

2019 Report to Congress on Future Water Resources Development

February 2019

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Report to Congress on Future Water Resources Development: Overview

This 2019 Report to Congress on Future Water Resources Development (Annual Report) is in response to section 7001 of the Water Resources Reform and Development Act (WRRDA) of 2014 (33 U.S. Code § 2282d), which requires that the Secretary of the Army submit an annual report to Congress that identifies potential future water resources development studies and projects. The Annual Report is compiled based on completed feasibility reports recommending a water resources project for congressional authorization, proposed feasibility studies, and proposed modifications to authorized water resources development projects or studies.

Section 7001 requires a notice to be published in the Federal Register requesting proposals for proposed feasibility studies and proposed modifications to authorized water resources development projects and feasibility studies to be submitted by non-Federal interests.

The section also directed that “the Secretary shall include in the annual report only those feasibility reports, proposed feasibility studies, and proposed modifications to authorized water resources development projects and feasibility studies that:

- (i) are related to the missions and authorities of the Corps of Engineers;
- (ii) require specific congressional authorization, including by an Act of Congress;
- (iii) have not been congressionally authorized;
- (iv) have not been included in any previous annual report; and
- (v) if authorized, could be carried out by the Corps of Engineers.

On April 20, 2018, the United States Army Corps of Engineers (Corps) published the annual Federal Register notice for proposals from non-Federal interests. The deadline for submitting proposals was August 20, 2018 (120 days). The Federal Register notice for proposals was published on the Corps Headquarters website, with information distributed to all Corps Civil Works districts and divisions. The Corps hosted a public information session about the proposal process, held annually, on July 31.

This year, 34 proposals were received. All submitted proposals were evaluated against the five criteria in section 7001 and are presented in one of two tables in this Annual Report. The first table, included in the main report, contains proposals that meet the five criteria and other recommendations from the Secretary, including signed Chief’s Reports recommending authorization of a water resources development project, proposed Storage Use Plans submitted under the Water Supply Act of 1958, as amended (43 U.S.C. 390b), and non-Federal feasibility reports submitted for review to the Secretary of the Army under Section 203 of WRDA 1986, as amended (33 U.S.C. 2231). The second table, included as an appendix, contains proposals that did not meet the necessary criteria.

Evaluation Criteria and Methodology

In order to provide more transparency to non-Federal interests, the Federal Register notice and Corps Headquarters website details the process under which proposals would be evaluated against the criteria in developing the Annual Report. How proposals were evaluated under each criteria are described below.

Criteria 1. Related to the missions and authorities of the Corps

Proposals are considered related to the missions and authorities of the Corps when they involve a proposed or existing Corps water resources project or effort whose primary purpose is flood and storm damage reduction, commercial navigation, or aquatic ecosystem restoration. Proposals for related purposes, such as for recreation, hydropower, or water supply, may be eligible for inclusion if undertaken in conjunction with a project or effort involving one or more of those primary purposes.

Despite not being primarily a flood or storm damage reduction, commercial navigation, or aquatic ecosystem restoration proposal, certain environmental infrastructure proposals (i.e., proposed modifications for an environmental infrastructure program) may be included in the main report due to recent legislative changes to 33 U.S.C. § 2282d, Annual report to Congress.

Criteria 2. Require specific congressional authorization, including by an Act of Congress

Proposals are considered to require specific congressional authorization in the following cases:

- Proposals seeking construction authorization
 - Signed Chief's Reports;
 - Non-Federal feasibility report submitted for review to the Secretary of the Army under Section 203 of WRDA 1986, as amended, under Administration review;
 - Ongoing feasibility studies that is expected to result in a Chief's Report;
 - Proposed modifications to environmental infrastructure projects that were authorized prior to the date of enactment of the Water Resources Development Act of 2016 (December 16, 2016); and
 - Proposed modifications to authorized water resources development projects requested by non-Federal interests through the WRRDA 2014 Section 7001 process.

- Proposals seeking study authorization
 - New feasibility studies proposed by non-Federal interests through the WRRDA 2014 Section 7001 process will be evaluated by the Corps to determine whether or not there is existing study authority; and
 - Proposed modifications to studies requested by non-Federal interests through the Section 7001 of WRRDA 2014 process.

The following types of proposals are not considered eligible to be included in the Annual Report because they do not require specific congressional authorization, although they will be included in the appendix for transparency:

- Proposals for modifications to non-Federal projects where USACE has provided previous technical assistance. Authorization to provide technical assistance does not provide authorization of a water resources development project.
- Proposals for construction of a new water resources development project that is unrelated to any currently authorized water resource development project and is not the subject of a completed or ongoing feasibility study.
- Proposals that do not include a request for a potential future water resources development project through completed feasibility reports, proposed feasibility studies, and proposed modifications to authorized projects or studies.

Criteria 3. Have not been congressionally authorized

A proposal is considered to have not been congressionally authorized if all the specific elements contained in the proposal were not included in any previous authorization.

Criteria 4. Have not been included in the report table of any previous Annual Report to Congress on Future Water Resources Development

Proposals included in the report table in any previous Report to Congress on Future Water Resources Development are not eligible to be included in the table submitted with this report. They will be included in the appendix for transparency. Proposals previously included in an appendix may be resubmitted for consideration for inclusion in subsequent reports.

Criteria 5. If authorized, could be carried out by the Corps

Unless some institutional impediment exists (e.g., state law), proposals meeting the other criteria are generally considered to be implementable by the Corps if authorized by Congress. As discussed below, additional steps are required before the Corps can begin implementation of any water resources development project.

Requirements for Project Implementation

The Federal Register notice identified specific requirements that all authorized water resources development projects must generally meet before the Corps can proceed to construction, whether the project is authorized following the Corps' traditional Chief's Report process or authorized with reference to the project's inclusion in the Annual Report to Congress on Future Water Resources Development.

Before the Corps can proceed to construct an authorized project: (1) the project must be authorized for construction by Congress; (2) the Secretary, or other appropriate official, has approved a current decision document with the Administration's position on the project (this may occur prior to or subsequent to authorization), and, if appropriate, has transmitted that decision document to Congress; and (3) funds for construction have been appropriated for the project.

The Secretary's approval of a current decision document is the basis for Administration support for budgeting decisions for projects. Current decision documents provide updated information on the scope of the potential project and demonstrate a clear Federal interest, including an assessment of whether the proposal is:

- Technically sound, economically viable and environmentally acceptable.
- Compliant with environmental and other laws including, but not limited to, the National Environmental Policy Act, the Endangered Species Act, the Coastal Zone Management Act, and the National Historic Preservation Act.
- Compliant with statutes related to water resources development including, but not limited to, the various water resources provisions pertaining to the authorized cost of projects, level of detail, separable elements, fish and wildlife mitigation, project justification, matters to be addressed in planning, and the 1958 Water Supply Act.

Under the traditional authorization process, the Chief's Report serves as the current decision document that is transmitted to Congress prior to authorization. Projects, or modifications to projects, authorized based on a proposal submitted under Section 7001 that do not have a completed and transmitted Corps decision document lack a basis for Administration support for implementation. Clearly identifying these requirements for implementation within the Annual Report to Congress (main report table) allows for a more transparent process should any of the non-Federal project, or project modification, proposals become authorized based on this Annual Report.

The Federal Register notice also noted two other important considerations for non-Federal sponsors preparing proposals. First, if Congressional authorization of a new feasibility study results from inclusion in this report, it is anticipated that such authorization would be for the study only and not for construction. Second, a Post Authorization Change Report (PACR) is required to be completed to support potential project modifications, updates to project costs, and increases to the maximum cost of a project established by section 902 of WRDA 1986, as amended (902 limit). Although PACRs may not include feasibility analysis, because these PACRs support project modifications they may be considered for inclusion in the report if the recommendations require authorization.

Of the 34 proposals submitted for the 2019 Annual Report, 22 were proposals for new feasibility study authorization, 1 was a proposal for a modification to existing study authority, and 11 were for modifications to existing projects. Of these proposals, 15 met the criteria and are listed in the main report table. The remaining 19 proposals that did not meet the criteria are included in the appendix with an explanation of which specific criteria were not met. All 34 proposals provided by non-Federal interests for the 2019 Annual Report are available on the Corps Headquarters website at http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Legislative-Links/wrrda2014/wrrda2014_proposals/.

The primary reason proposals are included in the Appendix is that authority already exists to perform the requested work. It is important to note that where authority already exists to undertake the efforts described in the proposals, inclusion in the Appendix to the 2019 Annual Report does not preclude the Army from carrying out either the study or construction.

All feasibility reports with signed Chief's Reports that have not been authorized or previously included in an annual report are included in this report. Since submission of the 2018 Annual Report, four feasibility reports have been signed as Chief's Reports and are under Army review.

In addition, the following recommendations from the Secretary are included in the main report:

- Proposed Storage Use Plans submitted under the Water Supply Act of 1958, as amended (43 U.S.C. 390b)
- Non-Federal feasibility reports submitted for review to the Secretary of the Army under Section 203 of WRDA 1986, as amended (33 U.S.C. 2231)

As mandated by WRRDA 2014, the required reporting for sections 3017 and 4011 of WRRDA 2014 have also been included at the end of this report.

The Assistant Secretary of the Army (Civil Works) certifies that, based on the information received from the non-Federal interests, each proposed feasibility study and proposed modification to an authorized water resources development project or feasibility study included in this main report meets the criteria established in WRRDA 2014 Section 7001. The information contained in proposals provided by non-Federal interests has not been revised or developed by the Corps or Army and the proposals are not endorsed by the Corps or Army. This report is in response to the requirements of Section 7001 only and does not reflect program, policy, or budgeting priorities.

Report Tables:

- Signed Chief's Reports
- Proposed Storage Use Plans submitted under the Water Supply Act of 1958, as amended (43 U.S.C. 390b)
- Non-Federal feasibility reports submitted for review to the Secretary of the Army under Section 203 of WRDA 1986, as amended (33 U.S.C. 2231)
- Proposal Report

Appendix:

- Proposal Appendix

Additional Information:

- Required reporting for Section 3017 of WRRDA 2014
- Required reporting for Section 4011 of WRRDA 2014

2019 Main Report Table
Chief's Reports

Name of Report	State(s)	Non-federal Interest	Status Notes	Purpose (Summarized from Chief's Report)	Benefits (Summarized from Chief's Report)	Estimated Federal Cost	Estimated Non-Federal Cost	Total Estimated Costs (October 2018 price levels)	Requirements for Implementation (All must be authorized by Congress in law and receive appropriations in law)
Projects which have signed Chief's Reports									
Anacostia Watershed Restoration, Prince George's County	MD	Prince George's County	Signed Chief's Report in Review	To restore ecosystem function within the Anacostia River Watershed.	In total, the recommended plan for aquatic ecosystem restoration will restore approximately 7 miles (32 acres) of aquatic habitat, restore approximately 4 miles of fish passage through the removal of blockages, and connect approximately 14 miles (64 acres) of restored habitat in the Northwest and Northeast Branches. App. 38 AA Stream HUs will be produced.	\$22,170,000	\$11,940,000	\$34,110,000	To complete the feasibility study process, the Secretary will transmit the Chief's Report and accompanying documents, including the administration's position on the project, to Congress.
Pawcatuck River and Rhode Island Coastal Investigation	RI	Rhode Island Coastal Resources Management Council	Signed Chief's Report in Review	To provide Coastal Storm Risk Management for the Pawcatuck River study area.	By elevating 247 structures and flood proofing 21 commercial structures, the project would provide equivalent average annual benefits of \$8,860,000 with net average annual benefits of \$6,750,000. The benefit to cost ratio is approximately 4.2 to 1	\$35,530,000	\$19,130,000	\$54,660,000	To complete the feasibility study process, the Secretary will transmit the Chief's Report and accompanying documents, including the administration's position on the project, to Congress.
Little Colorado Winslow	AZ	Navajo County Flood Control District	Signed Chief's Report in Review	To reduce flood risk to the community in and near Winslow, Arizona.	Construction/reconstruction of approximately 22,570 feet of levees within and near the city of Winslow, Arizona that will reduce average annual flood damages by approximately \$8,590,000. The benefit to cost ratio is approximately 2.67 to 1.	\$51,410,000	\$27,683,000	\$79,093,000	To complete the feasibility study process, the Secretary will transmit the Chief's Report and accompanying documents, including the administration's position on the project, to Congress.
San Joaquin Delta Islands and Levees	CA	California Department of Water Resources and the East Bay Regional Park District	Signed Chief's Report in Review	To restore ecosystem structure and function in the Sacramento-San Joaquin Delta.	Restoration of approximately 340 acres of intertidal marsh habitat through beneficial use of maintenance-dredged material from an ongoing federal navigation project. The restored marsh would provide habitat for multiple federally-listed species, notably salmonids and Delta smelt. The restored habitat would also benefit many species of migratory birds as they travel through the Delta on the Pacific Flyway.	\$16,277,000	\$8,764,000	\$25,041,000	To complete the feasibility study process, the Secretary will transmit the Chief's Report and accompanying documents, including the administration's position on the project, to Congress.

**2019 Main Report Table
Section 1046 Reports**

Name of Proposal	State(s)	Non-federal Interest	Status Notes	Purpose
Proposed Storage Use Plans submitted under the Water Supply Act of 1958, as amended (43 U.S.C. 390b)				
Missouri Department of Natural Resources Water Supply Storage at Mark Twain Lake	MO	Missouri Department of Natural Resources	Letter of recommendation to release future water storage rights signed by ASA(CW)	To release the Missouri Department of Natural Resources from 5,600 acre-feet of future water supply contracts and future financial obligations for the volume of storage.
City of Plattsburg Water Supply Storage at Smithville Lake	MO	City of Plattsburg	Letter of recommendation to release future water storage rights signed by ASA(CW)	To release the City of Plattsburg from 8,850 acre-feet of future water supply contracts and future financial obligations for the volume of storage. Also to relieve to the City of Plattsburg of the remaining principle payment and obligations for future water storage interest estimated at \$9,060,668, as of fiscal year 2015.
City of Smithville Water Supply Storage at Smithville Lake	MO	City of Smithville	Letter of recommendation to release future water storage rights signed by ASA(CW)	To release the City of Smithville from 6,000 acre-feet of future water supply contracts and future financial obligations for the volume of storage. Also to relieve the City of Smithville of the payment obligations for future water storage estimated at \$3,738,067, as of fiscal year 2015.

2019 Main Report Table
Section 203 Reports

Name of Report	State(s)	Non-federal Interest	Proposal Type	Purpose	Benefits	Estimated Federal Cost	Estimated Non-Federal Cost	Total Estimated Costs (October 2017 price levels)	Requirements for Implementation (All must be authorized by Congress in law and receive appropriations in law)
Projects which have signed Section 203 studies.									
Section 203 Navigation Study - Baptiste Collette, LA	LA	Plaquemines Parish	Non-Federal feasibility report submitted under Section 203 of WRDA 1986, as amended	To improve navigation efficiency on the Baptiste Collette Channel.	Benefits, in the form of transportation savings, are estimated at \$15,540,000, yielding net benefits of \$4,590,000 and a benefit-to-cost-ratio of 1.42 @2.75%.	\$24,080,000	\$20,840,000	\$44,920,000	The Secretary has transmitted the report and accompanying documents, including the administration's position on the project, to Congress and OMB.

2019 Main Report Table

Name of Proposal	State(s)	Non-federal Interest All proposals included in the Main Report demonstrated, to the extent practicable, local support and the financial ability to provide the non-Federal cost share.	Proposal Type (As Identified in Proposal)	Purpose (Summarized from Proposal)	Benefits (Summarized from Proposal)	Estimated Federal Cost*	Estimated Non-Federal Cost*	Total Estimated Costs*	Requirements for Implementation (All must be authorized by Congress in law and receive appropriations in law)
NOTE: Information by non-Federal interests was not verified, revised or developed by USACE, Army, or OMB									
Proposals submitted in 2018.									
South Perris Water Supply Desalination Modification	CA	Eastern Municipal Water District	Modification to USACE Project	This proposal requests an increase to the project authorization and federal appropriation limit from \$25 million to \$50 million. This increase of authorized funding would allow for continued federal participation in the South Perris Water Supply Desalination Modification Project, expanding the federal participation in the project to include a third desalter and related facilities including reverse osmosis systems which is expected to expand water production 5.4 million gallons per day. As the project is completed, the Eastern Municipal Water District expects to reduce its dependence on imported water from the State Water Project and the Colorado River Aqueduct.	The desalter, reverse osmosis system and related facilities are expected to increase the reliability and resilience for potable water supply for the Eastern Municipal Water District's customers and also to reduce dependence on imported water from the Colorado River Aqueduct and the State Water Project. The project could also reduce water supply uncertainties relating to droughts and other environmental conditions and events. The desalter will produce about 6,000 acre-feet of water which would be used to support and sustain water supply to a partially (39 percent) disadvantaged community. The project would also help maintain a separation of two different groundwater aquifers preventing the migration of a brackish aquifer.	\$25,000,000	\$8,330,000	\$33,330,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Lower Missouri River Study	KS, MO, NE	Port Authority of Kansas City Missouri	New Feasibility Study	This request seeks to evaluate the function and reliability of Bank Stabilization and Navigation Project (BSNP) and navigation system. The BSNP, with construction completed in 1980, runs along the lower River generally from Sioux City to the mouth and includes over 7,000 structures and hundreds of miles of bank revetments. Analysis indicates that there is a need to increase the performance and resiliency of the system give preliminary engineering evaluation results and the fact that the system was designed 50-60 years ago. Modifications of structural features along with consideration of new engineering methods as well as navigation technology could increase usage, performance and navigation benefits.	The project is expected to increase barge traffic usage of the BSNP on the Lower Missouri River to 1,000,000 to 1,500,000 ton miles per year. Currently usage is 400,000 ton miles per year. This is expected to provide significant regional and other related economic benefits as well.	\$1,500,000	\$1,500,000	\$3,000,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Incorporate the Cherokee Park Levee into the Red River below Denison Arkansas, Louisiana and Texas Dam Flood Control Project	LA	Caddo Levee District, a State Government Agency located in Shreveport, Caddo Parish, Louisiana	Modification to USACE Project	The Caddo Levee District would like to incorporate the Cherokee Park Levee into the Red River Below Denison Dam (Arkansas, Louisiana and Texas) Flood Risk Management Project. The Caddo Levee District, Caddo Parish, Louisiana has one section of levee that needs to be incorporated into the Red River Below Denison Dam Project. The existing levee, Cherokee Park Levee, is an extension of the North Caddo Levee, which is part of the main stem Red River Levee system. The Cherokee Park Levee is accredited by FEMA for the main stem Red River System and provides flood protection for approximately 2,432 acres and 661 acres developed commercial, industrial and residential area including the City of Shreveport's Downtown Airport.	Levees along the west side of the Red River provide flood protection for more than 30,000 residents most located within the City of Shreveport and 200,000 acres of agricultural land. The Cherokee Park Levee provides the required flood control and protection for the North Shreveport commercial, industrial, and residential area (480 residential buildings and 275 commercial/industrial buildings) including the City of Shreveport's Downtown Commercial Airport, which equates to 2,432 acres. This levee section performed well during the June 2015 historic record flood of the Red River and was determined to meet the Federal Eligibility Standards.	\$0	\$0	\$0	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Tangipahoa River Flood Risk Reduction	LA	Tangipahoa Parish Government	New Feasibility Study	This proposal is seeking an evaluation of flood risk management alternatives in the Tangipahoa basin in order to avoid damages caused by future events. In March and August of 2016, two major floods occurred in the Tangipahoa basin damaging approximately 12,700 structures in the area. With the rapid growth of the community and continued encroachment on the floodplains, the expected repetitive loss structures, economic damages, and disruption to transportation and industry is expected to increase as a result of future events.	The cost for lost productivity during the time of the August 2016 flood is estimated at \$17.4 million dollars. During the March and August 2016 floods, approximately 12,700 homes and 1,500 businesses were impacted. Impacts included flood damage to homes, and closure of roads impacting some 17,000 workers in the Parish. The proposed study would identify economically feasible alternatives to reduce economic losses in the parish as well as reduce the risk to human life and wildlife caused by flood events.	\$325,200,000	\$175,200,000	\$500,400,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Erosion Control Feasibility Report for Newburyport, Massachusetts	MA	Plum Island Foundation	New Feasibility Study	This proposal is seeking to examine coastal flooding on Plum Island and to include a review of the Newburyport Federal navigation channel and the two stone jetties in regards to what extent O&M of these project elements affect the severe erosion in the communities of Newbury and Newburyport. This proposed study would examine the causes of flooding and identify potential measures to reduce erosion/flooding and resulting property loss. The ultimate goal of this project is to provide information on local erosion and bathymetric properties that will fit into a larger regional approach to managing sediment, controlling erosion, encouraging maritime development and protecting human life and property from the seasonal storms that have degraded the coastline.	The proposal does not provide estimates of monetary damages. There is significant development along the shore and in the adjoining streets. There is also water and sewer lines and other utilities at risk. Proposed projects would reduce the vulnerability of property and infrastructure to erosion and inundation during coastal flood events.	\$4,500,000	\$1,500,000	\$6,000,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Clarence Cannon Dam and Mark Twain Lake Project Salt River, Missouri	MO	Missouri Department of Natural Resources	Modification to USACE Project	The State of Missouri and the Clarence Cannon Wholesale Water Commission have interconnected contracts with USACE St. Louis District for 20,000 acre-feet of water supply storage in the Clarence Cannon Dam and Mark Twain Lake Project Salt River, Missouri. Due to declining population within the water commission's service area and capacity limitations at the existing water treatment plant, the State anticipates the water commission will not need the entire capacity of the future use water storage. Therefore, this proposal is requesting the release of 5,600 acre-feet of the future use water supply storage back to the Federal Government under water supply contract DACW43-88-C-0036.	The USACE calculated the total future value of revenue foregone to be \$9,287,235.38, based on the State's request. The State calculated direct savings of an estimated \$4.6 million in principal and \$3.1 million in interest and O&M payments through contract maturity (2038). Releasing the excess storage will also save the water commission an estimated \$28,700 annually for the life of the contract, which will ultimately save rural water supply rate payers.	See Section 1046 table above	See Section 1046 table above	See Section 1046 table above	See Section 1046 table above. This request to release future water storage rights has been recommended by ASA(CW).
Lower Osage River Basin Feasibly Study	MO	Missouri Department of Natural Resources	New Feasibility Study	The purpose of the proposal is to obtain authorization for an ecosystem restoration project in the lower 81 miles of the Osage River. A previous federal navigation project and operation of dams have significantly impacted stream habitat in the basin in the last 70 years. The fish faunas of the impounded reaches of these reservoirs has been drastically altered. Aquatic species requiring flowing waters have been replaced by those preferring standing waters. The project area is subject to severe ongoing erosion and loss of aquatic, riparian and wetland habitat.	The project is for ecosystem restoration and will potentially provide for miles of riparian and aquatic habitat benefits due to restorative measures, and also specific areas of wetland restoration associated with riparian zones. There is extensive erosion and degradation of habitat in the lower 81 miles of river due to the effects of the previously constructed and now inactive navigation structure. The project will also protect infrastructure in the corridor and protect high value lands. The lock & dam has a serious impact to fisheries, and a risk to loss of life to boaters during higher flows. There has been one fatality and several incidents and near misses in recent years.	\$1,500,000	\$1,500,000	\$3,000,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
St. Louis Riverfront – Meramec River Basin Ecosystem Restoration Construction Authority	MO	Missouri Department of Natural Resources	Modification to USACE Study	This proposal is seeking construction authority for implementation of the ecosystem restoration recommended plan resultant from the USACE feasibility study. The recommended plan consists of critical restoration projects within the Meramec Basin, including bank stabilization, sediment capture, and riparian restoration at an estimated cost of approximately \$78 million. Implementation of the project will restore and maintain the ecological importance of the Meramec River and its tributaries and would also benefit water quality, the economy, and recreational within the watershed.	The recommended plan includes aquatic ecosystem restoration consisting of bank stabilization, sediment capture, and riparian restoration at an estimated cost of \$78 million. The construction of this plan will assist the ecosystem, local landowners, and recreation impacted by historic mining in the basin. Construction of the recommended ecosystem restoration plan would benefit aquatic species, including several freshwater mussels that are Federally-listed as threatened and endangered; riparian land that is currently being lost to excessive stream bank erosion; and recreation within the watershed. Implementation of the recommended plan is expected to provide 1,565 habitat units over the no action plan, benefiting 675 acres of riparian habitat and 1,310 acres of aquatic habitat.	\$51,261,000	\$27,602,000	\$78,863,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.

*As identified by non-federal interests in their proposals

2019 Main Report Table

Name of Proposal	State(s)	Non-federal Interest All proposals included in the Main Report demonstrated, to the extent practicable, local support and the financial ability to provide the non-Federal cost share.	Proposal Type (As Identified in Proposal)	Purpose (Summarized from Proposal)	Benefits (Summarized from Proposal)	Estimated Federal Cost*	Estimated Non-Federal Cost*	Total Estimated Costs*	Requirements for Implementation (All must be authorized by Congress in law and receive appropriations in law)
Jones County, MS-Flood and Storm Damage Reduction Study	MS	Pat Harrison Waterway District	New Feasibility Study	The purpose of this project is to evaluate long-term flood damage reduction solutions to address life safety concerns, and to protect property within Jones County, MS. A secondary purpose is to assess and restore downstream aquatic ecosystems in the Leaf and Pascagoula Rivers.	The primary benefit of this effort would be prevented flood damages. The population of Jones County is approximately 70,000 according to Census data, with about 27,000 homes. The County has identified a flood corridor based on the floodplain that included over 18,000 homes and businesses. The flood of record in 1964 affected approximately 500 homes and 20 businesses, causing \$4.1M in damages (2018 dollars). The 1961 flood affected 435 homes and 19 businesses, causing about \$3.1 M (2018 dollars). A similar flood also occurred in March 2011. Based on the affected structures, similar flood risk management projects could possibly save approximately \$8M in annual damages.	\$91,500,000	\$31,500,000	\$123,000,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Greater Williamsport Levee Rehabilitation Project	PA	County of Lycoming, Pennsylvania	Modification to USACE Project	During recent inspections, the Greater Williamsport Levee has been given a rating of "unacceptable". The project was built in the 1950s by USACE and has protected the region ever since. In addition to the items of concern due to maintenance issues, this request also include other items that could be considered for modification if/when the levee is rehabilitated in order to meet current construction guidelines. These items are not required to be completed in order to maintain a minimally-acceptable rating, which is necessary to remain in the PL 84-99 Program. The local sponsors believe that the USACE is obligated to participate in a full rehabilitation of the project.	The existing project protects assets valued at approximately \$1 billion. The project requires updates to obtain an acceptable rating. The USACE has also identified other areas that are not required for an acceptable rating, but that could be improved based on newer standards, such as the replacement of l-walls. A total rehabilitation is estimated at \$15M to \$25M. It is proposed that the sponsor replace the relief well system and realigning floodwalls and stabilizing the retaining walls around the pump stations (at an estimated total cost of \$7.3M) while USACE would replace l-wall sections and overhaul the cross pipe system (at an estimated total cost of \$7.4M). These actions would not alter the level of protection of the project.	\$7,400,000	\$7,300,000	\$14,700,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Chocolate Bayou, Texas Feasibility Study	TX	Brazoria County Drainage District #5 (BCDD5)	New Feasibility Study	The Chocolate Bayou Watershed (CBW) has historically seen severe rainfall events which are highly conducive to drainage problems. Significant and frequent flooding occur throughout CBW. Objectives of the proposed study are identification, description, assessment, and recommendation of potential flood control options that will address flooding problems in the CBW, with a particular focus directed toward reduction in residential structure flooding-induced damages.	Benefits resulting from reduction of flood damages include an increase in property revenue because of increased property value, improved transportation and emergency access, improved stream water quality, and greater community value. The expected average annual flood damage reduction benefits for conveyance and diversion pond projects for the various sub-watersheds is \$1.5M within a ten year target. Flood risk management projects are expected to yield a reduction in flooded lands, irrespective of whether structural flooding is reduced.	\$37,000,000	\$1,500,000	\$38,500,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Port Arthur and Vicinity, TX, Urban Watershed Municipal Drainage Improvement Project	TX	Jefferson County Drainage District No. 7	Modification to USACE Project	The proposed modification to the Port Arthur And Vicinity, TX HFPP is intended to reduce the risk of flooding within the Port Arthur and vicinity due to extreme rainfall events. The proposed improvements include items such as increasing pumping capacities by modifying existing pump stations or construction of new pump stations, construction of storm water detention, and increased storm water conveyance through channelization and structure upgrades.	The constructed project is expected to reduce flood damages to properties from extreme rainfall events, and provide for increased resilience to flooding of properties, transportation systems, petrochemical industries, and critical infrastructure, in Port Arthur and Vicinity, TX, on the order of \$100 Billion. The environmental benefit of providing for this project is reduce risks of water treatment plant and chemical spills due to flooding, which is a threat to human and environmental health and safety. The non-monetary benefits would include reduce risks to loss of life due to regional flooding, especially to residents with insufficient means.	\$222,500,000	\$120,500,000	\$343,000,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Proposal to Modify the Houston-Galveston Navigation Channels Project to Maintain a Required Nominal Depth	TX	Port of Houston Authority of Harris County, Texas	Modification to USACE Project	The purpose of this proposed modification to the Houston-Galveston Navigation Channels project is to increase the nominal depth requirements necessary for the safe passage of vessels at the authorized depth of the project. The proposed modification to the existing project is expected to help overcome the long recognized sudden lowering of water levels in the bay reach from atmospheric conditions throughout the year, which has been well documented by the Corps This request supports project operation and maintenance requirements cited at 33 USC 2241.	Maintaining the ship channel to a nominal depth for the authorized project will improve navigation efficiency, optimize vessel load planning for the channel with the second highest tonnage and largest foreign tonnage ranking in the U.S. Because vessels must light load in anticipation of unexpected draft limits or plan for delayed entry or exit from the port, the project could avoid an economic impact to shippers estimated at \$102,000,000 annually. This project would promote international competitiveness of products originating in Houston, including refined petroleum, U.S. crude exports, containerized products (including export plastic resin), in addition will result in less congestion, lower marine emissions, reduced risk from accidents and product spills.	\$73,700,000	\$25,300,000	\$99,000,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Feasibility study of reauthorization of the project for navigation, Christiansted Harbor-St. Croix, U.S. Virgin Islands	VI	Virgin Islands Port Authority	New Feasibility Study	The purpose of this proposal is to seek re-federalization of channels of Christiansted Harbor, St. Croix, U.S. Virgin Islands which were not constructed, but authorized under the Rivers and Harbors Act of 1950, and since deauthorized by WRDA 1986. Additionally, the proposed effort seeks to determine the feasibility of constructing a new segment of Federal channel(s) to reduce the number of turns required to reach the harbor's berthing areas and local service facilities. The re-federalization and or construction a new Federal channels would contribute significantly to the recovery of the economy of St. Croix, the U.S. Virgin Island Territories, and ultimately the nation.	Improvements to Christiansted Harbor are expected to provide economic and navigation benefits to the island territory of St. Croix. No specific monetary benefits were identified in the proposal, other than those provided by cruise vessels that could potentially call upon the harbor with the proposed improvements.	\$485,000	\$0	\$485,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.
Feasibility study of reauthorization of the project for navigation, St. Thomas (Charlotte Amalie) Harbor, U.S. Virgin Islands	VI	Virgin Islands Port Authority	New Feasibility Study	Damages incurred to the Port of Charlotte Amalie, Virgin Islands in the aftermath of Hurricanes Irma and Maria, has compelled both the Government of Virgin Islands (GVI) and Virgin Islands Port Authority (VIPA) to request Federal funding for dredging post-storm material deposited in the Port's navigation channels, turning basins, anchorage areas; a resumption of O&M dredging every 10 years; and improvements to the Port's navigation systems. The port was authorized in 1937, never federally constructed, and then deauthorized in 1986.	Improvements to Christiansted Harbor are expected to provide economic and navigation benefits to the island territory of St. Thomas.	\$950,000	\$0	\$950,000	To obtain Administration support for implementation, the Secretary, or other appropriate official, must approve a current decision document, including obtaining the Administration's position on the project, and, if appropriate, transmit the decision document and/or the Administration's position to Congress.

*As identified by non-federal interests in their proposals

2019 Appendix Table

Name of Proposal or Report	State(s)	Non-federal Interest	Proposal Type (As Identified in Proposal)	Purpose (Summarized from Proposal)	Benefits (Summarized from Proposal)	Total Estimated Costs (Directly from Proposal)	Unmet Section 7001 Criteria / Reason in Appendix
NOTE: Information by non-Federal interests was not verified, revised or developed by USACE, Army, or OMB							
Pure Water Project Las Virgenes - Triunfo	CA	Las Virgenes - Triunfo Joint Powers Authority	New Feasibility Study	This request proposes to eliminate discharge of excess recycle water into Malibu Creek to address TMDL requirements. Excess recycled water will instead be used for indirect potable reuse. The recycled water will be conveyed to a new advanced water treatment plant that will further treat the water. The purified water will be conveyed to the Las Virgenes Reservoir for indirect potable reuse utilizing surface water augmentation. The water would then be treated at the Westlake Filtration Plant and used to meet potable water demands. The specific project proposed for study is the proposed 11-mile brine line.	The Pure Water Project is expected to replace up to 2,600 acre-feet of imported water in the near term (12% of demand) and up to 5,100 acre-feet of imported water in the long term (20% of demand). Every acre-foot of water produced by the Pure Water Project reduces the need for imported water by the same amount, reducing impacts in Delta to smelt, salmon and other species & reduces energy consumption & greenhouse gas emissions. The project greatly diversifies the local water district's water portfolio, increasing local resilience to the potential adverse effects of climate change on water supply. Diversion and treatment of recycled water reduces nutrient load in Malibu Creek, addressing TMDL requirements and improving quality of aquatic habitat.	\$20,778,072	Proposal does not relate to a primary USACE authority/mission area (Criteria 1).
Rio Hondo/San Gabriel River Ecosystem Restoration Feasibility Study	CA	City of Arcadia, CA	New Feasibility Study	The request is for a feasibility study on ecosystem restoration opportunities adjacent to and along the Rio Hondo Channel, which is a USACE constructed facility. Specifically, the investigation of federal interest is in potential projects near the Arcadia Wash, Saw Tooth Wash, and within the Santa Fe Basin. Multiple benefits are expected from projects, including wetland recreation, groundwater recharge, ecosystem restoration, and restoration of riparian and aquatic habitats, etc. The cost estimate also includes an estimate for construction of three potential projects.	Benefits expected from the proposed project include ecosystem restoration benefits of riparian and wetlands recreation, as well as contributions toward groundwater recharge reducing the need to import water. It would also allow for storm water capture. The request notes that it could produce up to 1900 acre-feet of water.	\$68,900,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
South San Francisco Flood Control Feasibility Study	CA	City of South San Francisco	New Feasibility Study	The City of South San Francisco (SSF) faces an increasing threat from sea level rise which could severely flood up to 1,203 acres by the year 2100. SSF would like to conduct a Feasibility Study to look at infrastructure, land use planning and adaptation and mitigation strategies to define what opportunities exist to provide protection against tidal and fluvial flooding. The Colma Creek watershed, which flows through the southern part of SSF into San Francisco Bay, contains residential neighborhoods that have been severely flooded, habitat for threatened and endangered species and substantial public infrastructure. SSF has been declared a natural disaster area due to flooding by FEMA four times in the past 22 years, and three times in 2017 alone.	Economic benefits are expected to be realized via a reduction in tidal and fluvial flood damages. This includes reduced or avoided damages to transportation networks and highways, San Francisco International Airport (SFO), South Francisco Bay Area Rapid Transportation (BART) Station, hospitals, PG&E power stations, waste water treatment plant, fire stations, businesses and residential areas.	\$2,600,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
City of St. Augustine Back Bay CSRM	FL	City of St. Augustine	New Feasibility Study	This proposal requests a Flood Risk Management/Coastal Storm Risk Management Study to assess the waterway, coastline and infrastructure to find solutions to reduce back bay flooding in St. Augustine, Florida. The city ranges in elevation from 4 to 6 feet and experiences back bay flooding from extreme high tides, as well as storms and hurricanes. The city also understands its vulnerability to sea level rise, and is actively looking for long term engineering solutions to protect the citizens and valuable historic resources in the area.	Current coastal flooding causes damages in over 200 acres of residential homes, commercial buildings, roads, Flagler College and other infrastructure. It impacts the economy post-flooding and inhibits a tourist industry with over \$1 billion of revenue yearly, and it threatens over 250 irreplaceable structures listed on the National Register of Historic Places. It also disrupts the natural ecosystem along the intracoastal and inland. A map provided by the non-Federal sponsor shows extensive back bay nuisance flooding at elevation 3.75 feet, with further extent of flooding with minimal forecasted sea level rise of an additional 1.5 to 3 feet. The current damages are expected to worsen over time as hurricane frequencies and intensities increase, and as sea level rise trends continue. The benefits of the proposed effort would be to reducing these negative impacts.	\$203,000,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Kansas River Basin Study	KS	Kansas Water Office	New Feasibility Study	This proposal seeks to develop a holistic plan and strategies to address critical future needs of the Kansas River Basin watershed. Primary issues this study will investigate are significant flood risk in the Kansas River Basin, river/stream/wetland degradation, severe drought response and preparedness, Federal infrastructure resilience, and water supply availability. Flooding, stream erosion, and drought are increasing in intensity and frequency within the basin, heightening the existing threat to, and demands on, aging infrastructure which protects a large population.	The project will provide benefits to flood risk, habitat restoration and water supply by recommending measures at lakes, upstream and downstream of lakes, revisions to the operational plan and in measures appropriate communities. The study will recommend a plan to provide improved economic and environmental benefits to the State and communities benefiting from the system.	\$3,000,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Upper Turkey Creek PED Funding Approval	KS	City of Merriam, Kansas	Modification to USACE Project	This proposal is seeking authorization and funding of the Upper Turkey Creek Flood Risk project. Approximately 10,000 feet of low height levee and floodwall would be constructed to significantly reduce flood damage and risk to life.	It is estimated that this project will provide \$3,476,000 in average annual benefits from flood damage reduction, with average annual costs of \$1,593,000. Net benefits are estimated to be \$1,883,000 and the benefit cost ratio would be 2.2 to 1.	\$40,000,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Blue River Watershed Integrated Planning Study	KS, MO	City of Kansas City, Missouri	New Feasibility Study	The purpose of the study is to develop an integrated, recommended plan of habitat restoration and flood risk reduction, and other allied purposes in the Blue River Basin in Kansas City. The primary issue this study will investigate is degraded or lost habitat that can be restored while improving and sustaining flood risk management projects and providing multipurpose benefit opportunities in other allied purposes. The scope of the study includes consideration of wetland, riparian and aquatic restoration opportunities, enhance flood risk management where opportunities exist on active projects or potential new projects, and enhancing recreation and other related purposes.	The project will provide aquatic, riparian and wetland restoration habitat benefits in the highly impacted Blue River corridor in Kansas City and Johnson County, including in areas impacted by a previous traditional channel modification project in the lower corridor. The project will also evaluate opportunities for enhancing future flood risk reduction with non-structural and structural measures.	\$3,000,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Line Creek Aquatic Ecosystem Restoration Study	MO	City of Riverside, Missouri	New Feasibility Study	This proposal is seeking support of aquatic and riparian restoration along Line Creek in the City of Riverside, Kansas, in a reach of stream impacted by the L-385 Federal levee project.	Project is expected to provide aquatic and riparian ecosystem restoration in an impacted reach of stream over approximately 5,000 to 6,000 linear feet of waterway, with connectivity to the Missouri River and tributaries upstream in Platte County.	\$4,400,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Long Beach, MS Flood/Storm Water Reduction Study	MS	City of Long Beach, MS	New Feasibility Study	The purpose of this proposal is to assess flood and storm damage reduction in order to address life safety concerns and to protect property in the City of Long Beach, MS and surrounding areas in west Harrison County, MS. This project would also analyze ecosystem restoration opportunities in the Bay of St. Louis and MS Sound.	The project is expected to provide benefits in the form of flood risk reduction, improved safety and potentially habitat restoration.	\$53,000,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).

2019 Appendix Table

Name of Proposal or Report	State(s)	Non-federal Interest	Proposal Type (As Identified in Proposal)	Purpose (Summarized from Proposal)	Benefits (Summarized from Proposal)	Total Estimated Costs (Directly from Proposal)	Unmet Section 7001 Criteria / Reason in Appendix
PTCWSD Water Systems Improvement Project	MT	Power Teton County Water and Sewer District	Modification to USACE Project	This proposal request a Water System Improvement Project for construction of new water supply wells, new water storage, upgrade water treatment and connection to and improve the existing distribution system. The existing system serves the unincorporated town of Power with a population of approximately 171, but includes a school with enrollment of 105 students serving the surrounding area. Based on its proximity to the City of Great Falls, MT (approximately 20 miles to the south), the town of Power is expected to grow significantly in the next 20 years.	This effort is expected to provide benefits in the form of reliable water supply for the town, the school, and fire suppression. The existing surface water intake on Muddy Creek is not reliable based on high levels of sediment and poor water quality causing increased treatment costs and taxing the existing system. The surface intake and diversion dam have been subjected to periodic damages due to ice jams which have forced outages and further illustrate the need. The existing storage and distribution system lacks redundancy and sufficient volume to meet fire suppression requirements.	\$2,627,000	Proposal does not relate to a primary USACE authority/mission area (Criteria 1). Additionally, the proposed work does not require congressional authorization since authority exists (Criteria 2 and 3).
Extend Eastchester Creek, NY Federal Navigation Channel	NY	County of Westchester, New York	Modification to USACE Project	The objective of this request is to extend the northernmost portion of the Eastchester Creek Federal navigation channel from mile 4.7 to mile 5.0, and to achieve and Federally maintain greater channel depth in the "Y portion" of Eastchester Creek.	This proposal expects benefits in the form of transportation costs avoided, as well as safe operation and financial viability of this facility if dredging were to be performed.	\$0	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
MAWC Youghiogheny River Dam	PA	Municipal Authority of Westmoreland County	New Feasibility Study	This proposal is seeking to repair a reinforced concrete low-head dam that provides the pool for intake to the Indian Creek Water Treatment Plant, which provides water to thousands of customers in Somerset County, PA.	The Youghiogheny River dam provides the pool of water for the intake of the MAWC water treatment plant, as well as the North Fayette Municipal Authority treatment plant. These facilities provide potable water to tens of thousands of customers, including residential, commercial and industrial customers. The Indian Creek facility also provides bulk sales to a portion of the PA American system, Belle Vernon and Tenaska Westmoreland electric generating station with contracted reservation amounts. Any impact to this source would have a negative impact economically. This source also provides a health and safety benefit. The source water serving these systems provides for sanitary conditions necessary for human health and also fire protection for the local communities.	\$1,284,000	Proposal does not relate to a primary USACE authority/mission area (Criteria 1).
Section 313 South Central Pennsylvania Environmental Infrastructure program.	PA	Southwestern Pennsylvania Commission	Modification to USACE Project	This proposal is seeking to extend the \$200M ceiling of authority for the existing Section 313 Environmental Infrastructure program. The Section 313 program is within 5% of its authorized limit, which limits non-Federal sponsor's ability to partner with USACE in order to address water and wastewater infrastructure issues.	The Section 313 program was enacted to address widespread problems, especially in rural and small communities, regarding inadequate wastewater treatment, contaminated sources of drinking water, inadequate water supply capabilities and degraded quality of surface and ground water. These problems cause or contribute to public health and safety hazards, degraded environmental resources, and limited economic development.	\$0	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
West View Water Authority Neville Island Water Treatment Plant Rehabilitation	PA	The West View Water Authority	New Feasibility Study	This proposal is seeking capital upgrades to a water treatment facility that provides 40 million gallons per day to West View Water Authorities service area.	The West View Water Authority is the 3rd largest water system in Western Pennsylvania. This system provides water to over 200,000 residents in northern Allegheny County, southern Butler County and eastern Beaver County. The non-monetary benefits of this project can be measured by the protection of human health and improved reliability of safe drinking water. Although the Neville Island Water Treatment Plant is in fair condition, an investment is needed to bring the system into modern times ensuring public health and reliability. The West View Water Authority's system has seen growth of greater than fifteen percent. The project would help to continue providing safe clean drinking water.	\$15,650,000	Proposal does not relate to a primary USACE authority/mission area (Criteria 1). Additionally, the proposed work does not require congressional authorization since authority exists (Criteria 2 and 3).
Levee Improvement Project	TX	Victoria County Navigation District	New Feasibility Study	The purpose of this proposal is to heighten the existing levee system to meet the 3 feet FEMA free board requirements. The length of the project is approximately 2.2 miles and begins just North of the Union Pacific Railroad and ends at the Victoria Calhoun County line and has an estimated construction cost of \$3,000,000.	The proposed project will significantly alter the property attractiveness to large industry. The property has substantial benefits for inviting any industry that can utilize a multi-modal system of barge, rail, and road infrastructure to move their product. This is expected to greatly enhance the economy by employment opportunities and provide an increased tax base in an historically economically disadvantaged area of Victoria County in South Texas. The levee improvement project is also expected to aid property values for local landowners by removing or reducing the affects of flooding on certain areas of their property.	\$3,100,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Metropolitan Houston Flood Risk Management-Resilience Project/Proposed Legislation: Water Resources Development Act/2018;Energy/Water Development Appropriations Act/2019; All US Flood Bills for Houston	TX	Houston "Residents Against Flooding"	New Feasibility Study	This request seeks to (1) assess all flooding causes in all cities and six counties in Greater Houston Area, (2) evaluate all of Greater Houston Area's Building & Drainage Laws, (3) amend any such Laws, if faulty, to prevent/correct flooding, and (4) make recommendations & implement and/or construct drainage-relief projects in order to correct Greater Houston Area's flooding problems.	Once these projects are completed, it is expected that there will be an estimated \$1,000,000,000 of benefits provided to the Greater Houston Area over a 50-year project life cycle. In addition to the protection of human life, this request notes that there would be an improvement to quality of life and the environment, as well as vast increase of real estate property values; exponential economic growth in all business sectors, including the-Port of Houston, especially with recent Panama Canal expansion.	\$10,020,000,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Modification to Houston-Galveston Ship Channel project for Galveston Bay Widening	TX	Port of Houston Authority of Harris County, Texas	Modification to USACE Project	The purpose of this proposal is to modify the existing Galveston Bay reach by widening the channel from 530 feet to 700 Feet. Widening of the full bay reach would enable safe meeting and two-way traffic for neo-Panamax container ships, Suezmax tankers, and wide-body dry bulk carriers. Widening would minimize the reverting to one-way traffic movements, which would cause massive operational disruption of the busiest deep draft ship channel in the U.S. (22,000 deep draft vessel moves annually) because of vessel traffic congestion. Additionally, widening is expected to reduce the rate of vessel casualties and accidents as a result of unavoidable overtaking maneuvers in the bay that would occur with one-way vessel convoys.	Because over 80% of HSC tonnage is hazardous cargo, safer vessel movements will improve life safety and minimize environment consequences of accidents. Annualized National Economic Development benefits from full widening are estimated at \$27,000,000, without consideration of risk reduction benefits from avoidance of catastrophic impacts to the economy that would occur with a prolonged closure of the HGNC.	\$345,000,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Study for the feasibility for dredge material disposal in underground salt dome caver	TX	Port of Houston Authority of Harris County, Texas	New Feasibility Study	Available real estate for placement areas is expected to become increasingly scarce. Geologic salt domes and Salt caverns have been created in the Houston region for storage of oil and oil refinery by products at costs of less than the cost to create capacity in traditional upland disposal facilities. This request seeks to use the salt domes to potentially provide decades of disposal capacity for selected reaches with low development and operational costs.	This request expects that use of underground dredge material storage could be conducted for 60% to 80% less than upland placement areas, considering land acquisition, and recurring dike raises and mobilization costs. A single placement cavern could potentially receive 20 MCY of material in its first decade of use with cost avoidance of over \$100M. Use of underground placement could eliminate environmental impacts caused by creation and operation of new placement area islands in the bay, and preserve bay acreage for recreation and commercial fishing.	\$10,500,000	Does not require congressional authorization. Authority exists (Criteria 2 and 3).
Waco Lake Embankment Stabilization Project	TX	City of Waco	New Feasibility Study	The proposal seeks to study and repair a non-Federal city street embankment (Lake Shore Drive) that crosses USACE property at Lake Waco. It is suggested that changing lake levels due to flood risk management activities has attributed to the bank stabilities issues of the roadway.	The proposal states that the project would avoid \$100,000,000 in potential damages from a catastrophic failure if it were constructed.	\$29,125,000	Proposal does not relate to a primary USACE authority/mission area (Criteria 1).

Section 3017 of WRRDA 2014

Reporting Requirement to be Included in Annual Report to Congress on Future Water Resources Development

Section 3017 of WRRDA 2014 authorizes the Secretary of the Army to carry out measures on certain federally authorized hurricane and storm damage reduction projects to address consolidation, settlement, subsidence, sea level rise, and new datum. Subsection (d) of Section 3017 provides for the inclusion of the following information in the annual report on future water resources development that the Corps prepares under Section 7001 of WRRDA 2014:

- (1) any recommendations relating to the continued need for the authority provided under Section 3017;
- (2) a description of the measures carried out under Section 3017;
- (3) any lessons learned relating to the measures implemented under Section 3017; and
- (4) best practices for carrying out measures to restore hurricane and storm damage reduction projects.

Under the authority of Section 3017, the Corps is carrying out two studies. These studies will evaluate the costs and benefits of options to address consolidation, settlement, subsidence, sea level rise, and new datum impacts at the Lake Pontchartrain and Vicinity, Louisiana; and the West Bank and Vicinity, Louisiana projects.

Section 4011 of WRRDA 2014

Reporting Requirement to be Included in Annual Report to Congress on Future Water Resources Development

Section 4011 of WRRDA 2014 (“Louisiana Coastal Area”) requires the Secretary to review the plan entitled “Louisiana’s Comprehensive Master Plan for a Sustainable Coast” prepared by the State of Louisiana and accepted by the Louisiana Coastal Protection and Restoration Authority Board (CPRAB), including any subsequent amendments or revisions. Further, this section also requires the Secretary, in consultation with the State of Louisiana, to identify and conduct feasibility studies for up to 10 projects included in the plan. Subsection (b)(3) of Section 4011 requires that the Secretary to include the following in the subsequent annual report developed under Section 7001 of WRRDA 2014:

- (1) any proposed feasibility study initiated under this authority, and
- (2) any feasibility report for a project identified under this authority.

There are no proposed feasibility studies under this authority.