DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

MAY 21 2008

MEMORANDUM FOR the Deputy Commanding General for Civil Works and Emergency Operations

Subject: Upper Trinity River, Central City, Fort Worth, Texas – Modified Central City Project Report and Supplement No. 1 to the Final Environmental Impact Statement

Public Law 108-447, Section 116 authorized the Secretary of Army to undertake the Central City Project, as generally described in the April 2003 Trinity River Vision Master Plan. The Central City Project requires the joint efforts and funding of several Federal, state, and local agencies for implementation. The U.S. Army Corps of Engineers (Corps) is authorized to participate in the Central City Project at a total cost not to exceed $220,000,000, with a Federal cost of $110,000,000 and a non-Federal cost of $110,000,000, if the Secretary determines the work is technically sound and environmentally acceptable.

My April 7, 2006 response to your memorandum dated, March 16, 2006, concurred with the Corps recommendation for the Community-Based Alternative described in that submittal package. The recommended plan included the creation of an 8,400 foot-long bypass channel for the Clear Fork of the Trinity River, creation of an interior water feature utilizing a portion of the former channel of the Clear Fork, the construction of several dams, flood protection levees, road and bridge improvements, wetland, prairie and bottomland hardwood ecosystem restoration measures, and trail systems and water-based recreation opportunities. Of that recommended plan, the Corps portion of the project identified for implementation in accordance with Section 116 included those portions of the overall project that emphasize the flood control/hydraulic aspects that are fully functional. Specifically, the Corps project included the bypass channel, the isolation gates, the Samuels Avenue Dam, and most real estate, business and property owner relocations and soft costs associated with these features. (Soft costs include activities such as planning, design, survey and testing, legal support, program management, and construction oversight). Also included in the Corps project was all hydraulic (valley storage) and environmental mitigation required for the Central City Project, and all the cultural resources mitigation excepting mitigation of impacts to buried archeological resources that may be discovered in conjunction with project features other than those included in the Corps project. Based on the information provided in the Corps submittal package, I determined that the Community-Based

Alternative was technically sound and environmentally acceptable. Additionally, I signed a Record of Decision on April 7, 2006 to complete the National Environmental Policy Act process.

In response to a June 22, 2006 letter from the Fort Worth Parks and Community Services Department (enclosure 1), the Corps evaluated expanding the Central City Project farther to the east into the Riverside Oxbow study area, which is located immediately downstream of the Central City Project, along the Trinity River. In an April 25, 2008 memorandum from the Director of Civil Works, the Corps requested that I approve a modification to my April 7, 2006 determination identified above, in order to accommodate the City of Fort Worth. The revised Central City project is described in the Upper Trinity River, Central City, Fort Worth, Texas Modified Project Report and Supplement No. 1 to the Final Environmental Impact Statement. The Recommended Plan is the Modified Central City Project Alternative.

The Modified Central City Project Alternative would make the following changes to the previously approved plan: 1) move about 40 percent of the estimated 5,000 acre-feet of hydraulic mitigation to the Riverside Oxbow area; 2) relocate, reconfigure, and add a recreational lock and canal to the Samuels Avenue Dam, which now would be constructed by the non-Federal sponsor; 3) include a new Marine Creek low water dam and associated features which would be funded solely by the non-Federal sponsor; 4) construct various ecosystem restoration and recreation features in the Riverside Oxbow area which would also be non-Federally funded. All operations, maintenance, repair, replacement and rehabilitation costs, currently estimated at $272,000 annually, would remain with the sponsor.

The non-Federal sponsor for this project is the Tarrant Regional Water District. In their letter of May 2, 2008 to the District Engineer, Fort Worth District (enclosure 2), the Tarrant Regional Water District provided their full commitment to fund any cost differential between the $220,000,000 cost shared project, and the complete Modified Central City alternative, which currently has a total project cost of $597,000,000 and a fully funded cost of $673,000,000 (enclosure 3). These figures represent an increase of about $105 million for the Tarrant Regional Water District to implement the Modified Central City Project.

Based on the information provided in the Corps submittal package, I have determined that the Modified Central City Project is technically sound and environmentally acceptable. However, the project is not compliant with Administration policy. None of the proposed work has been subjected to an economic analysis to determine if it would meet the Federal objectives for water resources planning or if the benefits exceed the costs from a Federal perspective. Additionally, many of the project features provide recreational benefits which are not high priority project outputs for Federal investments, or environmental benefits resulting from planting upland prairie areas. Participation by the Corps in upland restoration efforts is not in accordance with policy as the Corps areas of expertise are closely linked with hydraulic and hydrologic modifications. Corps participation would be limited by the provisions of Section 116 and

appropriations by Congress for the project. I have signed a Record of Decision for the Modified Central City project (enclosure 4) to complete the National Environmental Policy Act process. Please continue to work with my staff to correct several minor report issues such as project related real estate mapping.

John Paul Woodley, Jr.
Assistant Secretary of the Army
(Civil Works)

Enclosures

RECORD OF DECISION

UPPER TRINITY RIVER, CENTRAL CITY, FORT WORTH, TEXAS, MODIFIED PROJECT

A Final Project Report dated March 2006, and Final Environmental Impact Statement (FEIS) dated January 2006, for the Upper Trinity River, Central City, Fort Worth, Texas addressed changes to the existing system of levees and channels to enhance existing levels of flood protection, restore components of the natural riverine system, and provide quality of life enhancements (ecosystem improvements and recreation) in Fort Worth, Texas. The report was prepared in response to Public Law 108-447, Section 116, dated December 8, 2004. Based on these documents, I signed a Record of Decision (ROD) for the Central City Project on April 7, 2006.

Subsequent to that decision, the City of Fort Worth requested that the U.S. Army Corps of Engineers (Corps) conduct an evaluation of merging the authorized Central City Project with the proposed Riverside Oxbow project, located immediately downstream on the Trinity River. This proposal became the Modified Central City Alternative in the subsequent project documentation. A Final Supplement No. 1 to the Final Environmental Impact Statement (FSEIS), dated March 2008, and a Final Modified Project Report, dated April 2008, were completed to document the analysis of technical soundness and environmental acceptability of modifying the Central City Project. Based on the review of the FSEIS and associated documents, as well as the views of interested agencies and the concerned public, I find that both the Modified Central City Alternative recommended by Corps for the overall Central City Project, and the Corps Component of that alternative, to be technically sound and environmentally acceptable.

Current Corps investigations into water resources problems and opportunities in the Upper Trinity River Basin were authorized by the Senate Committee on Environment and Public Works Resolution, dated April 22, 1988. In 2002, the Corps initiated plan formulation for the Central City area, in accordance with the Water Resources Council's Economic and Environmental Principles and Guidelines for Water and Related Land Resources Implementation Studies, and within the Corps current mission areas, which include flood damage reduction, ecosystem restoration, and recreation. The study authority was subsequently modified by Public Law 108-447, Section 116, which authorized the Secretary of the Army to undertake the Central City Project, as generally described in the Trinity River Vision Master Plan, dated April 2003. The Central City Project in the Trinity River Vision Master Plan was developed at a conceptual level by the local community and, in addition to the Corps mission areas, included urban revitalization as a primary goal. This overall Central City

ENCL 4

Project is envisioned as a multi-agency project, to be implemented through the joint efforts and funding of several Federal, state and local agencies. The project authorization contained in P.L. 108-447, Section 116, authorizes Corps of Engineers participation in the Central City project at a total cost not to exceed $220,000,000, and specifies that the Corps and the non-Federal share will each be $110,000,000. Corps participation is authorized if the Secretary "determines the work is technically sound and environmentally acceptable."

As interdependent parts of the larger Central City Project, the Corps participation features and the other agency participation features are connected actions. All the actions comprising the overall Central City Project and the Modified Central City Alternative have therefore been included in the scope of analysis of the FEIS and FSEIS. The FSEIS ultimately considered two alternatives: the Modified Central City Alternative and the "No Action" Alternative. The "No Action" Alternative assumed that the two projects, the Central City Project discussed in the FEIS and the Riverside Oxbow project would continue on as separate projects. This "No Action" Alternative was proper because, without a decision to modify the project, the two projects would have gone forward as described in their respective National Environmental Policy Act documents. The Modified Central City Alternative assumed that certain changes discussed below were made to the plan. The descriptions and discussion of these alternatives in the FSEIS are incorporated by reference. The Modified Central City Alternative best meets all the project goals without unacceptable adverse environmental and social impacts, is the least environmentally damaging practicable alternative, and is therefore the Corps' recommended plan.

Within the fiscal, technical and environmental constraints of the section 116 authorization, Corps participation in the recommended plan, the Modified Central City Alternative, is comprised of flood control/hydraulic features and required hydraulic, environmental and cultural mitigation. While the specific features contained within the Corps Component of the Modified Central City Alternative are identified later in this ROD, all of the features of the Modified Central City Alternative are listed below:

- Bypass channel, approximately 8,400 feet in length and 300-400 feet wide between the top of levees to carry the flood flows around the Central City area;
- Samuels Avenue Dam and recreational lock designed to create a normal water surface elevation of approximately 525 feet to allow boating within the upstream area;
- Marine Creek Low Water Dam to create a normal water surface elevation of 516.5 feet to allow boating on Marine Creek up to the Stockyards;
- Three isolation gates designed to restrict flood flows to the new bypass channel and to isolate the interior area from flood flows. A

stormwater pump station would operate with the isolation gates to reduce flooding in two interior drainage areas;

- Valley storage mitigation sites upstream and downstream of the Samuels Avenue Dam;
- Street and highway improvements for Henderson Street, White Settlement Road Bridges, North Main Street Bridge, Beach Street Bridge, and University Drive; pavement and traffic engineering improvements to improve capacity, movement, and provision for automobiles and public transit;
- Utility relocations, including water, sanitary and storm sewer, electric, gas, and telecommunications;
- Interior water feature;
- Ecosystem Restoration of two Trinity River oxbows and the Riverside Oxbow and Gateway Park area;
- Recreational enhancements in Riverside Oxbow, Gateway Park, and Riverside Park including roadways, parking, pedestrian bridges, soccer fields, baseball field, basketball courts, splash park, and trail heads;
- Trail network of approximately 12 miles of waterfront trails, approximately 3.5 mile boating loop, and 9 miles of soft park and equestrian trails;
- Wetland, riparian, and terrestrial improvement in the Riverside Oxbow/ Gateway Park areas, Rockwood area, and aquatic habitat mitigation in Ham Branch;
- Cultural resource mitigation.

The recommended plan, the Modified Central City Alternative, accomplishes all four dimensions of the Central City project purpose, i.e. Flood Damage Reduction, Ecosystem Restoration, Urban Revitalization, and Recreation. The recommended plan provides protection for the Standard Project Flood with 4 feet of freeboard and improves the performance of the interior drainage components. Additionally, the recommended plan will facilitate revitalization of the Central City area by establishing the conditions for levee removal along the river, which will promote better connection and access to the Trinity River. The plan also provides ecosystem restoration and recreation opportunities. Although the plan has some adverse effects to fish and wildlife habitat, these effects are significantly reduced from the original Central City project, and will be mitigated with no unacceptable adverse effects remaining. The plan is strongly supported by local governments, as evidenced by their development of a Tax Increment Financing District and substantial bond revenue that will be used for the local cost share.

Hydraulic mitigation will occur mostly downstream of the Samuels Avenue Dam, with the primary site being the Riverside Oxbow/Gateway Park area. It also includes five contingency valley storage sites that could be used if analyses during the detailed design phase indicate the primary storage sites are not sufficient to achieve the required valley storage, or if other factors preclude their use. One or more of the contingency sites could be used to replace any of the primary sites depending on the total amount of valley storage necessary. The evaluation of valley storage sites included avoiding, to the extent feasible, important habitats and subsequently developing habitat within these sites following excavation.

The Modified Central City Alternative would avoid much of the initial impact to riparian woodland areas that would occur with the original Central City project in the Riverbend area as proposed in the FEIS. Upon completion of habitat development, which would compensate for impacts, the Modified Central City Alternative would result in more riparian woodland outputs but less wetland outputs relative to the No Action alternative. The Modified Central City Alternative would have similar upland woodland impacts and outputs as the No Action alternative, but would impact a greater amount of grassland habitat than the No Action alternative. Most of the grassland impacts will occur to areas dominated by non-native species and therefore no mitigation is deemed necessary. These changes in habitat outputs are primarily due to relocating the valley storage sites from the Riverbend area to the Riverside Oxbow area, and replacing grassland habitat at these sites with riparian woodland.

Relocation of Samuels Avenue Dam upstream of the Marine Creek and Trinity River confluence would avoid some adverse effects to riparian and aquatic habitat along lower Marine Creek and all impacts to Lebow Creek. However, construction of a low water dam on Marine Creek and a lock and boat channel from the Trinity River impoundment to Marine Creek would still result in inundation (albeit to a lesser extent) of riparian and aquatic habitat in Marine Creek, which would require mitigation. This aquatic habitat mitigation will occur in the Ham Branch tributary and in the remnant Sycamore Creek through physical habitat modification, including establishment of riffle and pool complexes. This plan has been coordinated with the U.S. Fish and Wildlife Service and State of Texas resource agencies, and all practicable means to avoid and minimize environmental impacts have been adopted. A monitoring plan will be implemented to evaluate the compensatory mitigation.

Implementation of the recommended plan will potentially have adverse effects on eleven historic architectural properties eligible for the National Register of Historic Places. A plan to mitigate the impacts of the Community Based Alternative on historic architectural resources has been developed and adopted in consultation with the Texas Historical Commission as well as numerous stakeholder groups. Specific components of the mitigation plan are contained in

the executed Programmatic Agreement among the Corps, the Texas Historical Commission and the City of Fort Worth.

Those features identified for Corps of Engineers participation (Corps Component) in accordance with the cost limitations contained in P.L. 108-447, Section 116, emphasize the flood control/hydraulic aspects of the Central City Project and develop a fully-functioning hydraulic (flood control) system. Specifically, the Corps Component of the Modified Central City Alternative consists of a bypass channel, two isolation gates, associated real estate and property owner relocations, all valley storage and habitat mitigation, and soft costs associated with these features. ("Soft costs" include activities such as planning, design, survey and testing, legal support, program management and construction oversight). Also included is all cultural resources mitigation, except mitigation of impacts to buried archeological resources that may be discovered in conjunction with project features other than those included in the Corps Project. Lands required for the Corps Component that are already owned by the Sponsor, the City of Fort Worth, or Tarrant County will be provided to the project.

In order to ensure that the Corps Component is fully functional when complete, the Project Partnership Agreement (PPA) between the Corps and the non-Federal sponsor will be conditioned to require certain base conditions. Specifically, utility relocations, demolition, and the cleanup of substances regulated by the Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation, and Liability Act will be performed by the sponsor as a non-project cost prior to a construction start for appropriate elements of the Corps Component. Additionally, new bridges, to be constructed by the Texas Department of Transportation at the North Main Street and Henderson Street intersections with the bypass channel, the Samuels Avenue Dam, and the Trinity Point isolation gate will be base conditions of the PPA.

The project has been extensively coordinated with the public and with resource agencies. The project is in compliance with all environmental requirements, including the Endangered Species Act, the National Historic Preservation Act, the Clean Air Act, and the Clean Water Act. This finding terminates further consideration by the Department of the Army of the separate proposal for the Riverside Oxbow, Upper Trinity River, Fort Worth, Texas ecosystem restoration project. This ROD supersedes the ROD signed on April 7, 2006, with respect to the originally proposed Central City Project and the Finding of No Significant Impact signed by the Acting District Engineer, Fort Worth District, on May 22, 2003, with respect to the proposed Riverside Oxbow project.

All applicable laws, executive orders, regulations, and local plans were considered in evaluating alternatives. The recommended plan is the least environmentally damaging practicable alternative and incorporates features to avoid, minimize, or mitigate adverse environmental and social impacts. Based upon the review of FSEIS and comments received from other agencies and the public, I find that the project benefits gained by construction of the recommended plan outweigh the adverse effects. Therefore, I have determined that the Modified Central City Alternative and the Corps Component of that plan are in the public interest. This Record of Decision completes the National Environmental Policy Act process.

May 21, 2008
Date

John Paul Woodley, Jr.
Assistant Secretary of the Army
(Civil Works)

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

MAY 13 2016

Honorable Paul Ryan
Speaker of the House of Representatives
U.S. Capitol Building, Room H-232
Washington, DC 20515-0001

Dear Mr. Speaker:

The Secretary of the Army recommends modifying the total project first cost of the authorized Turkey Creek Basin, Kansas City, Kansas and Kansas City, Missouri project, to increase the total project first cost from $73,380,000 (October 2001 price levels) to $152,533,000 (October 2015 price levels). The increase in the authorized cost is necessary because the construction costs are projected to exceed the maximum allowed by section 902 of the Water Resources Development Act (WRDA) of 1986. The enclosed May 2015 Post Authorization Change Report/ Limited Reevaluation Report (PACR/LRR) explains and supports the cost increase. The report also documents that the project remains economically justified and environmentally acceptable.

The authorized project was based on a Locally Preferred Plan (LPP) that included an increase in the design capacity of the Missouri Interceptor from a 10% annual chance of exceedance (ACE) event to a 6.67% ACE event and the addition of a Mission Road Interceptor with a 4% ACE event design capacity. However, after an analysis documented in the PACR/LRR showed mimimal reductions in flood ponding associated with the Mission Road Interceptor, the non-Federal sponsor decided to defer construction of this fully funded non-Federal feature.

The project was originally authorized for construction in section 101(a) (24) WRDA 1999 (Public Law 106-53), at a total project first cost of $42,875,000. The Local Cooperation Agreement (LCA) was executed on July 17, 2006 with the non-Federal sponsors, the Unified Government (UC) of Wyandotte County, Kansas City, Kansas and the City of Kansas City, Missouri. Funds to initiate Preconstruction Engineering and Design were first appropriated in FY 1998 and funds to initiate construction were appropriated in FY 2004. Section 123 of Division D of the Consolidated Appropriations Resolution of 2003, Public Law 108-7 modified the authorized total project cost to $73,380,000 (October 2001 prices). As of October 1, 2015, the project was approximately 66% complete, based on total project sunk costs and the recommended total project first cost. All remaining features are under construction or waiting to be advertised for construction and all design is complete. The Missouri Interceptor is the only remaining feature of the authorized project to be constructed.

The maximum cost for the authorized project, adjusted for allowable inflation in accordance with section 902, is $123,870,000 (at October 2015 price levels). Based on

cost increases described in the PACR/LRR, the revised estimated project first cost of $152,533,000 (at October 2015 price levels) is $28,660,000 over the section 902 limit. This estimate includes $99,003,000 in sunk costs. The current PACR/LRR documents the need for a second increase in the authorized project cost primarily due to 1) differing site conditions found during design and construction, requiring additional work and excavation, 2) additional utility relocations, and 3) additional railroad relocation requirements. The modifications to the project have caused unforeseen costs and measurable schedule delays. The project scope, purpose, and relocations remain as authorized.

In accordance with the cost sharing provisions of section 103(a) of WRDA 1986, flood risk management features are cost shared 65 percent Federal and 35 percent non-Federal. The non-Federal local sponsors are responsible for 100 percent of the cost of the LPP above the costs of the NED plan. The Federal share of the recommended total project first cost is estimated to be $97,067,750 and the non-Federal share is estimated at $55,465,250. The estimated costs of lands, easements, rights-of-way, relocations, and excavated material disposal areas (LERRDs) is $12,224,000. Approximately $7,000,000 of the estimated LERRDs has been credited to the non-Federal sponsors for work completed to date. The local sponsors are responsible for the operation, maintenance, repair, replacement, and rehabilitation of the project after construction, an estimated $167,000 per year.

An economic update was completed in conjunction with this report which verified that the project continues to be economically justified. At an October 2015 (FY 2016) price level and the current FY 2016 Federal interest rate of 3.125 percent (50-year period of analysis), annual benefits are $17,794,000, annual costs are $6,307,000, net benefits are $11,487,000, and the benefit-to-cost ratio is 2.8 to 1.

With respect to environmental compliance, a Finding of No Significant Impact (FONSI) was signed in 2003 when an Environmental Assessment (EA) was prepared for the General Reevaluation Report (GRR), which included a Clean Water Act (CWA) section 404 authorization and a CWA section 401 water quality certification. However, design changes to the Missouri Interceptor were determined to differ from what was described in the EA. Therefore, a supplemental EA was prepared and a FONSI was signed in February 2015. An updated section 401 was also provided to accompany the supplemental EA.

A Type I Independent External Peer Review (IEPR) was not completed for the Turkey Creek PACR/LRR. The Director of Civil Works for the Army Corps of Engineers (Corps), Headquarters approved an IEPR exclusion request for the PACR/LRR on November 4, 2015. However, a Type II IEPR (for implementation documents), which is a Safety Assurance Review (SAR), will be conducted on design and construction activities. Corps policy directs that an SAR be conducted for any project involving public safety.

The Office of Management and Budget (OMB) advises that there is no objection to the submission of the PACR/LRR to Congress and concludes that the recommendation is consistent with the policy and programs of the President. However, OMB also noted that should Congress authorize this project for construction, it would need to compete with other proposed investments for funding in future budgets. A copy of OMB's letter dated May 11, 2016 is enclosed. I am providing a copy of this transmittal and the OMB letter to the Subcommittee on Water Resources and Environment of the House Committee on Transportation and Infrastructure, and the Subcommittee on Energy and Water Development of the House Committee on Appropriations. I am also providing an identical letter to the President of the Senate.

Very truly yours,

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Enclosures

DEPARTMENT OF THE ARMY
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MAY 13 2016

Honorable Paul Ryan
Speaker of the House of Representatives
U.S. Capitol Building, Room H-232
Washington, D.C. 20515

Dear Mr. Speaker:

The Secretary of the Army recommends modifying the total project first cost of the authorized Ohio River Shoreline, Paducah, Kentucky project to increase the total project first cost from $20,260,000 (October 2013 price levels) to $31,246,000 (October 2015 price levels). The increase in the authorized cost is necessary because the construction costs are projected to exceed the maximum allowed by section 902 of the Water Resources Development Act (WRDA) of 1986. The enclosed March 2016 Limited Post Authorization Change Report (PACR) explains and supports the cost increase. The report also documents that the project remains economically justified and environmentally acceptable.

The authorized project is the National Economic Development (NED) plan as described within the Feasibility Report, dated April 2011 (revised September 2011), and modified by a Limited PACR, dated March 2016. The Paducah Local Flood Protection project consists of reconstructing the following features: recondition/replace pumps, motors and motor control systems, major pump station components, and other miscellaneous items at each of the 12 existing pumping stations; construction of one new pumping station; slip-line 37 existing deteriorated corrugated metal pipes; stabilize diversion channel banks; replace water stops; plug/remove existing toe drains; construct new gate well structures; permanently close several floodwall openings; and install scour erosion control. This reconstruction project will significantly improve reliability and restore system performance. When completed, the project will reduce the expected annual flood damages to the area by approximately 99 percent. The completed project is expected to provide about $6.9 million annually in flood reduction benefits.

The project was originally authorized for construction in section 5077 of WRDA 2007 at an estimated cost of $3 million. The authorization was amended by section 7002(2) of the Water Resources Reform and Development Act of 2014 for a total project cost increase to $20,260,000. The authorized project is described within the Chief of Engineer's Report, dated May 16, 2012, and modified by a Limited PACR, dated March 2016. Funds to initiate Preconstruction Engineering and Design were first appropriated in FY 2012. Funds to initiate construction have not been appropriated. The project is approximately 6 percent physically complete as of FY 2015 due to in-kind work completed by the non-Federal sponsor, the city of Paducah, KY.

The maximum cost for the authorized project, adjusted for allowable inflation in accordance with section 902, is $25,491,000 (October 2015 price levels). Based on cost increases described in the PACR, the revised estimated project first cost (without inflation) is $31,246,000 (October 2015 price levels). The cost increase is due to an underestimation

of the cost for pump station rehabilitation work. The project scope, purpose, and relocations included within the NED plan remain as authorized.

In accordance with the project authorization, the flood risk management features of the reconstruction project are cost shared at 65 percent Federal and 35 percent non-Federal. The Federal share of the project first cost is estimated at $20,309,900 and the non-Federal share is estimated at $10,936,100. The non-Federal sponsor currently owns nearly all of the required lands, easements, rights-of-way, relocations, and excavated material disposal areas required for implementation of the project. The non-Federal cost sharing sponsor will be responsible for the operation, maintenance, repair, replacement, and rehabilitation of the project after construction, at a cost currently estimated at $623,000 per year.

At the October 2015 price level, a 3.125 percent discount rate, and a 50-year period of economic analysis, the U.S. Army Corps of Engineers (Corps) estimates the total equivalent annual costs to be $1,852,000 and total equivalent annual benefits to be $7,096,000. Net benefits are estimated at $5,244,000 and the benefit-to-cost ratio is 3.8 to 1.

With respect to environmental compliance, a Finding of No Significant Impact (FONSI) was signed in 2012 when an Environmental Assessment (EA) was prepared as part of the final Feasibility Report. The Corps and my office reviewed the FONSI, EA, associated environmental permits and cultural resource clearances and have determined that the Paducah project remains compliant with the aforementioned documents.

A Type I Independent External Peer Review (IEPR) was not completed for the Paducah PACR. The Director of Civil Works for Corps Headquarters approved an IEPR exclusion request for the PACR on April 26, 2011. However, a Type II IEPR (for implementation documents), which is a Safety Assurance Review (SAR), will be conducted on design and construction activities. Corps policy directs that an SAR be conducted for any project involving public safety.

The Office of Management and Budget (OMB) advises that there is no objection to the submission of the Limited PACR to Congress and concludes that its recommendation is consistent with the policy and programs of the President. However, OMB also noted that should Congress authorize this project for construction, it would need to compete with other proposed investments for funding in future budgets. A copy of OMB's letter, dated May 13, 2016, is enclosed. I am providing a copy of this transmittal and the OMB letter to the Subcommittee on Water Resources and Environment of the House Committee on Transportation and Infrastructure, and the Subcommittee on Energy and Water Development of the House Committee on Appropriations. I am also sending an identical letter to the President of the Senate.

Very truly yours,

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Enclosures

3 Enclosures

1. Director of Civil Works' transmittal, March 11, 2016
2. OMB Letter, May 13, 2016
3. Ohio River Shoreline, Paducah, Kentucky, Reconstruction Project Limited Post Authorization Change Report, March 2016

DEPARTMENT OF THE ARMY
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MAY 13 2016

Honorable Paul Ryan
Speaker of the House of Representatives
U.S. Capitol Building, Room H-232
Washington, DC 20515

Dear Mr. Speaker:

The Secretary of the Army recommends modifying the total project first cost of the authorized Blue River Basin, Kansas City, Missouri project to increase the total project first cost from $17,082,000 (October 1996 price levels) to $46,480,000 (October 2015 price levels). The increase in the authorized cost is necessary because the construction costs are projected to exceed the maximum allowed by section 902 of the Water Resources Development Act (WRDA) of 1986. The enclosed April 2015 Post Authorization Change Report / Limited Reevaluation Report (PACR/LRR) explains and supports the cost increase. The report also documents that the project remains economically justified and environmentally acceptable.

The authorized project was based on the National Economic Development (NED) plan and includes improvements to approximately 6,800 feet of floodwall and levee, from U.S. Highway 71 upstream to the Bannister Federal Complex levee in the Dodson Industrial District. When completed, the project will reduce the expected annual flood damages to the area by approximately 99 percent. The completed project is expected to provide about $4.57 million annually in flood reduction benefits.

The project was originally authorized for construction in section 101(a)(18) of WRDA 1996 (Public Law 104-303), at a total cost of $17,082,000. The authorized project is described within the Feasibility Study, dated February 19, 1996, and modified by an LRR, dated April 2000. Funds to initiate Preconstruction Engineering and Design were first appropriated in FY 1996 and funds to initiate construction were appropriated in FY 2001. The project is approximately 41 percent physically complete as of FY 2015. All remaining features are currently in design. The remaining features include a levee from Hickman Mills Road Bridge to Prospect Avenue Bridge along with associated utility relocations.

The maximum cost for the authorized project, adjusted for allowable inflation in accordance with section 902, is $32,312,000 (October 2015 price levels). Based on cost increases described in the LRR, the revised estimated project first cost (without inflation) is $46,480,000. The revised cost is a result of unforeseen changes during design and construction activities that have occurred. Cost increases were caused by unsuitable excavation materials for relocation of sewer lines and damages due to flooding during construction.

In accordance with the cost sharing provisions of section 103(a) of WRDA 1986, flood risk management features are cost-shared at 75 percent Federal and 25 percent

non-Federal (in accordance with the original project authorization). The Federal share of the project first cost is estimated at $34,860,000 and the non-Federal share is estimated at $11,620,000. The majority of lands, easements, rights-of-way, relocations, and excavated material disposal areas required for the project have been obtained since initiating construction. The non-Federal cost sharing sponsor will be responsible for the operation, maintenance, repair, replacement, and rehabilitation of the project after construction, at a cost currently estimated at $85,300 per year.

At the October 2015 price level, a 3.125 percent discount rate, and a 50-year period of economic analysis, the Corps estimates the total equivalent annual costs to be $1,945,000 and total equivalent annual benefits to be $4,621,000. Net benefits are estimated at $2,676,000 and the benefit-cost-ratio is 2.4 to 1.

With respect to environmental compliance, a Finding of No Significant Impact (FONSI) was signed for the authorized project in March 1996. There have not been any significant changes to the existing environmental conditions that have or are foreseen to result in the need for additional National Environmental Policy Act compliance. Only minor design changes from what was described in the FONSI and in the selected alternative contained in the Environmental Assessment (EA) are being considered, but all were assessed in the EA. The project required mitigation for impacts to 1.1 acres of wooded wetland will be accomplished by developing a wetland in the 4 acre riverward borrow area in reach 2.

A Type I Independent External Peer Review (IEPR) was not completed for the Blue River Basin PACR/LRR. The Director of Civil Works for Corps, Headquarters approved an IEPR exclusion request for the PACR/LRR on November 6, 2015. However, a Type II IEPR (for implementation documents) which is a Safety Assurance Review (SAR), will be conducted on design and construction activities. Corps policy directs that an SAR be conducted for any project involving public safety.

The Office of Management and Budget (OMB) advises that there is no objection to the submission of the report to Congress and concludes that the report recommendation is consistent with the policy and programs of the President. However, OMB also noted that should Congress authorize this project for construction, it would need to compete with other proposed investments for funding in future budgets. A copy of OMB's letter dated May 10, 2016, is enclosed. I am providing a copy of this transmittal and the OMB letter to the Subcommittee on Water Resources and Environment of the House Committee on Transportation and Infrastructure, and the Subcommittee on Energy and Water Development of the House Committee on Appropriations. I am also sending an identical letter to the President of the Senate.

Very truly yours,

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Enclosures

3 Enclosures

1. Director of Civil Works Report, dated November 5, 2015
2. OMB Clearance Letter, dated May 10, 2016
3. Blue River Basin Flood Damage Reduction Project, Kansas City, Missouri Post Authorization Change Report/Limited Reevaluation Report, April 2016 (CD)

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON, DC 20310-0108

JUL 15 2016

The Honorable Paul Ryan
Speaker of the House of Representatives
U.S. Capitol Building, Room H-232
Washington, DC 20515-0001

Dear Mr. Speaker:

The Secretary of the Army recommends modifying the total project first cost of the authorized Comprehensive Everglades Restoration Plan: Picayune Strand Restoration project to increase the total project first cost from $375,330,000 (October 2004 price levels) to $617,967,000 (October 2015 price levels). The increase in the authorized cost is necessary because the construction costs are projected to exceed the maximum allowed by section 902 of the Water Resources Development Act (WRDA) of 1986. The enclosed April 2015 Post Authorization Change Report/Limited Reevaluation Report (PACR/LRR) explains and supports the cost increase. The report also documents that the project remains technically sound, cost effective, and environmentally acceptable.

The authorized project was based on the National Ecosystem Restoration (NER) plan and consists of spreader channels, canal plugs, road removal, and pump stations to restore and enhance wetlands in Golden Gate Estates and adjacent public lands, improve estuarine water quality by reducing large freshwater inflows, and improve groundwater recharge.

The project was originally authorized for construction in section 1001(15) of WRDA 2007 (Public Law 104-303), at a total cost of $375,330,000. The authorized project is described within the Chief's Report, dated September 15, 2005. Prior to the authorization in 2007, the non-Federal sponsor initiated pre-construction, engineering, and design efforts and started construction activity under the state of Florida's Acceler8 initiative. Roadway removal and the Prairie Canal backfilling were completed in 2007 by the non-Federal sponsor.

In 2008, the U.S. Army Corps of Engineers (Corps) and the sponsor agreed the Corps would complete construction of the project. Subsequently, significant revisions to the design, including phasing of construction and updating the pump stations and telecommunication system, were recommended. The construction phasing was required to comply with the Corps budget process and adhere to Federal acquisition regulations.

A manatee refugium feature was also required. On March 12, 2009, the U.S. Fish and Wildlife Service (USFWS) issued a Biological Opinion in accordance with the Endangered Species Act that did not concur with the Corps' determination of "may

affect, not likely to adversely affect" the manatee or its critical habitat. This led to the U.S. Geological Survey (USGS) studies and creation of a manatee study team that confirmed in 2011 that a manatee refugium would be the best solution for protection of the West Indian manatee. The Corps reinitiated consultation with USFWS on September 11, 2014 with a determination of "may affect, not likely to adversely affect" the manatee or its critical habitat with the addition of the manatee refugium feature. Based on the USGS studies and multi-agency consultations, the USFWS concurred with the Corps' determination of "may affect, not likely to adversely affect" manatee on October 31, 2014.

The total project cost has increased and exceeds the maximum authorized cost of the project. The design refinements to the three pump stations and associated earthwork are the major drivers of the increased costs. The remaining project features to be constructed are the southwestern protection feature, additional road removal and canal plugging, and the manatee refugium feature.

The maximum cost for the authorized project, adjusted for allowable inflation in accordance with section 902, is $505,904,000 (October 2015 price levels). Based on cost increases described in the LRR, the revised estimated project first cost (without inflation) is $617,967,000 (October 2015 price level). In accordance with section 601(e) of the WRDA 2000, the Federal and non-Federal shares of the costs for this project each are $308,983,000 (50%).

Based on October 2015 price levels, a 3.125 percent discount rate, and a 50-year period of analysis, the total equivalent average annual costs of the Picayune Strand Restoration project are estimated to be $37,477,000. The Picayune Strand Restoration project is estimated to restore 50,350 average annual habitat units of non-monetary benefits. The average annual cost per average annual habitat unit is about $749.

An Environmental Assessment and Finding of No Significant Impact was prepared in accordance with the National Environmental Policy Act and concluded that there are no significant effects anticipated as a result of the design refinements to the project as described in the 2004 project implementation report and Environmental Impact Statement.

A Type I Independent External Peer Review (IEPR) was completed for the Picayune Strand Restoration project PACR/LRR by Battelle Memorial Institute. The review comments resulted in expanded narratives throughout the PACR/LRR to support the decision-making process and justify the recommendation. All comments from the review have been addressed and incorporated into the final documents.

The Office of Management and Budget (OMB) advises that there is no objection to the submission of the report to Congress and concludes that the report recommendation is consistent with the policy and programs of the President. A copy of OMB's letter dated July 7, 2016 is enclosed. I am providing a copy of this transmittal and the OMB letter to the Subcommittee on Water Resources and Environment of the House

Committee on Transportation and Infrastructure and the Subcommittee on Energy and Water Development of the House Committee on Appropriations. I am providing an identical letter to the President of the Senate.

Very truly yours,

for Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Enclosures

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

JUL 15 2016

Honorable Paul Ryan
Speaker of the House of Representatives
U.S. Capitol Building, Room H-232
Washington, DC 20515

Dear Mr. Speaker:

The Secretary of the Army recommends modifying the total project first cost of the authorized Swope Park Industrial Area, Blue River, Missouri project to increase the total project first cost from $16,980,000 (October 2003 price levels) to $31,085,000 (October 2015 price levels). The increase in the authorized cost is necessary because the construction costs are projected to exceed the maximum allowed by section 902 of the Water Resources Development Act (WRDA) of 1986. The enclosed April 2016 (revised May 2016) Post Authorization Change Report (PACR) explains and supports the cost increase. The report also documents that the project remains economically justified and environmentally acceptable.

The authorized project is the National Economic Development (NED) plan as described within the Feasibility Report, dated December 2003, and modified by the PACR. The Swope Park Industrial Area project consists of approximately 6,840 feet of floodwalls and earthen levees to form a perimeter of protection from a 0.2 percent annual exceedance probability flood event. Included in the authorized project are various floodwall and levee sections, gatewells, a rolling steel floodgate, and interior drainage collection system. The project includes fish and wildlife mitigation consisting of planting hardwood trees along the Blue River Parkway and excavation of a small wetland riverward of the levee just upstream of the project site. When completed, the project will reduce the expected annual flood damages to the area by approximately 92 percent.

The project was originally authorized for construction in section 1001(29) of WRDA 2007 at an estimated cost of $16,980,000. The authorized project is described within the Feasibility Report, dated December 2003, and modified by the PACR. Funds to initiate Preconstruction Engineering and Design were first appropriated in FY 2001. Funds to initiate construction were first appropriated in FY 2009. The project is approximately 17 percent financially complete (based on sunk costs), and 8 percent physically complete.

The maximum cost for the authorized project, adjusted for allowable inflation in accordance with section 902, is $25,267,000 (October 2015 price levels). Based on cost increases described in the PACR, the revised estimated project first cost (without inflation) is $31,085,000 (October 2015 price level). The cost increase is due to omissions, underestimations, and unforeseen changes during design and construction

activities. Project costs have increased primarily due to an underestimation of levee and floodwall quantities, consideration for the potential of unsuitable foundation material, increased requirement for off-site borrow material, higher construction cost for the interior drainage construction contract, and updated real estate values from the final design. Unforeseen changes include, but are not limited to, additional armoring for erosion protection, increased engineering and design due to extended duration of project administration (more than 10 years) and alternating design phases between architectural/engineering firms and the District, and increased Supervision & Administration due to anticipation of intermittent funding. Cost reductions have been implemented on project features to the maximum extent technically feasible. There are no changes in project location, purpose, or scope.

In accordance with the project authorization, the flood risk management features of the project are cost shared at 65 percent Federal and 35 percent non-Federal. The Federal share of the project first cost is estimated at $20,205,250 and the non-Federal share is estimated at $10,879,750. The non-Federal sponsor currently owns nearly all of the required lands, easements, rights-of-way, relocations, and excavated material disposal areas required for implementation of the project. The non-Federal cost sharing sponsor will be responsible for the operation, maintenance, repair, replacement, and rehabilitation of the project after construction, at a cost currently estimated at $81,600 per year.

At the October 2015 price level, a 3.125 percent discount rate, and a 50-year period of economic analysis, the U.S. Army Corps of Engineers (Corps) estimates the total equivalent annual costs to be $1,358,400 and total equivalent annual benefits to be $3,018,100. Net benefits are estimated at $1,659,700 and the benefit-to-cost ratio is 2.2 to 1.

With respect to environmental compliance, a Finding of No Significant Impact (FONSI) was signed in 2014 when an updated Environmental Assessment (EA) was prepared as part of the project. The Corps and my office reviewed the FONSI, EA, associated environmental permits and cultural resource clearances and have determined that the Swope Park Industrial Area project remains compliant with the aforementioned documents.

A Type I Independent External Peer Review (IEPR) was not completed for the Swope Park Industrial Area PACR. The Director of Civil Works for Corps Headquarters approved an IEPR exclusion request for the PACR on March 8, 2016. However, a Type II IEPR (for implementation documents), which is a Safety Assurance Review (SAR), will be conducted on design and construction activities. Corps policy directs that a SAR be conducted for any project involving public safety.

The Office of Management and Budget (OMB) advises that there is no objection to the submission of the PACR to Congress and concludes that its recommendation is consistent with the policy and programs of the President. However, OMB also noted that the project would need to compete with other proposed investments for funding in

future budgets. A copy of OMB's letter, dated July 13, 2016, is enclosed. I am providing a copy of this transmittal and the OMB letter to the Subcommittee on Water Resources and Environment of the House Committee on Transportation and Infrastructure, and the Subcommittee on Energy and Water Development of the House Committee on Appropriations. I am also sending an identical letter to the President of the Senate.

Very truly yours,

for Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Enclosures

3 Enclosures

1. Director of Civil Works' transmittal, April 21, 2016
2. OMB Letter, July 13, 2016
3. Swope Park Industrial Area, Blue River, Kansas City, Missouri Flood Damage Reduction Project, Post Authorization Change Report, April 2016 (revised May 2016)

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

SEP 21 2016

Honorable Paul Ryan
Speaker of the House of Representatives
U.S. Capitol Building, Room H-232
Washington, DC 20515

Dear Mr. Speaker:

The Secretary of the Army recommends modifying the total project first cost of the authorized Rio de Flag, Flagstaff, Arizona project to increase the total project first cost from $54,100,000 (October 2006 price level) to $100,837,000 (October 2015 price level). The increase in the authorized cost is necessary because the construction costs are projected to exceed the maximum allowed by section 902 of the Water Resources Development Act (WRDA) of 1986. The enclosed June 2016 Limited Reevaluation Report (LRR) explains and supports the cost increase. The LRR also documents that the project remains economically justified and environmentally acceptable.

The authorized project was based on the National Economic Development plan and will provide essential flood risk reduction to the City of Flagstaff. The floodplain encompasses over 1,500 structures worth over $1 billion. Completion of this project will significantly reduce flood damages within the study area while also providing critical flood risk reduction to thousands of floodplain residents and the Northern Arizona University campus which has over 16,000 students. The project will further decrease risks to life and safety by reducing the probability and extent of flooding of the City's transportation network and public health and safety facilities. Additional benefits provided by the project include reduced damages and disruptions to the Burlington Northern Santa Fe rail corridor and historical/culturally significant properties, reduced negative social effects to the community, and positive regional economic development benefits generated by project construction. The completed project is expected to provide about $7.763 million annually in flood reduction benefits.

The project was originally authorized for construction in section 101(b)(3) of the WRDA of 2000 at a total cost of $24,072,000. The authorized project is described within the Feasibility Study, dated September 2000. Section 3007 of WRDA 2007 modified the project authorization to increase the total cost to $54,100,000. Funds to initiate Pre-construction Engineering and Design (PED) were first appropriated in FY1996 and funds to initiate construction were appropriated in FY2009. The project is approximately 29% fiscally complete.

The maximum cost for the authorized project, adjusted for allowable inflation in accordance with section 902, is $81,025,000 (October 2015 price levels). Based on cost increases described in the LRR, the revised estimated project first cost (without

inflation) is $100,837,000 (October 2015 price level). The increase in project costs is attributable to substantial increases in the construction costs and the lands, easements, rights-of-way, relocations and suitable borrow and dredged or excavated material disposal areas. Primary drivers of the increase in construction costs were: (a) additional PED costs related to design oversight and construction deficiencies, (b) refinements in the design quantities and estimates, including moving from 30% design to 90% design and additional extensive excavations into bedrock that were unforeseen during the feasibility study, (c) an increase in the contingency value resulting from the recently completed Cost and Schedule Risk Analysis, (d) relocations not captured in the 2006 cost estimate, (e) Construction Management and Supervision and Administration increases due to overall project cost increases.

In accordance with the cost sharing provisions of section 103(a) of the WRDA of 1986, flood risk management features are cost-shared at 65 percent Federal and 35 percent non-Federal. The Federal share of the project first cost is estimated to be $65,515,000 and the non-Federal share is estimated at $35,322,000. The non-Federal cost sharing sponsor will be responsible for the operation, maintenance, repair, replacement, and rehabilitation of the project after construction, at a cost currently estimated at $99,000 per year.

At the October 2015 price level, a 3.125 percent discount rate, and a 50-year period of economic analysis, the U.S. Army Corps of Engineers estimates the total equivalent annual costs to be $4,282,000 and total equivalent annual benefits to be $7,763,000. Net benefits are estimated at $3,481,000 and the benefit-to-cost ratio is 1.8 to 1.

With respect to environmental compliance, a Record of Decision (ROD) was signed for the authorized project in 2002. Subsequently, two supplemental Environmental Assessments (EA) were completed relative to design changes. Both of these EAs resulted in findings of No Significant Impact (FONSI) beyond those documented in the 2000 EIS and 2002 ROD. The design modifications would not encroach into new areas outside of the project area evaluated in the 2000 EIS. Design changes would not change the nature of impacts evaluated in the 2000 EIS.

The 2000 EIS identified a total of 3 acres of mitigation: 1.2 acres on-site and 1.8 acres offsite. The design changes would not affect the offsite mitigation area since designs from the 2000 EIS for the offsite reach remain unchanged. The 2010 design changes would modify the reach where two mitigation sites totaling 0.9 acres are planned. The 2000 EIS envisioned planting a total of 0.9 acres of vegetation encompassing these two sites within an open trapezoidal channel with armored embankments. The 2010 design replaced the open trapezoidal channel with a composite channel comprised of buried box culverts with a "natural" looking, shallow earthen channel on top. This design would shunt storm flows into the box culverts; low flows and nuisance flows would be conveyed by the earthen channel. This area would be planted with a native plant palette that would satisfy a total of 3 acres of mitigation required in the 2000 EIS. The 2000 EIS and Supplemental EAs continue to satisfy National Environmental Policy Act Compliance.

An Independent External Peer Review was not required for the Rio de Flag LRR. The LRR is limited to cost escalation, design quantity variations and associated cost increases, with no significant changes in project scope or purpose.

The Office of Management and Budget (OMB) advises that there is no objection to the submission of the report to Congress. However, OMB also noted the project it would need to compete with other proposed investments for funding in future budgets. A copy of OMB's letter, dated September 13, 2016, is enclosed. I am providing a copy of this transmittal and the OMB letter to the Subcommittee on Water Resources and Environment of the House Committee on Transportation and Infrastructure, and the Subcommittee on Energy and Water Development of the House Committee on Appropriations. I am also sending an identical letter to the President of the Senate

Very truly yours,

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Enclosures

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
CIVIL WORKS
108 ARMY PENTAGON
WASHINGTON DC 20310-0108

4 NOV 2016

Honorable Paul Ryan
Speaker of the House of Representatives
U.S. Capitol Building, Room H-232
Washington, DC 20515

Dear Mr. Speaker:

The Secretary of the Army recommends modifying the total project first cost of the authorized Houston-Galveston Navigation Channels, Texas, project to increase the total project first cost from $298,334,000 (October 1995 price levels) to $509,198,000 (October 2016 price levels). The increase in the authorized cost is necessary because the construction costs are projected to exceed the maximum allowed by section 902 of the Water Resources Development Act (WRDA) of 1986. The enclosed March 2016 (revised May 2016) Post Authorization Change Report (PACR) explains and supports the cost increase. The report also documents that the project remains economically justified and environmentally acceptable.

The authorized project is the National Economic Development plan to improve deep draft navigation efficiency and provide ecosystem restoration benefits. The project was originally authorized for construction in section 101(a)(30) of WRDA 1996 at an estimated cost of $298,334,000. The authorized project is described within the 1995 Houston-Galveston Navigation Channels, Texas, Limited Reevaluation Report and Final Environmental Impact Statement (November 1995) and associated Chief's Report, dated May 9, 1996. The authorized project provides for a 45-foot depth at both the Houston Ship Channel and Galveston Channel, and a 47-ft depth and 3.9 mile long extension of the entrance channel. The authorized project also included the use of dredged material to construct initial and deferred environmental restoration features totaling 4,250 acres of marsh, restoration of Goat Island, creation of an offshore beneficial use berm, and the creation of a 12-acre bird island. The Energy and Water Development Appropriations Act of 2001 further directed the U.S. Army Corps of Engineers (Corps) to design and construct barge lanes immediately adjacent to either side of the Houston Ship Channel (HSC), from Bolivar Roads to Morgans Point, to a depth of 12 feet. Construction of the barge lanes and associated mitigation cost $5,444,000. Navigation features of the project have been completed with the exception of corrective actions needed to fix a project design deficiency on the HSC in the vicinity of Bayport to address hazardous navigation safety issues. The estimated project first cost for fixing the design deficiency is $37,582,000. Funds to initiate Pre-construction Engineering and Design were first appropriated in Fiscal Year (FY) 1990 and funds to initiate construction were appropriated in FY1998. The project is approximately 93 percent complete as of FY2015. Remaining work includes implementation of the HSC design deficiency and remaining deferred environmental work.

The maximum cost for the authorized project, adjusted for allowable inflation in accordance with section 902, as well as other modifications required by law, is $450,757,000 (October 2016 price levels). Based on cost increases described in the PACR, the revised estimated project first cost (without inflation) is $509,198,000 (October 2016 price level). A significant portion of the cost increase is intended to remedy the design deficiency on the HSC. The remainder of the cost increase is due to increased dredging costs associated with higher than anticipated shoaling rates, increased dredging and associated fuel costs, construction of added initial placement area capacity, and costs associated with changed site conditions surrounding specific placement areas.

In accordance with the project authorization, both the navigation and ecosystem features of the project are cost shared at 75 percent Federal and 25 percent non-Federal. The Federal share of the project first cost is estimated at $381,773,000 and the non-Federal share is estimated at $127,425,000.

At the October 2016 price level, a 2.875 percent discount rate, and a 50-year period of economic analysis, the Corps estimates the total equivalent annual costs to be $75,066,000 and total equivalent annual benefits to be $113,056,000. Net benefits are estimated at $37,990,000 and the benefit-to-cost ratio is 1.5 to 1.

With respect to environmental compliance, the PACR only addresses changes in project cost. The Corps determined, and I concur, that no additional environmental compliance actions are required. A Type I Independent External Peer Review was not conducted for the PACR as it did not meet any of the mandatory triggers.

The Office of Management and Budget (OMB) advises that there is no objection to the submission of the PACR to Congress. However, OMB also noted that the project would need to compete with other proposed investments for funding in future budgets. A copy of OMB's letter, dated November 3, 2016 is enclosed. I am providing a copy of this transmittal and the OMB letter to the Subcommittee on Water Resources and Environment of the House Committee on Transportation and Infrastructure, and the Subcommittee on Energy and Water Development of the House Committee on Appropriations. I am also sending an identical letter to the President of the Senate.

Very truly yours,

Jo-Ellen Darcy
Assistant Secretary of the Army
(Civil Works)

Enclosures

3 Enclosures

1. Director of Civil Works' transmittal, May 13, 2016
2. OMB Letter, November 3, 2016
3. Houston-Galveston Navigation Channels, Texas, Post Authorization Change Report and Section 902 Cost Limit Determination, March 2016 (revised May 2016)

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

CECW-SWD

MAY 13 2016

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

SUBJECT: Houston-Galveston Navigation Channels, Texas, Post Authorization Change Report and Section 902 Cost Limit Determination

1. Purpose. Request your review and approval of the Houston-Galveston Navigation Channels (HGNC), Texas, Post Authorization Change Report and Section 902 Cost Limit Determination (HGNC 902 PACR), dated March 2016 (Revised May 2016), which documents the need to increase the project authorization cost to $508,210,000.

2. Background. Section 101(a)(30) of Water Resources Development Act (WRDA) of 1996 originally authorized the project at a total cost of $298,334,000. In addition, in the Energy and Water Development Appropriations Act of 2001, barge lanes were authorized to be constructed on either side of the Houston Ship Channel (HSC), from Bolivar Roads to Morgans Point, of which construction and mitigation totaled $5,444,000. The revised estimated total project first cost (without inflation) is $508,210,000 (October 2015 price levels). The revised cost is the result of cost increases due to factors such as problematic construction of beneficial use sites and increased fuel and dredging costs. A design deficiency has been identified on the HSC and the cost to perform the corrective action of $35,106,000 is included, which is the only additional construction associated with the Section 902 limit calculation. A Project Deficiency Report (PDR) to address the design deficiency on the HSC and recommend a corrective action was approved by Headquarters, U.S. Army Corps of Engineers (HQUSACE) on 9 May 2016. Increases in the current authorized project costs are not associated with changes in the project purpose, local cooperation requirements, location of project, or as a result of modifications required by law. The maximum cost for the authorized project, adjusted for allowable inflation in accordance with Section 902 of WRDA 1986, is $450,306,000 (October 2015 price levels); the revised total project cost exceeds the Section 902 limit.

3. Project Description. The HGNC project purposes are to provide navigation improvements to the ports of Houston and Galveston, and to provide environmental restoration improvements for the Houston portion of the HGNC through the beneficial use of dredged material. The authorized project: (1) extended and deepened the HGNC Entrance Channel an additional 3.9 miles and to a depth of 47 feet, respectively; (2) enlarged the HSC to a depth of 45 feet and a width of 530 feet; and (3) enlarged the Galveston Channel (excluding the last 2,571 feet at the most westward end) to a depth of 45 feet and a width that varies between 650 and 1,112 feet.

The authorized project also allowed for 4,250 acres of marsh located in mid and upper Galveston Bay, and a 12 acre bird island located in East Galveston Bay, Evia Island. Of the 4,250 acres of marsh restoration, 690 acres were constructed as part of the initial navigation channel improvements and the remaining acres were deferred for future channel maintenance dredging cycles. Mitigation features include construction of 172 acres of oyster reef and planting of 0.86 acres of trees for a bird rookery adjacent to Alexander Island placement area.

4. Non-federal sponsors. A Project Cooperation Agreement (PCA) with the two non-federal sponsors, the Port of Houston Authority (PHA) and the Port of Galveston (POG) was executed on 10 June 1998. The PCA addressed navigation and ecosystem restoration features for the PHA and navigation features for the POG. Funds to initiate construction were appropriated in Fiscal Year 1998. As of December 2013, project construction was complete for the PHA navigation and ecosystem restoration features, except for the deferred ecosystem restoration features and the corrective action documented in the PDR. As of September 2011, project construction was complete for the POG features.

5. Project Costs and Benefits. At the October 2015 price level, the estimated total project first cost is $508,210,000. A total economic update was completed for the subject PACR. The project continues to be economically justified based principally on a reduction in shipping costs. At the October 2015 price level, a 3.125 percent discount rate, and a 50-year period of economic analysis, the estimated total equivalent annual costs for the remaining construction are $38,696,000 and the remaining total equivalent annual benefits are $97,588,000. The net remaining equivalent annual benefits are estimated at $58,892,000 and the remaining benefit remaining cost ratio is 2.5. The total project equivalent annual benefits are now $114,804,000 and total project equivalent annual costs are $77,899,000. The net total equivalent annual benefits are estimated at $36,905,000 and the benefit cost ratio is 1.5.

In accordance with the cost sharing provisions of Section 103(a) of WRDA 1986, deep-draft navigation is cost shared differently depending on the depth of the modification. Construction of the barge lanes are cost shared at 90 percent federal and 10 percent non-federal. Construction of the HGNC was cost shared at 75 percent federal and 25 percent non-federal. Operation, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R) of the HGNC is 100 percent federal cost for the navigation features of the project. The non-federal sponsors will be responsible for OMRR&R of the ecosystem restoration features of the project after construction. The federal share of the project first cost is estimated at $381,032,000 ($264,261,000 for navigation and $116,771,000 for environmental restoration) and the non-federal share is $127,178,000 ($86,246,000 for navigation and $38,924,000 for environmental restoration), which also includes $2,008,000 for lands, easements, relocations, and rights-of-way.

6. Policy Compliance Reviews. HQUSACE conducted policy compliance reviews throughout preparation of the PACR. All policy review concerns have been adequately addressed and the project is technically sound, environmentally acceptable, and economically justified. A Type I Independent External Peer exclusion request for the PACR was approved by HQUSACE in November 2012.

7. Recommendation. I recommend that the enclosed PACR be transmitted to Congress as a basis for increasing the authorized project cost of the HGNC, Texas Project to $508,210,000 (October 2015 price levels).

8. Contact. Any questions on this matter should be directed to Ms. Sandy Gore, Deputy Chief, Southwestern Division Regional Integration Team, 202-761-5237.

STEVEN L. STOCKTON, P.E.
Director of Civil Works

4 Encls
1. PACR dated March 2016 (Revised May 2016)
2. Documentation of Review Findings
3. PDR Approval Memo
4. PDR Finding of No Significant Impact

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

November 3, 2016

The Honorable Jo-Ellen Darcy
Assistant Secretary of the Army (Civil Works)
U.S. Army Corps of Engineers
108 Army Pentagon
Washington, D.C. 20310-0108

Dear Assistant Secretary Darcy:

As required by Executive Order 12322, the Office of Management and Budget has reviewed a May 2016 Army Corps of Engineers (Corps) Post Authorization Change Report and Section 902 Cost limit Determination (report) for the Houston-Galveston Navigation Channels (HGNC), Texas. The report estimates that the project cost has increased to $508,210,000 ($381,032,000 federal) at October 2015 prices.

The report proposes to increase the estimated cost of the project, in part, due to a change in the scope of the original project authorization as approved in the Corps' March 2016 Houston Ship Channel Project Deficiency Report. Based on an analysis of the costs and benefits of the project, the report estimates that the benefit-to cost ratio (BCR) for this project is 1.47 to 1 at a discount rate of 3.125% percent. This is the rate that the Corps is required to use for FY 2015 under section 80 of the Water Resources Development Act of 1974 to evaluate and formulate its projects. The Corps estimates that the equivalent BCR is 1.14 to 1 at a discount rate of 7%. This is the discount rate that the Administration uses in the Budget to measure the performance of Corps construction projects whose primary purpose is to provide an economic return to the Nation.

The Office of Management and Budget does not object to you submitting this report to the Congress. When you do so, please advise the Congress that the project would need to compete with other proposed investments in future Budgets. We anticipate that future Budgets will continue to be limited to investments that demonstrate a high return to the Nation.

Sincerely,

John Pasquantino
Deputy Associate Director
Energy, Science and Water