Report to Congress
Vertical Integration and Acceleration of Studies

June 2018

This is the final report prepared to meet the requirements of Section 1001 "Vertical Integration and Acceleration of Studies" of the Water Resources Reform and Development Act (WRRDA) of 2014.

Purpose

Section 1001 of WRRDA 2014 (Public Law 113-121, 33 U.S. Code §2282c), entitled Vertical Integration and Acceleration of Studies, provides that, to the extent practicable, U.S. Army Corps of Engineers (USACE) final feasibility reports will be completed in three years and will have a maximum Federal cost of $3 million and that the USACE District, Division and Headquarters review will be concurrent. Section 1001 provides further that the Secretary of the Army may extend the timeline or approve Federal costs greater than $3 million, subject to notification of the non-Federal study sponsor and the Senate Committee on Environment and Public Works and the House of Representatives Committee on Transportation and Infrastructure (Committees). Finally, Section 1001 provides that the authorization for a particular feasibility study terminates if the study is not completed within certain timeframes.

Section 1001 required an interim report to the Committees on the status of implementation of this section by not later than 18 months of enactment of WRRDA (June 10, 2014), and a final report to the Committees within 4 years of enactment of WRRDA. The Interim Report is available on the USACE Headquarters website: http://www.usace.army.mil/Missions/Civil-Works/Project-Planning/Report-to-Congress/.

Specifically, the final report is to describe:

- The status of the implementation of the planning process under this section of the law, including a description of each feasibility study subject to the requirements of this section;
- The amount of time taken to complete each feasibility study; and
- Any recommendations for additional authority necessary to support efforts to expedite the feasibility study process, including an analysis of whether the limitation established by subsection (a)(2) (maximum Federal cost of $3,000,000) needs to be adjusted to address the impacts of inflation.

Background

Prior to the passage of WRRDA 2014, USACE had implemented guidance to improve feasibility studies project delivery.[1] This procedural guidance included enhanced engagement of all three levels of the organization (the "vertical team" of Headquarters, the Divisions, and the Districts), emphasized the importance of early risk-informed decision making to reduce duplicative or unnecessary analyses, directed concurrent – rather than sequential - technical and policy review of draft and final feasibility

[1] MEMORANDUM FOR MAJOR SUBORDINATE COMMANDS, SUBJECT: U.S. Army Corps of Engineers Civil Works Feasibility Study Program Execution and Delivery. 8 February 2012 and Planning Bulletin 2012-02, Planning SMART Guide. 4 March 2014.

reports, recommended tailoring the amount of data collection and analysis to the next planning decision, and emphasized up-front direct engagement of all parties with a role to play in the development of the recommendation to Congress of a water resources development project, including other federal agencies with a role in environmental review processes.

These procedures and guidelines implemented "SMART Planning" for USACE planning activities, including feasibility studies. Studies to be conducted were SMART – Specific, Measurable, Achievable, Risk Informed, and Timely.

Further, studies were to be scoped to be completed within 3 years and for $3 million, with exceptions made for complex studies. By using the tools of SMART Planning and conducting studies according to the SMART Planning principles (early decision making, concurrent review, etc.), more efficient project delivery is possible – although difficult. The original "3x3" memo, signed by the Deputy Commanding General for Civil and Emergency Operations (DCG-CEO) February 8, 2012, made it clear that more efficient – faster and less costly – delivery of feasibility studies was a priority for USACE, and that the quality of the USACE product and integrity of the development of recommendations for authorized water resource development projects remained mission-critical for the agency.

Section 1001 enacted into law the policies and procedures USACE had established in 2012 with SMART Planning guidance and the 3x3 rule.

A feasibility study follows the established process leading to the recommendation of a water resources development project for Congressional authorization, if required, and federal construction. SMART Planning established vertical-team checkpoints, milestone decision meetings, marking engagement of the full enterprise at key points during the feasibility study:

- Alternatives Milestone - after the study is scoped and an array of alternative plans to address the problem have been identified;
- Tentatively Selected Plan Milestone - after alternative plans have been evaluated and compared against each other and a "future without project" to identify the "tentatively selected plan";
- Agency Decision Milestone - after the concurrent public review, USACE technical review, and USACE policy review of draft feasibility report with the tentatively selected plan, once the study team has a path forward to complete the feasibility study.

Each of these milestone meetings is an opportunity for the District-based study team to engage the Division and Headquarters and to ensure all levels of the organization are aligned on the risk management decisions the study team has made to complete the study and develop a water resources development project recommendation.

Study Time and Cost Limitations

Section 1001 of WRRDA 2014 provides that, to the extent practicable, final feasibility reports will be completed in three years and will have a maximum Federal cost of $3 million.

Section 1001 provides further that the Secretary of the Army may extend the timeline or approve Federal costs greater than $3 million, subject to notification of the non-Federal sponsor and the Senate Committee on Environment and Public Works and the House of Representatives Committee on Transportation and Infrastructure (Committees). This authority has been delegated to the Assistant Secretary of the Army (Civil Works).

Following the passage of WRRDA 2014, USACE issued implementation guidance detailing the procedures to obtain approval from the Assistant Secretary of the Army (Civil Works) (ASA(CW)) to exceed the 3 year and $3 million Federal cost restrictions identified in Section 1001.[2] As a matter of program oversight, USACE will continue to follow the Planning Bulletin 2014-01, Subject: Application and Compliance of SMART Planning and the 3x3x3 Rule, which requires the concurrence of the DCG-CEO to exceed the total study cost (i.e., the study costs shared by the USACE and the non-Federal sponsor) of $3 million.[3]

Calculating the duration of a study starts with the signing of the Feasibility Cost Sharing Agreement (FCSA), the agreement between the non-Federal sponsor and USACE to conduct the feasibility study, and ends with signing of the Chief's Report, the recommendation for authorization of a specific water resources development project.

Section 1001 provides that the authorization for a feasibility study terminates if the study is not completed within the timeframe approved by the ASA(CW). Any feasibility study not completed within the approved timeframes are no longer authorized, and the study will be terminated. In the case of a study undertaken under a general authority, such as Section 216 of the Flood Control Act of 1970, the particular study will be terminated but the general study authority is not affected. New Congressional authorization would be required for USACE to restart or complete a study that is no longer authorized and has been terminated under the provisions of Section 1001.

Concurrent Review

Section 1001 requires that personnel from the District, Division, and Headquarters levels of the Corps of Engineers concurrently conduct the review required under Section 905(a) of the Water Resources Development Act of 1986, as amended. All reviews for a feasibility report are documented in the Review Plan, which is part of the project management plan, and posted to the District's public website. Each draft and final feasibility report, in addition to Quality Control and Quality Assurance review processes, also undergoes Agency Technical Review, Independent External Peer Review (when required), policy review, and legal review.

Implementation Status: Vertical Integration and Acceleration of Studies

USACE Civil Works is committed to enhancing product delivery and increasing organization efficiency and effectiveness by reducing redundancies and delegation of decision making authority. The SMART Planning approach and feasibility study process is a focused, iterative, risk-based approach to decision-making, based on consideration of the full range of reasonable alternatives and an analysis of the return to the Nation from each alternative.

[2] MEMORANDUM FOR Commanders, Major Subordinate Commands, SUBJECT: Implementation Guidance for Section 1001 of the Water Resources Reform and Development Act of 2014 (WRRDA 2014) - Vertical Integration and Acceleration of Studies. 9 April 2015.

[3] Planning Bulletin 2014-01. Subject: Application and Compliance of SMART Planning and the 3x3x3 Rule. 14 March 2014.

USACE continues to refine the tools and processes for feasibility study delivery. Since the passage of WRRDA 2014, USACE has:

- Provided a model feasibility cost sharing agreement (FCSA) that non-Federal sponsors and USACE can sign prior to the development of a project management plan. The project management plan, including the study's review plan, is developed based on project scoping activities in the first 30 to 90 days of a study.
- Further developed study risk assessment and communication tools to facilitate the understanding, communication, and management of risks to the study and the risks associated with the recommended project, including how residual risks will be managed.
- Coupled the six-step planning process with the risk management framework to better identify and manage study and project risks during the feasibility study process. This process, and techniques for applying this process, have been published in the Planning Manual Part II: Risk-Informed Planning.[4]
- Engaged with the federal resource agencies and external stakeholders at all levels of the agency (local, regional, national) to communicate the purpose of feasibility studies, the expected level of detail in a draft feasibility report released for public comment (pre-decisional and pre-consultation with other federal agencies under the Endangered Species Act, etc.), and the sequencing of planning decisions associated with a feasibility study.
- Issued procedural guidance for the execution of feasibility studies (e.g., timing, participation, and focus of milestone decision meetings), the concurrent public, technical, and policy review of the draft and final feasibility reports, and exemptions to the "3x3" rule. Guidance is regularly examined by Headquarters and Division leadership, in partnership with the Office of the Assistant Secretary of the Army (Civil Works), and revised as necessary. Updates to guidance are distributed to the field through several channels and are posted to the USACE Planning Community of Practice Toolbox website.

Section 1001 of WRRDA 2014 is applicable to all feasibility studies that had not received any appropriations prior to and were initiated after enactment of WRRDA 2014 or 10 June 2014. While on-going studies that received appropriations prior to WRRDA 2014 and were resumed after enactment of WRRDA 2014 follow SMART Planning principles, they are not bound to the requirements set forth by Section 1001. Examples of studies initiated prior to WRRDA 2014 that were resumed post 10 June 2014 and amended the existing cost share agreement include Mobile Harbor, AL; Village Creek, AL; Whittier Breakwater, AK; East San Pedro Bay, CA; Inner Harbor Navigation Canal Lock, LA (General Reevaluation Report); Rahway River Basin, NJ; Arkansas River Corridor, OK; Resacas at Brownsville, TX; Jefferson County Shore Protection, TX; and Hudson River Habitat Restoration, NY. These studies are not included in Table 1.

Between the enactment of WRRDA (June 10, 2014) and June 1, 2018, sixty-one new feasibility studies were initiated. Of those, forty-eight studies are on-going, one has completed, and twelve were terminated because there was no justifiable alternative, no sponsor support or the study was converted to the Continuing Authorities Program. Of the sixty-one feasibility studies, thirteen have received an

[4] Planning Manual Part II: Risk-Informed Planning. USACE Institute for Water Resources. IWR2017R03. July 2017.

exemption to exceed the 3 years and/or $3 million dollar Federal limit. A status of each feasibility study is provided in Table 1.

Table 1: Studies Initiated Since the Enactment of WRRDA 2014 (Data as of 1 Jun 2018)

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
Alaska	Barrow Coastal Storm Damage Reduction, AK	7/12/17	TBD	This flood risk management feasibility study is on-going.
Alaska	Elim Subsistence Harbor, AK	3/23/18	TBD	This Tribal Partnership Program navigation feasibility study is on-going.
Alaska	Kenai River Bluff Erosion, AK	5/12/15	TBD	This flood risk management feasibility study is on-going and received an exemption to increase the study duration by 10 months.
Alaska	Kotzebue Small Boat Harbor, AK	11/12/15	TBD	This navigation feasibility study is on-going.
Alaska	Lowell Creek Tunnel Flood Diversion, AK	8/12/16	TBD	This flood risk management feasibility study is on-going.
Alaska	Alaska Regional Ports,(Port of Nome Modification), AK	2/2/18	TBD	This navigation feasibility study is on-going.
Alaska	Saint George Harbor Improvement, AK	10/15/15	TBD	This navigation feasibility study is on-going.

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
Alaska	Unalaska (Dutch) Harbor, AK	8/18/16	TBD	This navigation feasibility study is on-going.
Arkansas	Three Rivers, AR	6/30/15	TBD	This navigation feasibility study is on-going.
California	Dry Creek (Warm Springs) Restoration, CA	5/6/15	TBD	This aquatic ecosystem restoration feasibility study is on-going and received an exemption to increase the study duration by 9 months.
California	Lower Santa Cruz River, AZ	8/28/15	TBD	This flood risk management feasibility study is on-going.
California	Pajaro River at Watsonville, CA (General Reevaluation Report)	5/5/15	TBD	This flood risk management feasibility study is on-going and received an exemption to increase the study duration by 12 months.
California	Port of Long Beach Navigation Improvements, CA	8/27/15	TBD	This navigation feasibility study is on-going.
California	Sacramento River Bank Protection Project, CA (General Reevaluation Report)	6/19/15	6/19/18	This flood risk management feasibility phase was terminated after 36 months due to no justifiable alternative.

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
California	Yuba River Fish Passage (Englebright and Daguerre Point Dams), CA	6/2/15	TBD	This aquatic ecosystem restoration feasibility study is on-going and received an exemption to increase the study duration by 13 months.
Connecticut	Fairfield and New Haven Counties (Flooding), CT	6/24/16	TBD	This flood risk management feasibility study is on-going.
Connecticut	New Haven Harbor Deepening, CT	12/4/15	TBD	This navigation feasibility study is on-going.
District of Columbia	The District of Columbia, DC (Sandy Focus Area)	7/18/17	TBD	This flood risk management feasibility study is on-going.
Florida	Lake Okeechobee Watershed, FL	7/26/16	TBD	This South Florida Everglades Restoration aquatic ecosystem restoration feasibility is on-going and received an exemption to increase the total study cost to $5.7 million.
Florida	Loxahatchee River Watershed Restoration, FL	1/21/16	TBD	This South Florida Everglades Restoration aquatic ecosystem restoration feasibility phase is on-going and received an exemption to increase the total study cost to $5 million.
Florida	Manatee Harbor Improvements, FL	11/10/15	Pending termination	This navigation feasibility phase is being terminated due to no sponsor support.

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
Florida	Western Everglades Restoration Project, FL	8/16/16	TBD	This South Florida Everglades Restoration aquatic ecosystem restoration feasibility phase is on-going and received an exemption to increase the study duration by 10 months.
Georgia	Proctor Creek Watershed, Fulton County, GA	10/5/15	TBD	This aquatic ecosystem restoration feasibility study is on-going.
Georgia	Savannah River Below Augusta Ecosystem Restoration, GA	8/1/16	Pending termination	This aquatic ecosystem restoration feasibility phase is being terminated due to no sponsor support.
Georgia	Sweetwater Creek, GA	5/25/16	TBD	This flood risk management feasibility study is on-going.
Illinois	Du Page River, IL	7/1/15	TBD	This flood risk management feasibility study is on-going.
Illinois	Kaskaskia River Basin, IL	9/15/15	Pending termination	This aquatic ecosystem restoration feasibility phase is being terminated due to no sponsor support.
Illinois & Missouri	St. Louis Mississippi River Front, MO, IL	8/27/15	TBD	This aquatic ecosystem restoration feasibility study is on-going.

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
Iowa	Des Moines Levee System, Des Moines and Raccoon Rivers, IA	8/18/15	Pending termination	This flood risk management feasibility phase is being terminated due to no sponsor support.
Kansas	Prairie Band Potawatomi Nation, Soldier Creek, KS	11/1/17	TBD	This Tribal Partnership Program, Flood Risk Management, feasibility study is on-going.
Louisiana	Mississippi River Ship Channel, Gulf to Baton Rouge, LA	4/2/15	TBD	This navigation feasibility study is on-going and received an exemption to increase the study duration by 4 months.
Maine	Passamaquoddy Pleasant Point, ME	5/2/16	TBD	This Tribal Partnership Program, Multipurpose program, feasibility study is on-going.
Maryland & Virginia	Baltimore Harbor and Channels (50-Foot), MD & VA (General Reevaluation Report)	8/1/14	8/1/17	This navigation feasibility phase was terminated due to no justifiable alternative.
Michigan	Saginaw River Deepening, Saginaw, MI	12/1/14	Pending termination	This navigation feasibility phase received an exemption to increase the study duration by 18 months, but is being terminated due to no justifiable alternative.
Missouri	Grand River Basin, IA & MO	9/1/16	TBD	This flood risk management feasibility study is on-going.

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
Nebraska	Fremont, NE	7/15/15	TBD	This flood risk management feasibility phase was terminated and moved back to the Continuing Authorities Program.
New Jersey	New Jersey Back Bay Coastal Resilience Study, NJ (Sandy Focus Area)	9/30/16	TBD	This flood risk management feasibility study is on-going.
New Jersey	Raritan River Basin, Green Brook Sub-Basin, NJ (Upper Basin)	9/27/16	Pending termination	This flood risk management feasibility phase is being terminated due to no justifiable alternative.
New Jersey & New York	New York and New Jersey Harbor and Tributaries, NY & NJ (Sandy Focus Area)	7/15/16	TBD	This flood risk management feasibility study is on-going.
New Jersey & New York	New York and New Jersey Harbor, NY & NJ	5/12/17	TBD	This navigation feasibility study is on-going.
New Mexico	Rio Grande, Sandia Pueblo to Isleta Pueblo, NM	8/22/16	TBD	This aquatic ecosystem restoration feasibility study is on-going.
New York	Nassau County Back Bays, NY (Sandy Focus Area)	9/30/16	TBD	This flood risk management feasibility study is on-going.

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
New York	Upper Susquehanna Comprehensive Flood Damage Reduction, NY	7/8/16	TBD	This flood risk management feasibility study is on-going.
North Dakota	Souris River Basin, ND	5/6/16	TBD	This flood risk management feasibility study is on-going and received an exemption to increase the study duration by 12 months.
Northern Mariana Islands	Rota Harbor Modifications, CNMI	12/4/15	Pending termination	This navigation feasibility phase is being terminated due to no justifiable alternative.
Northern Mariana Islands	Tinian Harbor Modifications, CNMI	12/4/15	Pending termination	This navigation feasibility phase is being terminated due to no justifiable alternative.
Oregon	Willamette River Basin Review, OR	8/19/15	TBD	This water supply feasibility study is on-going.
Puerto Rico	San Juan Harbor Improvements Study, PR	9/16/15	TBD	This navigation feasibility study is on-going.
South Dakota	Lower Brule, SD	10/17/17	TBD	This Tribal Partnership Program, Aquatic Ecosystem Restoration, feasibility study is on-going.

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
Tennessee	Memphis Metro: Cypress Creek, TN	8/1/14	8/1/17	This Mississippi River and Tributaries aquatic ecosystem restoration feasibility phase was completed in 36 months and continued to the next phase in the Continuing Authorities Program.
Texas	Coastal Texas Protection and Restoration Study, TX	11/16/15	TBD	This flood risk management feasibility study is on-going and received an exemption to increase the study duration by 30 months and increase the total study cost to $19.8 million.
Texas	Freeport Harbor, TX	6/10/15	TBD	This navigation feasibility study is on-going.
Texas	GIWW - Brazos River Floodgates & Colorado River Lock, TX	Study initiated 7/1/16. 100% Fed no FCSA	TBD	This flood risk management feasibility study is on-going.
Texas	Houston Ship Channel, TX	11/13/15	TBD	This navigation feasibility study is on-going and received an exemption to increase the study duration by 12 months and to increase the total study cost to $10 million.
Texas	Matagorda Ship Channel (Widening and Deepening), TX	8/5/16	TBD	This navigation feasibility study is on-going.

State	Name	FCSA Signed / Initiation Date	Completion Date	Study Description and Status
Virginia	Atlantic Intracoastal Waterway Bridge Replacement at North Landing, VA	100% Fed no FCSA (Sep- 17)	TBD	This navigation feasibility study is on-going.
Virginia	City of Norfolk, VA (Sandy Focus Area)	2/3/16	TBD	This flood risk management feasibility study is on-going.
Virginia	Norfolk Harbor and Channels (55-Foot Deepening), VA	6/16/15	TBD	This navigation feasibility study is on-going.
Virginia	Norfolk Harbor and Channels (Southern Branch), VA	6/15/15	TBD	This navigation feasibility study is on-going.
Washington	Lower Dungeness Ecosystem Restoration Study, WA	3/17/16	Pending termination	This aquatic ecosystem restoration feasibility phase is being terminated due to no sponsor support.
Washington	Seattle Harbor Navigation Improvement Project General Investigation Study, WA	9/29/14	TBD	This navigation feasibility study is on-going and received an exemption to increase the study duration by 8 months.

Recommendations

USACE Civil Works is committed to identifying opportunities for enhanced project delivery and increased organizational efficiency and effectiveness. At this time, no additional authorization is necessary to support efforts to expedite the feasibility process.