

The value of the existing environmental review process is well recognized by the Corps. In a letter sent to the Senate Environment and Public Works Committee on March 14, 2013, the Corps urged Congress to "affirm continued use of the current foundational environmental framework for all water resource project decisions... support efforts to evaluate the full range of reasonable alternatives, ensure the integrity of its analysis, and promote better environmental stewardship." More pointedly, the letter recommended that WRDA "should not prescribe regulatory deadlines, limit public participation, or constrain the Federal review process of the potential impacts" of Corps proposals.

We urge the Committee to abandon attempts to cripple environmental reviews of, and public participation in, Corps projects.

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