



Institute for  
Water Resources

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# **PARTNERING WITH THE U.S. ARMY CORPS OF ENGINEERS**

*A Guide For Communities, Local Governments, States,  
Tribes, and Non-Governmental Organizations*

2019-R-02



US Army Corps  
of Engineers®



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# IWR Institute for Water Resources

The Institute for Water Resources (IWR) is a U.S. Army Corps of Engineers (USACE) Field Operating Activity located within the Washington D.C. National Capital Region (NCR) in Alexandria, VA and with satellite centers in New Orleans, LA; Davis, CA; Denver, CO; and Pittsburgh, PA. IWR was created in 1969 to analyze and anticipate changing water resources management conditions, and to develop planning methods and analytical tools to address economic, social, institutional, and environmental needs in water resources planning and policy. Since its inception, IWR has been a leader in the development of strategies and tools for executing the USACE water resources planning and water management programs.

IWR strives to improve the performance of the USACE water resources program by examining water resources problems and offering practical solutions through a wide variety of technology transfer mechanisms. In addition to hosting and leading USACE participation in national forums, IWR activities include the production of white papers, reports, workshops, training courses, guidance, and manuals of practice; the development of new planning, socio-economic, and risk-based decision-support methodologies, improved hydrologic engineering methods, and software tools; and the management of national waterborne commerce statistics and other Civil Works information systems. IWR serves as the USACE expertise center for integrated water resources planning and management; hydrologic engineering; collaborative planning and environmental conflict resolution; and waterborne commerce data and marine transportation systems.

The Institute's Hydrologic Engineering Center (HEC), located in Davis, CA, specializes in the development, documentation, training, and application of hydrologic engineering and hydrologic models. IWR's Navigation and Civil Works Decision Support Center (NDC) and its Waterborne Commerce Statistical Center (WCSC) in New Orleans, LA is the Corps data collection organization for waterborne commerce, vessel characteristics, port facilities, dredging information, and information on navigation locks. IWR's Risk Management Center (RMC) is a center of expertise whose mission is to manage and assess risks for dams and levee systems across USACE, to support dam and levee safety activities throughout USACE, and to develop policies, methods, tools, and systems to enhance those activities.

Other enterprise centers at the Institute's NCR office include the International Center for Integrated Water Resources Management (ICIWaRM) under the auspices of UNESCO, which is a distributed, intergovernmental center established in partnership with various universities and non-governmental organizations; and the Conflict Resolution and Public Participation Center of Expertise (CPCX), which includes a focus on both the processes associated with conflict resolution and the integration of public participation techniques with decision support and technical modeling. The Institute plays a prominent role within a number of the USACE technical Communities of Practice (CoP), including the Economics CoP. The Corps Chief Economist is resident at the Institute, along with a critical mass of economists, sociologists, and geographers specializing in water and natural resources investment decision support analysis and multi-criteria tradeoff techniques.

The Director of IWR is Dr. Joe Manous. Additional information on IWR can be found at: <http://www.iwr.usace.army.mil>. IWR's NCR mailing address is:

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# ABSTRACT

**P**artnering with the U.S. Army Corps of Engineers: A Guide for Communities, Local Governments, States, Tribes, and Non-Governmental Organizations provides a general introduction to the programs and processes available for non-Federal partners and U.S. Army Corps of Engineers (USACE) representatives to work together to address the Nation's water resources problems. The Guide includes an overview of the USACE Civil Works Program and describes how USACE can work with local, State, Tribal, and Federal agencies and other non-Federal partners on activities ranging from technical services and advice to planning and constructing water resources projects. The goal of this document is to outline the key processes and paths to engagement with USACE.

# PREFACE & ACKNOWLEDGEMENTS

This document provides information for potential partners or anyone who wishes to better understand partnerships with USACE. It also provides details on how to contact USACE to discuss your specific interests, needs, and next steps.

This document was prepared as an update to the *Project Partnership Kit* (IWR Report No 96-R-10) that was last revised in 2001. *Partnering with the U.S. Army Corps of Engineers: A Guide for Communities, Local Governments, States, Tribes, and Non-Governmental Organizations* represents the collective efforts of many individuals. Special thanks are due to the members of the Guide's Project Delivery Team and USACE field personnel who devoted many hours to thoughtful discussion about partnership concepts and issues, and provided thorough review and critique of drafts of this document.

*NOTE: Budgetary priorities for the USACE may change over time. Changes in both the structure and missions of USACE, as well as cost sharing policies, are regularly considered by the Administration and the Congress. As a result, information regarding any of the specific programs, missions, or USACE structure contained in this document may have changed or may be different from what is indicated in this Guide.*

# TABLE OF CONTENTS

Abstract .....	iv
Preface & Acknowledgements.....	v
The USACE Civil Works Mission .....	1
Flood Risk Management .....	1
Navigation.....	2
Ecosystem Restoration .....	2
Recreation .....	3
Hydroelectric Power .....	3
Water Supply .....	3
Emergency Management .....	3
USACE's Organization & Operation .....	4
Office of the Assistant Secretary of the Army for Civil Works .....	5
U.S. Army Corps of Engineers Headquarters (HQUSACE).....	5
Regional Divisions .....	5
Local Districts.....	5
Partnering to Develop a Civil Works Project.....	6
Project Delivery Team .....	6
Non-Federal Partner Roles and Responsibilities .....	7
Congressional Coordination: Authorization & Appropriations.....	8
Budgetary Process.....	8
Federal Funding: Annual Appropriations Processes .....	9
The Feasibility Study .....	10
Planning Process.....	10
Initiating a Planning Study.....	11
From Scoping to Washington-level Review .....	12
The Chief's Report .....	13
Preconstruction, Engineering & Design (PED) .....	14
Project Construction .....	14
Project Operation & Maintenance.....	15
Tribal Partnership Program.....	16

Continuing Authorities Program .....17

Watershed Studies .....19

Technical Assistance Partnership Opportunities .....20

    Floodplain Management Services .....20

    Planning Assistance to States.....21

        Comprehensive Water Resources Planning.....21

        Technical Assistance Supporting State Water Resources Management Plans .....21

    Interagency and International Services.....22

    Teaming to Address State Flood Risk Priorities: Silver Jackets .....22

Partnering in Times of Need: Emergency Response and Emergency Management .....23

    FEMA Support.....23

    Public Law 84-99 and the Flood Control and Coastal Emergencies Act .....23

For More Information.....25

Commonly Used Acronyms & Abbreviations .....26

# THE USACE CIVIL WORKS MISSION

The origins of the U.S. Army Corps of Engineers (USACE) can be traced back to 1775 and the early days of the American Revolution when the Massachusetts Provincial Congress appointed Richard Gridley to the rank of Colonel and Chief Engineer. In 1779, Congress created a separate Corps of Engineers, but the engineers dissipated from military service after the Revolutionary War ended. Congress reestablished the Corps of Engineers within the Army in 1802. At the same time, it established the United States Military Academy at West Point, NY, the country's first, and for 20 years its only, engineering school. With the Army having the Nation's most readily available engineering talent, successive Congresses and Administrations established a role for USACE as an organization to carry out both military construction and works "of a civil nature." In 1824, the Supreme Court ruled that Federal authority covered interstate commerce, including riverine navigation. Shortly thereafter, Congress enacted laws that marked the beginning of USACE's continuous involvement in civil works, with a mission focus on water resources.

Three primary mission areas are the heart of the USACE Civil Works Program.

- The **flood risk management** mission includes both inland and coastal flood risk management and addresses assessment, management, and communication of current and future flood risk in a systematic and comprehensive manner.
- The **navigation** mission focuses on safe, reliable, and efficient waterborne transportation systems (channels, harbors, and waterways) for movement of commerce, national security needs, navigational access for the Coast Guard, and recreation. Inland (riverine) and deep draft navigation, as well as small boat harbors, are all part of the USACE navigation mission.
- The **ecosystem restoration** mission restores, protects, and manages aquatic ecosystems. Ecosystem restoration projects assist in the recovery of ecosystems that have been degraded, damaged, or destroyed and focuses on establishing the ecological processes necessary to make aquatic ecosystems sustainable, resilient, and healthy under current and future conditions.

Congress has also directed the USACE Civil Works Program to address **recreation, hydropower, and water supply**. USACE engagement in these areas is generally required to be associated in some relevant manner with one or more of the three primary mission areas, e.g., a flood risk management project that also provides recreation benefits to the community.

In addition, the USACE Civil Works Program has a robust mission area in **emergency response**, including providing infrastructure and engineering response services to the Nation.

## Flood Risk Management

The USACE flood risk management mission area, including both inland and coastal storm risk management, encompasses ongoing and diverse flood risk management projects, programs, and authorities, and includes engagement and partnerships with other Federal agencies, State and Tribal organizations, and regional and local agencies. USACE activities related to flood risk management include technical services, project planning and construction, dam safety, levee safety, emergency operations, and emergency response.

USACE flood risk management projects utilize structural and nonstructural measures to manage the hazards associated with flooding and reduce the negative consequences of flooding to people and property. Structural and nonstructural flood risk management measures include channel modifications, levees, floodwalls, dams,

diversion culverts, natural and nature-based features, elevating structures in the floodplain, floodproofing, acquisition or relocation, flood warning systems, floodplain management, and increasing road elevations.

USACE has an active role in assessing, managing, and communicating flood risk associated with approximately 14,000 miles of levees in the USACE Levee Safety Program portfolio, and operates and maintains approximately 700 dams through the USACE Dam Safety Program portfolio that provide multiple significant benefits to the Nation. USACE manages these important elements of the Nation's flood risk management infrastructure to ensure its civil works projects deliver their intended benefits.

## Navigation

The Federal interest in navigation derives from the Commerce Clause of the Constitution and is limited to the navigable waters of the United States. Navigation was USACE's first civil works mission dating to Federal laws in 1824, which authorized and funded USACE to improve safety on the Ohio and Mississippi Rivers and several ports. The primary objective of the USACE navigation mission is to provide safe, reliable, and efficient waterborne transportation systems, including channels, harbors, and waterways for movement of commerce, national security needs, and recreation.

Today, USACE operates and maintains nearly 12,000 miles of commercial inland and intracoastal shallow draft (9- to 14-foot) navigation channels and waterways, and 13,000 miles of channels greater than 14 feet deep, for a total of 25,000 miles operated and maintained for commerce. USACE also assists in the movement of commerce by operating about 190 lock sites on 41 waterways, dredging more than 200 million cubic yards of construction and maintenance material annually, and maintaining 926 coastal, Great Lakes, and inland harbors.

Navigation studies and projects employ various measures to improve navigation. Port and harbor development typically consists of navigation channels that permit safe passage of vessels and any necessary breakwaters or jetties for protection against hazardous wave conditions. Inland waterway projects include navigation channels and locks. USACE's non-Federal partners or other non-Federal interests are responsible for providing the infrastructure necessary for full harbor and waterway development, including dredging of berthing areas, docks, and landside warehousing and transportation facilities.

## Ecosystem Restoration

The USACE Civil Works Program's ecosystem restoration mission area focuses on restoring degraded aquatic ecosystem structures, improving function and dynamic processes to a less degraded and more natural condition, and employing system-wide watershed approaches to problem solving and management for ecosystem restoration projects.

USACE's principal ecosystem restoration focus is on ecological resources and processes that are directly associated with, or directly dependent upon, the hydrological regime of the ecosystem and watershed(s). Ecosystem restoration opportunities that involve modification of hydrology or substrate are likely to be most appropriate for USACE initiatives; USACE is most likely to partner in activities addressing ecosystems associated with wetland, riparian, and aquatic systems.

Not all ecosystem restoration opportunities are appropriate for USACE involvement. Generally, it will not be appropriate for USACE to conduct ecosystem restoration activities on upland, terrestrial sites that are not closely linked to water and related land resources; such activities may best be addressed by other Federal agencies through their missions and programs.

## Recreation

USACE is the second largest Federal provider of outdoor recreation, with more than 400 lake and river projects in 43 states. Recreational features can be, and often are, considered as an element to enhance the overall benefit of a USACE project to the public. However, when partnering with USACE in cost-shared civil works studies and projects, recreational features cannot be the primary objective of the project.

## Hydroelectric Power

Hydropower is one of the products of developing rivers for multiple purposes. Over the years, Congress has directed USACE to build water resource projects to serve public needs. Where feasible, hydropower has also been included. USACE-operated hydropower plants offer reliable hydroelectric power services at the lowest possible cost as a benefit to the Nation, consistent with sound business principles and in partnership with other Federal and non-Federal hydropower generators, power marketing administrations such as the Tennessee Valley Authority, and hydropower customers. USACE collaborates on its hydropower efforts with the Department of Energy, the Federal Energy Regulatory Commission, and a variety of other Federal, regional, and State agencies and some private Corps-permitted hydropower facilities.

USACE is the largest operator of hydroelectric power plants in the U.S., and one of the largest in the world. The 75 Corps hydropower plants across the country have a total installed capacity of over 20,000 megawatts and produce nearly 100 billion kilowatt-hours a year. At nearly a third of the Nation's total hydropower output, it is enough energy to serve about ten million households.

## Water Supply

USACE may participate and cooperate with states and local communities in developing water supplies in connection with water resource improvements when certain conditions of non-Federal participation are met. These water supply features may be included in Federal navigation, flood risk management, or multipurpose projects when they are being considered for construction, operation, maintenance, and/or modification. This USACE involvement policy is based on a recognition that states and local governments, not the Federal Government, have the primary responsibility for the development and management of their water supplies.

## Emergency Management

USACE is prepared to respond to natural and man-made disasters as part of the Federal Government's unified national response to disasters and emergencies. As part of its Emergency Management mission, USACE prioritizes saving lives, protecting property, and supporting immediate emergency response needs for USACE, the Department of Defense (DoD), the Federal Emergency Management Agency (FEMA), and the Federal Government. During natural disasters and other emergencies, USACE can respond under its own authorities; as a component of the DoD; and as the designated lead agency in support of FEMA for the Public Works and Engineering Emergency Support Function. Some examples of USACE's primary Emergency Management activities include: preparing for disasters; providing technical assistance related to flood fighting, mapping, and modeling; and inspecting and rehabilitating coastal and inland flood risk management projects that have been damaged or destroyed by floods.

# USACE'S ORGANIZATION & OPERATION

**W**hile largely composed of civilians, USACE operates as part of the U.S. Army and has both military and civilian leadership that operate in tandem. It is an organization of thousands of dedicated civilian and military employees representing over 100 different professional engineering, scientific, environmental, and managerial specialty areas.

The military leadership operates through a chain of command that provides a direct link within the hierarchy of the U.S. Army, USACE Headquarters, regional Division offices, and local Districts. The Headquarters, Division, and District offices are generally organized in the same way: executive leadership at all levels rests with a military commander supported by a senior civilian program manager or director.

The USACE Commanding General and Chief of Engineers is located at the USACE Headquarters (HQUSACE) in Washington D.C. Reporting to HQUSACE are nine Division offices, also known as Major Subordinate Commands (MSCs). Each Division office oversees multiple District offices within its Division boundaries.

Divisions serve as the regional USACE interface with other regional agencies and organizations within their boundaries. The Districts' Civil Works Programs are responsible for conducting and completing assigned civil works studies, projects, and programs within their respective areas of responsibility. District boundaries are based on watersheds, and thus may not correspond directly with state or other governmental boundaries.

In addition to the nine Division offices, USACE also operates a number of other organizations including specialized labs and research branches such as the Army Geospatial Center (Alexandria, VA), the Engineer Research & Development Center (Vicksburg, MS), the Institute for Water Resources (Alexandria, VA), and the Marine Design Center (Philadelphia, PA).

## Need Help Answering Questions?

The online location map for Headquarters, Divisions, Districts, and other organizations includes hyperlinks with specific information about each office. You can also find USACE offices using your favorite search engine.

<https://www.usace.army.mil/Locations>

## USACE REGIONS



## Office of the Assistant Secretary of the Army for Civil Works

The USACE Commanding General and Chief of Engineers reports to the Assistant Secretary of the Army for Civil Works (ASA(CW)). The ASA(CW) is appointed by the President, confirmed by the U.S. Senate, and establishes policy direction and provides supervision of the Department of the Army functions relating to all aspects of the USACE Civil Works Program. The Office of the ASA(CW) represents USACE's interests to the Administration, and represents the Administration's interests to USACE in:

- The annual legislative program, which usually includes recommended authorizations to conduct studies and construct projects;
- The development of the annual Civil Works Program budget included in the President's Budget submission to Congress, which includes requests to fund selected studies and projects;
- The annual appropriations process, providing operations and maintenance and project-based funding for the Civil Works Program; and
- Providing policy direction and interpreting policy guidance on specific USACE studies, projects, and programs.

## U.S. Army Corps of Engineers Headquarters (HQUSACE)

At HQUSACE, the Chief of Engineers is the Commanding General of the Corps of Engineers. Reporting to the Chief of Engineers, the Director of Civil Works is the senior civilian leader overseeing the Civil Works Program, and the Deputy Commanding General for Civil and Emergency Operations is the senior military leader overseeing the Civil Works Program.

HQUSACE is responsible for organizational leadership and management of the programs and resources of the agency. It ensures that policy established by the ASA(CW), including associated USACE interpretive policy and guidance on specific projects and programs, is applied to all phases of project development. HQUSACE staff also monitor and provide guidance to the Divisions and Districts; provide progress reports to the ASA(CW); support and help the ASA(CW) to work with other agencies and organizations; and, together with the ASA(CW), provide requested testimony to Congress in support of the Civil Works Program and the Administration.

## Regional Divisions

Division leadership rests with the military Division Commanders, sometimes referred to as Division Engineers. The Divisions are the regional offices responsible for the supervision and management of their subordinate Districts. Divisions are also responsible for efficient use of personnel and funds, ensuring that the Districts' activities are compatible with policy, and monitoring and reporting to HQUSACE on progress. Divisions serve as the regional interface with other regional agencies and organizations within their boundaries.

## Local Districts

The Districts are led by military District Commanders, sometimes referred to as District Engineers. The Districts are the local offices responsible for conducting and completing their assigned civil works studies, projects, and programs.

With their focus on implementation, the Districts represent "one door to the Corps." Large regional projects that cross state lines or District boundaries will be managed by a single District and include multidisciplinary team members from multiple USACE offices.

# PARTNERING TO DEVELOP A CIVIL WORKS PROJECT

## NON-FEDERAL PARTNERS

*In most cases, non-Federal interests will be both a partner with, and client to, USACE. We will work together to meet the needs of the local community and Nation.*

*Throughout this Guide, non-Federal interests that are contractual or cost-sharing partners with USACE to plan and deliver a civil works project may also be referred to as "sponsors."*

USACE works hand-in-hand with non-Federal partners throughout the country to investigate water resources and related land problems and opportunities and, if warranted, develop projects that would otherwise be beyond the sole capability of the non-Federal partner(s). Study and project non-Federal partners are States, Tribes, county or local governments, or agencies that are interested in partnering with USACE to participate in civil works projects.

These partnerships are multifaceted, and vary by the scope and scale of the project being developed. The development of a civil works project can be a complex undertaking and requires a successful partnership and a contractual agreement between USACE and the non-Federal study or project partner. In contrast, as a technical services client, a non-Federal partner's engagement with USACE may be limited in scope and duration.

USACE civil works water resources activities are initiated by non-Federal partners or potential non-Federal partners, authorized by Congress, funded by Federal and non-Federal partners, and typically constructed by private contractors supervised by USACE. A civil works project partnership between USACE and a non-Federal partner progresses through four phases: feasibility study (planning); preconstruction, engineering, and design

(PED); construction; and, once project construction is complete, operation, maintenance, repair, replacement, and rehabilitation (OMRR&R). Most civil works projects – from planning through construction – are cost-shared between the Federal Government and a non-Federal partner or partners. With the exception of navigation projects, the non-Federal partner is generally responsible for the OMRR&R phase of the project.

## Project Delivery Team

Each individual civil works study or project will have a Project Delivery Team (PDT) led by a project manager. PDTs are typically made up of members from the USACE planning, engineering, construction, operations, and real estate functions that bring needed expertise for that specific study or project. Other USACE personnel from branches and divisions of the District are needed from time-to-time to perform certain functions, like assisting with contracts, scheduling tasks, and funding activities.

Non-Federal partner (also referred to as the non-Federal sponsor) representatives are also members of the PDT. The sponsor is expected to contribute knowledge and perspectives on local conditions, agencies' and public views, the environmental setting, potential solutions to the water resources problem(s), and other information. While some PDT staff changes are expected as a project moves from planning, to PED, to construction, certain sponsor and USACE representatives will remain involved and play a key role throughout the entire project development process.

The PDT, including the non-Federal partner(s), works closely with other Federal, State, Tribal, and local government agencies, businesses, interest groups, homeowners, and other members of the public.

## NON-FEDERAL PARTNER (SPONSOR) PROJECT DELIVERY TEAM ROLE

- *Participate as active PDT member(s).*
- *Provide funding and/or in-kind contributions that amount to the statutory share of financial costs of studies and projects.*
- *Meet agreed-upon budget, scope, quality, and schedule reporting requirements.*

## Non-Federal Partner Roles and Responsibilities

A partnership combines the resources and expertise of USACE and the non-Federal partner to address water resources problems. Most USACE water resources studies and projects require non-Federal partners to share the cost of the study and the project. Sponsoring a study or project requires a formal, legal agreement that is binding, but not irreversible. Cost-sharing requirements vary by the type of problem (i.e., USACE mission area) as well as the phase of the effort (e.g., planning phase, design, or construction) and are specified by Congress. The local share generally ranges from 25 percent to 50 percent of the cost depending on the project type and the phase of project development, although some elements must be fully funded by the non-Federal partner. Sponsors may also provide negotiated “in-kind contributions” for a portion of the required cost share.

Most study and project partnerships are initiated via a request to the local USACE District office. A project manager in the District will work with an interested non-Federal partner to learn about the water resources problem and make an initial determination whether USACE has a program under which it could be considered. This is often followed by an in-person meeting and site visit to gather more information, and to discuss the details and requirements of a partnership.

If it is determined that the problem is appropriate for USACE involvement, the non-Federal partner and the USACE team will work together to define the actions to be taken, e.g., technical data needed, public involvement, or next steps in the process to advance a civil works study or project.

# CONGRESSIONAL COORDINATION: AUTHORIZATION & APPROPRIATIONS

**B**efore any USACE civil works project or study can begin, three steps must take place: 1) Congress establishes the authority for USACE to conduct the study; 2) the study is included in the President's Budget, indicating Administration support for addressing that specific study; and 3) Congress provides Federal appropriations to initiate the study or project. Each are separate actions which must happen sequentially and therefore, can take several years. There are, of course, exceptions – emergency authorities and appropriations by Congress following a large scale national disaster can enable USACE and non-Federal partners to move forward on studies or projects expeditiously.

Congress provides permission to undertake a study by providing “study authority” to USACE to evaluate the feasibility of a recommended solution (project) for a specific water resources problem. The local District can identify if there may be an existing study authority available to meet specific water resources needs. New study authorizations can be provided by a House of Representatives or Senate committee resolution, in the periodic USACE authorization laws known as “Water Resources Development Acts” (WRDAs), or, less commonly, via another legislative vehicle.

## STUDY AUTHORITIES

*There are many existing study authorities that cover much of the Nation's water resources needs. Check with your local District for assistance to determine what authority may be already available in advance of outreach to Congressional interests.*

Congress also provides permission for USACE to undertake construction of a water resources project by providing “project authority” for a specific water resources project. Generally, Congress will not provide project authority until a completed study results in a recommendation to Congress of a water resources project, conveyed via a Report of the Chief of Engineers (Chief's Report) or Report of the Director of Civil Works (Director's Report). Without project authority, USACE cannot invest Federal dollars to construct a water resources project, even if it has been studied by USACE and recommended for authorization.

There are also several standing authorities or “continuing authorities” that cover both the study and construction authorities for certain types of water resources development projects under a total project cost threshold.

The recommended first step for any community considering a partnership on a USACE civil works project is to contact the local District office to determine whether there is already a study or project authority associated with the problem, and identify the opportunities that may exist to address the issue.

For those projects that do not fall either under an existing study or project authority or a standing authority, such as the Continuing Authorities Program (CAP) or the Tribal Partnership Program (TPP), potential non-Federal project or study partners may submit their requests for study and project authorization to the Corps for inclusion in the Annual Report to Congress on Future Water Resources Development (see Section 7001 of WRRDA 2014, as amended). Proposals are included in the report if they meet five criteria outlined by Congress. Since this process has begun in 2015, Congress has used the Annual Report to Congress to identify areas where new study and project authorities are required.

## Budgetary Process

Once authorized, a study or project must have Federal funding before it can begin. Federal funding from the annual USACE appropriations will not be available for a specific study or project until the authorized study is

included in either the President's Budget, which is submitted to Congress each February, or the Administration's work plan, which is submitted by the Office of Management and Budget.

The President's Budget categorizes requested funds by the phase of the civil works project. Funds for all pre-construction activities, including feasibility studies and preconstruction, engineering and design (PED) up to the award of the first construction contract are "Investigation" funds. "Construction General" funds are then provided to complete engineering and design after award of the first construction contract and cover all remaining project construction and implementation requirements. "Operations and Maintenance" (O&M) funds are allocated for the operations and maintenance of all USACE-owned and operated projects, along with the Inspection of Completed Works program.

USACE is always looking at least two fiscal years ahead in the budgetary process. Therefore, a newly authorized study may not appear in the President's Budget in the Investigations category for at least two years. Similarly, a newly authorized project may take years before it is included in the Construction General budget.

## Federal Funding: Annual Appropriations Processes

Congress provides funding for USACE civil works studies and projects through the annual Energy and Water Development Appropriations Act. This Act is one of several appropriations bills that Congress passes each year to fund the operations of the Federal Government. Other agencies are also funded by the Energy and Water Development Appropriations Act, including the Department of Energy, Department of Interior, and other agencies and commissions. Congress typically describes the studies and projects they want USACE to work on in the report attached to the appropriations bill, and requires USACE to develop a work plan that describes how the Federal funding will be allocated to specific projects and programs.

# THE FEASIBILITY STUDY

Often referred to as the first step toward construction of a USACE civil works water resources development project, the feasibility study is the disciplined process under which USACE planners work with non-Federal study sponsors and multi-disciplinary study teams to identify water resources problems, formulate and evaluate solutions, resolve conflicting interests, and prepare recommendations. A feasibility study is used to establish the Federal interest, engineering feasibility, economic justification, and environmental acceptability of a recommended water resources project. A feasibility study determines if Congressional authorization and USACE implementation of a specific civil works project are warranted.

Feasibility studies are generally cost-shared equally between USACE and a non-Federal partner, and reflect the shared responsibility for management and protection of the Nation's water resources. The non-Federal share may be in the form of 100 percent work-in-kind in lieu of a partial or complete cash contribution.

The feasibility phase concludes with either the finding of no Federal interest or the recommendation for the authorization of a specific water resources project. The analyses that support the recommendation are documented in a decision document. The final feasibility report will include documentation required by the National Environmental Policy Act (NEPA) and other applicable laws and guidance. The recommended project and the technical and engineering appendices in the decision document will lay the groundwork for the preconstruction, engineering and design (PED) phase of the project.

The recommendation to Congress for authorization of a water resources project will be made by the Chief of Engineers in the form of a "Chief's Report." After the Chief's Report is signed, the ASA(CW) will officially transmit the Chief's Report to Congress along with the views of the Administration.

Note that there are other USACE post-authorization decision documents that follow a similar process to the feasibility study process. For example, General Reevaluation Reports are developed to affirm, reformulate, or modify a previously completed feasibility study and the resulting recommended water resources project, or portions of the project. Although these reports are not technically "feasibility studies," the process they follow is extremely similar.

Non-Federal partners are also authorized to independently undertake feasibility studies of proposed projects for submission directly to the ASA(CW) and transmission to Congress. The Secretary of the Army reviews the feasibility study and the process under which the study was developed to determine the following: (1) whether the study complies with Federal laws and regulations, and (2) whether the project is feasible. The Secretary of the Army can also provide recommendations concerning the plan or design of the project, as well as set additional conditions that will be required for construction of the project. The local USACE District can provide valuable advice for a non-Federal partner interested in this path to a civil works project.

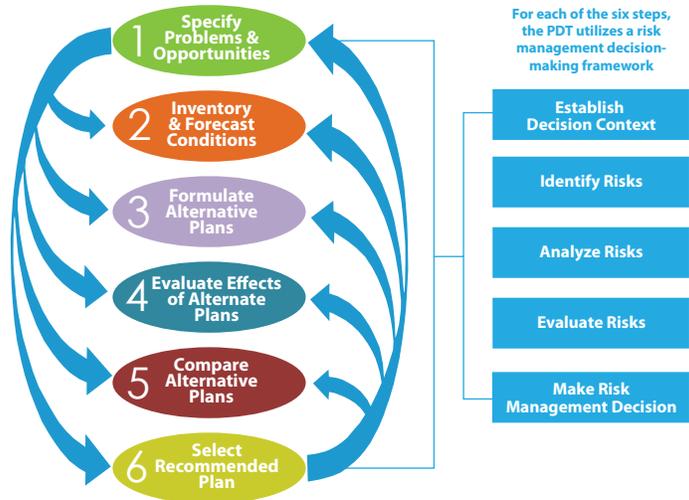
## Planning Process

USACE follows the six-step planning process defined in the *Economic and Environmental Principles and Guidelines for Water and Land Related Resources Implementation Studies* developed in the 1980s to guide the formulation and evaluation of water resources projects. This process is a structured approach to problem solving which provides a rational framework for sound decision making.

The six-step process is used for all USACE feasibility studies, regardless of scale. This process is typically presented and discussed in a sequential manner for ease of understanding, but usually requires multiple, and sometimes

## THE SIX STEP PLANNING PROCESS

The USACE Planning process is both sequential (left side of the diagram) and iterative (right side). Past steps can be revisited as more information is developed and more decisions are made during the study.



concurrent, iterations to formulate efficient, effective, complete, and acceptable plans, and to identify a single recommended plan.

USACE applies the six-step planning process within a risk management decision-making framework, so teams are better able to identify and communicate the way they use information and reduce uncertainty to inform decisions through iterations of the planning process. The approaches and techniques of planning provide USACE and its non-Federal partners with tools to efficiently reduce uncertainty by gathering the evidence needed to make the next planning decision and to manage the risks that result from doing so without more complete information.

### Initiating a Planning Study

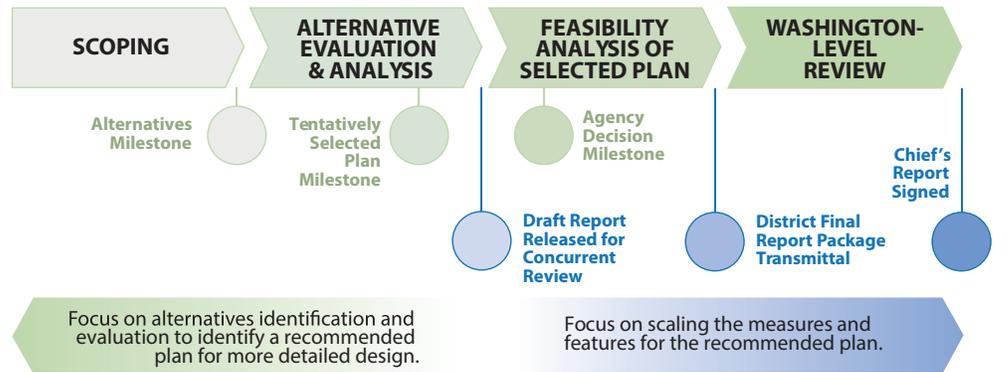
No work may begin on a study until execution of a cost-sharing agreement between USACE and the non-Federal sponsor occurs. The USACE model feasibility cost-sharing agreements (FCSAs) for projects that will require specific authorization are based on completion of the study within three years, using no more than a total combined funding and in-kind contributions amount of \$3 million for both the Federal and non-Federal share. The three-year timeline begins with the signing of the FCSA and ends with a signed decision document (such as a Chief's Report) or the termination of the study. Consideration of exemptions to these time and cost limits is part of the USACE feasibility decision-making process in which risk and uncertainty, scope, schedule, and funding. As a general rule, exemptions should only be required for the most complex studies. The three-year timeframe and funding limit for a feasibility study do not apply to studies conducted under the Continuing Authorities Program.

Once the FCSA has been signed, the PDT determines the initial framework for how decisions will be made and communicated, how risks will be managed, and what level of detail of information is needed to support the decision-making process. Adjustments may be made to the scope, schedule, and budget as a result of early PDT interaction, leading to agreement among principal parties on realistic expectations about study outputs, resource commitments, timeframe, and affirmation that the study can be completed within three years and for

## SMART PLANNING

To emphasize the need to make risk-informed decisions throughout the planning process, USACE implemented **SMART (Specific, Measurable, Attainable, Risk-Informed, Timely) Planning** in 2012 to conduct civil works feasibility studies for water resources development projects. The SMART Planning process relies on a structured multi-step risk-informed decision-making process, and is intended to improve and streamline feasibility studies (and other studies), reduce cost, and expedite completion.

**SMART  
FEASIBILITY  
STUDY  
PROCESS —  
KEY DECISION  
& PRODUCT  
MILESTONES**



*Note: The duration of each phase of a feasibility study is unique for each study. Not to scale.*

no more than \$3 million. Throughout the study, the PDT will communicate with its Division office and HQUSACE if adjustments are needed that impact schedule and funding.

The USACE project manager works with the non-Federal partner and other PDT members to develop a mutually acceptable project management plan that outlines tasks, costs, schedule, and responsibilities (the what, when, and how). The resulting project management plan is signed by the study sponsor and USACE representatives and serves as a road map for the conduct of a study, and, potentially, for the related design and construction of a project.

The nature of planning is such that it is accepted that circumstances change based on new information, and decisions made leading up to that point in the study may need to be revisited. It is expected that the PDT and sponsor may identify changes to study scope, schedule, and budget during scoping and other stages of the study. Therefore, the project management plan is regularly updated and maintained throughout the study.

### From Scoping to Washington-level Review

During the first months of a study, the PDT is expected to complete at least one iteration of the six-step planning process to formulate and evaluate an array of distinctly different alternative plans, and a rough order of magnitude of costs, benefits, and environmental impacts using existing and available information. The PDT coordinates with representatives from its Division and HQUSACE to affirm that there is Federal interest in developing a recommendation to address the water resources problem, and a representative array of distinctly different solutions has been formulated and will be evaluated.

Early coordination with Federal and State resource agencies, such as the National Marine Fisheries Service and / or U.S. Fish and Wildlife Service, will inform the study scope and path forward, as well as jump start Fish and Wildlife Coordination Act activities, Endangered Species Act (ESA) compliance, and other environmental and cultural resources activities. Within 90 days of study initiation, the PDT will convene an interagency meeting of all Federal, Tribal, and State agencies that may be required by law to conduct or issue a review, analysis, or opinion on, or to make a determination concerning a permit or license for the study. If the study will require an Environmental Impact Statement (EIS), the PDT's letter inviting the relevant agencies to the meeting will request that they serve as either a cooperating agency or a participating agency, if applicable.

The PDT will also hold a public scoping meeting early in the process, providing another opportunity to define the scope of the study and consider external views on the water resources problem(s).

After a focused array of alternatives is identified, the PDT continues to use iterations of the risk-informed six-step planning process, and evaluates and compares the array of distinct strategies for achieving the water resources objectives in the study area against the forecasted "future without project" condition. The result is determination

of Federal interest in recommending a water resources project and the identification of a “Tentatively Selected Plan” (TSP), which may be either the “national economic development” (NED) or “national ecosystem restoration” (NER) plan identified as reasonably maximizing the economic or ecosystem restoration benefits, respectively, of the project compared to its costs. At this point, a “Locally Preferred Plan” (LPP) may also be identified. An LPP is a plan that is preferred by the non-Federal sponsor over the NED or NER plan, and is sometimes recommended for project authorization instead of the NED or NER plan, with caveats. The analysis to determine and describe the TSP is documented in the draft feasibility report. The PDT usually takes 12 to 18 months to gather the necessary information, conduct required analyses, and develop the draft feasibility report.

The draft feasibility report is a pre-decisional document. The plan presented in the study is, at this point, the tentatively selected plan; it is not yet the recommended plan. The draft feasibility report documents the process to date, but the concurrent public comment, technical review, and policy review of the draft feasibility report may result in a change to the TSP. In addition, there are technical and policy elements that are required for the final feasibility report that will not yet be completed when the draft report is released for review.

The PDT considers all public, technical, and policy comments on the draft report as it moves forward to complete additional design and analyses of the TSP to reduce risk and uncertainty with cost data, engineering effectiveness, environmental impacts, and economic benefits. The PDT will also analyze design requirements to assure functionality of the recommended project and life safety.

There are several procedural and policy requirements that must be met by the PDT during the development of the final feasibility report and NEPA documentation. During this period, USACE and the sponsor continue to document environmental compliance activities under relevant laws and policies including NEPA, the National Historic Preservation Act, the Fish and Wildlife Coordination Act, the ESA, the Clean Water Act, the Clean Air Act, and others.

The District Commander’s signed feasibility report represents the District’s response to the study authority with the recommendation of a project to address the water resources problem. Once the District Commander signs the recommendations in the final feasibility report, the District will forward the final report, final NEPA document, and related materials to the applicable Division and/or HQUSACE for final USACE policy review, final NEPA review, and State & Agency review (for studies that lead to a Chief’s Report).

## The Chief’s Report

The recommendation to Congress for authorization of a water resources project will be made by the Chief of Engineers in the form of a “Chief’s Report.” If a project has already received congressional authorization pending identification of an acceptable solution during the feasibility phase, the final recommendation may be made by the Director of Civil Works in a “Director’s Report,” depending on the project and study.

The Chief’s Report provides Congress with a succinct recommendation of a project for authorization and assurance that the process to develop the recommendation is consistent with Administration policy and all applicable laws. After the Chief’s Report is signed, the ASA(CW) will officially transmit the Chief’s Report to Congress, along with the views of the Administration.

# PRECONSTRUCTION, ENGINEERING & DESIGN (PED)

**D**uring preconstruction, engineering and design (PED), USACE and the non-Federal partner(s) complete the detailed engineering, technical studies, and design needed to begin construction of the project as recommended in the planning decision document, including engineering design documentation and the plans and specifications (“Plans and Specs”) of the first significant project construction contract.

PED may begin after the District Engineer’s transmittal of the final feasibility report, once PED funds have been appropriated by Congress and a Design Agreement is executed with the non-Federal sponsor. The costs of PED activities are usually shared using the same percentages as construction of the project based on the mission area (e.g., flood risk management, navigation, ecosystem restoration). This is different than the typical 50%-50% cost-sharing of feasibility studies.

PED activities usually require several years to complete, and are a critical engineering component to prepare for project construction. PED activities continue under the original study authorization and may begin before congressional project authorization and construction funding of the project are received. However, construction may not begin until the project has been authorized and construction funding has been appropriated.

USACE and its non-Federal partners use the more detailed engineering design documentation developed during PED as a resource to draft and negotiate the Project Partnership Agreement (PPA) for project construction.

## PROJECT CONSTRUCTION

**U**SACE must be congressionally authorized to participate in the construction or modification of a water resources project. The authorization can be project-specific, programmatic, or general. While most USACE project authorizations are included in Water Resources Development Acts, some construction projects are undertaken under other authorities. Your local District can help determine if there is existing authority for the construction or modification of a water resources project.

USACE’s ability to act on an authorization also requires congressional funding. Once a project is authorized, appropriations are sought through annual Energy and Water Development Appropriations Acts. Once a project has secured Federal funding, the non-Federal sponsor and USACE can sign a Project Partnership Agreement (PPA). The PPA outlines Federal and non-Federal responsibilities for construction and for OMRR&R of the project once construction is complete.

After the PPA is signed, the non-Federal partner can begin acquisition of the real estate required for project implementation, as established during the feasibility study. Non-Federal partners are responsible for providing all lands, easements, rights-of-way, relocations, and disposal/borrow areas (LERRD) required for construction, operation, and maintenance of the project, and may receive credit towards cost-share responsibilities for costs associated with acquiring the LERRD necessary to implement a project. Typically, the construction is then performed by private contractors with oversight by USACE construction staff.

After the project has completed its final construction contract, a final inspection will be conducted by USACE to ensure that the project has been completed as designed. If the project will be operated and maintained by the non-Federal partner, USACE transfers the project to the sponsor along with an operation and maintenance manual.

# PROJECT OPERATION & MAINTENANCE

**P**roject operation, maintenance, repair, replacement, and rehabilitation (OMRR&R) requirements are initially identified during the feasibility phase and considered in the economic analysis when weighing project costs and benefits. Responsibility for OMRR&R is described in the feasibility report and is outlined in the construction PPA. Responsibilities for OMRR&R are based on the project purpose. If the non-Federal partner will eventually operate and maintain the project, USACE will prepare an Operation and Maintenance manual. During the lifetime of the project, the non-Federal partner completes operations reports on a regular basis, and USACE will periodically inspect the project through the Inspection of Completed Works program.

In most cases, costs for OMRR&R for newly completed projects are 100 percent sponsor costs. Exceptions to this are for commercial navigation projects, where USACE usually pays 100 percent of OMRR&R costs for projects with depths to 50 feet, and 50 percent of increased OMRR&R costs for depths in excess of 50 feet.

# TRIBAL PARTNERSHIP PROGRAM

*Most Districts have a Tribal Liaison. Contact a local District office for additional assistance or use the following link: [Tribal Nations Community of Practice](#)*

USACE is authorized to study and determine the feasibility of carrying out projects that will substantially benefit Indian Nations. The Tribal Partnership Program (TPP) provides USACE with broad authorities to assist with water resources projects that address economic, environmental, and cultural resource needs through studies including flood risk management, environmental restoration, and protection and preservation of natural and cultural resources. Other opportunities for TPP involvement include watershed assessments and planning activities as well as other projects as the Secretary of the Army, in cooperation with Indian Tribes and the heads

of other Federal agencies, determines to be appropriate. The TPP also includes an “Ability to Pay” provision for studies and projects carried out under its authorities.

Upon request, USACE will cooperate with Tribes to study water resources problems primarily located within Tribal lands. Because the TPP is a programmatic authority, specific Congressional authorization is not needed to initiate a feasibility study. After a Tribe requests a study, a 50 percent Federal / 50 percent Tribal cost-shared feasibility study is initiated. The Tribal cost share may be in the form of 100 percent work-in-kind. During the feasibility study, potential solutions are identified, the costs, benefits, and environmental impacts are analyzed, and a recommended project is developed.

If the Federal cost share of the recommended project is below \$12,500,000, USACE can carry out the project design and implementation without specific Congressional authorization. If the Federal cost share is above \$12,500,000, Congressional authorization is required. Depending on the type of project to be developed, different cost-sharing responsibilities for the Tribe and Federal Government will apply. A cost-share waiver up to \$482,000 may be applied to any TPP project that recommends project implementation (i.e., not a watershed study).

# CONTINUING AUTHORITIES PROGRAM

In addition to project-specific authorities and the Tribal Partnership Program, there are nine additional “continuing authorities” to plan, design, and construct water resources projects under a certain cost threshold. For many communities, if a water resource problem can be addressed by an authority in the Continuing Authorities Program (CAP), the entire project may be implemented more expeditiously. Studies conducted under CAP authorities are approved at the Division level. CAP authorities and cost limits, however, are generally insufficient for particularly large or complex water resources problems.

Local governments and agencies seeking assistance can request that USACE investigate potential water resource issues that may align with a particular CAP authority. USACE will review a non-Federal partner’s request to determine if it is aligned with an existing authority or whether the request would require additional Congressional authorization. Following an initial site visit to inform the determination if a project is potentially eligible to be included as a CAP project, the USACE Headquarters CAP manager will determine if and when the proposed new CAP project can be funded and started. Once approved, the District requests funds (up to \$100,000 initially) to prepare a Federal Interest Determination (FID) on the advisability of continuing work consistent with the principles, priorities, and constraints of the specific CAP authority, and initiates the feasibility phase, which is then followed by a design and implementation phase. The first \$100,000 for a CAP feasibility study is entirely federally funded, and then cost-shared above that amount for costs to complete the study.

Both phases of a CAP project are cost-shared between the Federal Government and the non-Federal partner. Certain territories of the U.S., including Puerto Rico and the U.S. Virgin Islands, as well as Tribes, are eligible for a reduction of the non-Federal cost-share requirement.

Timelines vary, but the feasibility phase of a CAP project is typically completed within two years. Cost and duration of the design and implementation phase of a CAP project will vary based on the size and complexity of the project.

CAP authorities are described in the following table.

## CONTINUING AUTHORITIES PROGRAM

SECTION	AUTHORITY	AUTHORITY PURPOSE	FEASIBILITY COST SHARE DIVISION (Fed/non-Fed)	GENERALIZED DESIGN AND IMPLEMENTATION COST SHARE DIVISION (Fed/non-Fed) <sup>1</sup>	MAXIMUM FEDERAL EXPENDITURE PER PROJECT <sup>2</sup>	NATIONAL PROGRAM LIMIT (Per FY) <sup>3</sup>
14	<b>Emergency Stream Bank and Shoreline Protection</b> <i>(Flood Control Act of 1946, as amended, or 33 USC 701r)</i>	Emergency stream bank stabilization and shoreline protection for public works and non-profit public services in imminent danger of failing (e.g., roads, bridges, hospitals, schools, treatment plants). Private properties/facilities not eligible.	1st \$100k Fed; 50/50 cost share for any remaining costs	65/35 <sup>2</sup>	\$5,000,000	\$25,000,000
103	<b>Beach Erosion and Hurricane and Storm Damage Reduction</b> <i>(Rivers and Harbors Act of 1962, as amended, or 33 USC 426g)</i>	Protection of utilities, roadways and other public infrastructure, private properties, and facilities against damages caused by storm-driven waves and currents (e.g., construction of revetments, groins, and jetties; may also include periodic sand replenishment).	1st \$100k Fed; 50/50 cost share for any remaining costs	65/35	\$10,000,000	\$37,500,000
107	<b>Navigation Improvements</b> <i>(Rivers and Harbors Act of 1960, as amended, or 33 USC 577(a))</i>	Plan, design, and construct small projects for commercial navigation improvements to ensure safe and efficient use of navigable waterways (e.g., channel dredging, widening of turning basins, breakwaters, jetties).	1st \$100k Fed; 50/50 cost share for any remaining costs	Varies, based on depth	\$10,000,000	\$62,500,000
111	<b>Shore Damage Prevention or Mitigation of Damages Caused by Federal Navigation Projects</b> <i>(Rivers and Harbors Act of 1968, as amended, or 33 USC 426i)</i>	Investigate and construct projects for the prevention or mitigation of shoreline erosion damages to public and privately owned shores along the coastlines when the damages are a result of a Federal navigation project.	Shared in same proportion as the original project causing damage	Shared in same proportion as the original project causing damage	\$12,500,000	N/A
204	<b>Beneficial Uses of Dredged Material</b> <i>(Water Resources Development Act of 1992, as amended, or 33 USC 2326(g))</i>	Use Regional Sediment Management concepts, restore, protect or create aquatic and wetland habitats in connection with construction maintenance dredging of an authorized Federal navigation project. Base disposal plan is least costly for typical disposal of dredged material.	100/0	100/0 for base disposal plan  65/35 for costs beyond base disposal	\$10,000,000	\$62,500,000
205	<b>Flood Risk Management</b> <i>(Flood Control Act of 1948, as amended, or 33 USC 701s)</i>	Local protection from flooding by non-structural measures (e.g., flood warning systems or flood proofing) or by structural flood risk management features (e.g., levees, diversion channels, or impoundments).	1st \$100k Fed; 50/50 cost share for any remaining costs	65/35 <sup>2</sup>	\$10,000,000	\$68,500,000
206	<b>Aquatic Ecosystem Restoration</b> <i>(Water Resources Development Act of 1996, as amended, or 33 USC 2330)</i>	Restore degraded aquatic ecosystems and wetland habitats to improve the quality of the environment.	1st \$100k Fed; 50/50 cost share for any remaining costs	65/35	\$10,000,000	\$62,500,000
208	<b>Snagging and Clearing for Flood Damage Reduction</b> <i>(Flood Control Act of 1954, as amended, or 33 USC 701g)</i>	Channel clearing and excavation, with limited embankment construction by use of materials from the clearing operation only.	1st \$100k Fed; 50/50 cost share for any remaining costs	65/35 <sup>2</sup>	\$500,000	\$7,500,000
1135	<b>Project Modifications for Improvement of the Environment</b> <i>(Water Resources Development Act of 1986, as amended, or 33 USC 2309a)</i>	Modifications of USACE-constructed water resources projects to improve the quality of the environment. Also, restoration projects at locations where an existing USACE project contributed to the degradation.	1st \$100k Fed; 50/50 cost share for any remaining costs	75/25	\$10,000,000	\$50,000,000

<sup>1</sup> For structural flood risk management purpose, non-Federal share is 35% up to 50% (based on cost of LERRDs), plus 5% must be in cash

<sup>2</sup> For non-structural flood risk management purpose, non-Federal share is limited to 35% with no cash requirements

<sup>3</sup> Per project limits and national program limits are subject to change; program funds' availability are subject to annual appropriations

# WATERSHED STUDIES

**W**atershed studies allow USACE to examine the water resources needs of river basins and watersheds of the United States in consultation with Federal, State, Tribal, interstate, and local governmental entities. Non-Federal partners may engage with USACE in watershed studies or assessments, using comprehensive and strategic evaluations and analyses that include diverse political, geographical, physical, institutional, technical, and stakeholder considerations. Watershed planning addresses water resources needs from any source, regardless of agency responsibilities, and provides a shared vision of a desired end state that may include recommendations for potential involvement by USACE, other Federal agencies, or non-Federal interests.

The overarching USACE strategy for watershed studies is to work in partnership with other interests on providing a shared vision with a holistic focus on water resource challenges and opportunities that reflect coordinated development and management of water and related resources. Key components of an effective watershed planning process include:

- Determining problems, needs, and opportunities in the watershed by involving non-Federal partners, water and related land resources interests (stakeholders), resource agencies, and the public.
- Preparing a collaborative inventory and future forecast of relevant water and related land resources consistent with the needs of the study, such as: land use; multiple agency programs and capabilities; jurisdictional boundaries; demands and needs within the watershed; existing models; existing mapping and data; water supply and treatment systems; water rights; transportation systems; or any inventory consistent with the needs of the study.
- Developing management measures based on a feature or activity at a site which address one or more of the planning objectives. Measures will be screened initially by using constraints, expert judgment, metrics, and specific screening criteria to focus on those that will contribute towards meeting the planning objectives.
- Providing a clear description of alternative approaches to address identified problems and needs, emphasizing alignment of actions of Federal, Tribal, State, interstate, and local governmental entities, with an explanation of expected outcomes resulting from combinations of measures and actions considered.
- Evaluating the alternative strategies, in consultation with non-Federal partners, to assess how effectively the strategies address the identified problems while focusing on collective values, missions, and the shared vision.
- Comparing the strategies against one another, noting trade-offs between the strategies, and selecting the best suited strategy for meeting the watershed study goals and objectives.

Watershed studies may identify potential USACE civil works projects consistent with priority missions; however, this is not the primary consideration of watershed planning. Ultimately, watershed studies should inform multiple audiences and decision makers at all levels of government, and provide a strategic roadmap to inform future investment decisions by multiple agencies.

It is expected that a watershed study will be completed within three years, and is typically cost-shared 75 percent Federal and 25 percent non-Federal. Specifically-authorized watershed studies and comprehensive studies may have their own cost-share requirements. Interested non-Federal partners should engage with their local District to evaluate opportunities for ongoing or new watershed studies.

# TECHNICAL ASSISTANCE PARTNERSHIP OPPORTUNITIES

## Floodplain Management Services

The Floodplain Management Services (FPMS) program (authorized by Section 206 of the 1960 Flood Control Act, as amended) provides information on flood hazards to local interests, State agencies, Tribes, and other Federal agencies to guide floodplain development. The FPMS program addresses the needs of people who live and work in floodplains by helping them better understand flood hazards and the actions they can take to reduce property damage and prevent the loss of life caused by flooding. The program's objective is to foster public understanding of the options available to address flood hazards and promote prudent use and management of the Nation's floodplains.

FPMS program services are provided to State, Tribal, regional, and local governments at no cost, within program funding limits. When funding is available, USACE will work with the requesting organization to develop a scope of work and assemble the appropriate study team for the effort being requested. FPMS program services for other Federal agencies and private persons are provided on a cost-recovery or fee basis. USACE may also accept voluntarily contributed funds to expand the scope or accelerate the provision of services requested. All requestors are asked to furnish available field survey data, maps, historical flood information, etc. to help reduce the cost of services. Requests for assistance under the FPMS program should be submitted by an appropriate representative of a non-Federal partner to the local District and include the location and nature of the problem to be investigated.

The FPMS program provides a full range of information, technical services, and planning guidance and assistance on floods and floodplain issues that is needed to support effective floodplain management. Under the FPMS program, USACE can compile and disseminate information on floods and flood damages, including identification of areas subject to inundation by floods of various magnitudes and frequencies, and general criteria for guidance of Federal and non-Federal interests and agencies in the use of floodplain areas. FPMS activities include advice to other Federal agencies and local interests for their use in planning to address local flood hazards. Examples of FPMS technical services include the development or interpretation of site-specific data on obstructions to flood flows, flood formation, and timing; flood depths or stages; floodwater velocities; and the extent, duration, and frequency of flooding. USACE may also provide information on natural and cultural floodplain resources of note, and flood loss potentials before and after the application of floodplain management measures.

On a larger scale, FPMS general planning guidance provides assistance in the form of "special studies" on all aspects of floodplain management planning including the possible impacts of off-floodplain land use changes on the physical, socio-economic, and environmental conditions of the floodplain. Special studies can range from helping a community identify present or future floodplain areas and related problems, to a broad assessment of which various remedial measures may be effectively used. Some of the most common types of special studies include: floodplain delineation/flood hazard evaluation studies; dam break analysis studies; hurricane evacuation studies; flood warning/preparedness studies; regulatory floodway studies; comprehensive floodplain management studies; flood damage reduction studies; urbanization impact studies; stormwater management studies; flood proofing studies; and inventories of flood-prone structures.

Through the FPMS program, USACE can also prepare guides and pamphlets to disseminate to States, Tribes, local governments, Federal agencies, and private citizens to convey the nature of flood hazards and to foster public understanding of floodplain data and available options including flood proofing techniques, floodplain regulations, floodplain occupancy, natural floodplain resources, and other related aspects of floodplain management.

## Planning Assistance to States

The Planning Assistance to States (PAS) program (authorized by Section 22 of WRDA 1974, as amended) offers comprehensive planning and technical assistance. Any State, or group of States, may partner with USACE under the PAS program. Federally-recognized Tribes, U.S. Territories, non-profits or other non-Federal interests working with a State, and regional coalitions of governmental entities and institutions of higher education are also eligible non-Federal partners in the PAS program. In addition, qualifying federally-recognized Tribes, U.S. Territories, and Commonwealths are eligible to apply a waiver to part or all of the cost of a PAS study. Requests for assistance under the PAS program should be submitted by an appropriate representative of a non-Federal partner to the local District and include the location and nature of the problem to be investigated.

*Typical PAS studies are only conducted at a planning level of detail and do not include detailed design for project construction. Implementation of the plan is the responsibility of the State, Tribe, or Territory.*

### COMPREHENSIVE WATER RESOURCES PLANNING

Comprehensive water resources plans include planning for the development, utilization, and conservation of the water and related resources of drainage basins, watersheds, or ecosystems located within the boundaries of a state, including plans to comprehensively address water resource challenges such as the State Water Plan. Comprehensive plans can extend across state boundaries, provided both states agree.

Typical water resources problems and opportunities included in comprehensive state water resource planning efforts include flood risk management, water supply, water conservation, environmental restoration, water quality, hydropower, erosion, navigation, coastal zone protection, fish and wildlife, cultural resources, and environmental resources. These PAS water resources planning efforts do not result in a recommendation for a USACE civil works project.

Comprehensive planning activities through the PAS program are cost-shared (50% USACE, 50% non-Federal partner); the partner may provide voluntarily contributed funds in excess of its cost share. The non-Federal cost share for preparation of a state comprehensive water resources plan may be provided by funds or through the provision of services, materials, supplies, or other in-kind contributions.

### TECHNICAL ASSISTANCE SUPPORTING STATE WATER RESOURCES MANAGEMENT PLANS

Technical assistance provided through the PAS program also includes support of planning efforts related to the management of state water resources, provision and integration of hydrologic, economic, or environmental data, and analysis in support of the state's water resources management and related land resources development plans. These plans are often identified in the State Water Plan or other water resources management related planning documents, such as state hazard mitigation, preparedness, response, and recovery plans and plans associated with changing hydrologic conditions, climate change, long-term sustainability, and resilience. This technical assistance cannot include the preparation of site-specific designs or construction.

Technical assistance activities through the PAS program are only conducted at a planning level of detail and are cost-shared (50% USACE, 50% non-Federal partner). The non-Federal partner may provide voluntarily contributed funds in excess of its cost share. The cost share for technical assistance must be provided by funds, not in-kind contributions. Some financial credit is available for qualifying federally-recognized Tribes and U.S. Territories.

## Interagency and International Services

Through the Interagency and International Services (IIS) program, USACE can provide technical assistance to non-Department of Defense Federal agencies, State and local governments, Tribal nations, private U.S. firms, international organizations, and foreign governments. Through the IIS program, USACE may provide engineering and construction services, environmental restoration and management services, research and development assistance, management of water and land-related natural resources, relief and recovery work, and other management and technical services. Most IIS work is funded on a reimbursable basis.

## Teaming to Address State Flood Risk Priorities: Silver Jackets

The Silver Jackets program is an approach facilitated by USACE to bring together multiple State, Federal, and sometimes Tribal and local agencies to learn from one another and apply their knowledge to reduce the risk of flooding and other natural disasters in the Nation.

Silver Jackets teams are state-based and state-led, with organizational and technical support provided by USACE flood risk managers or planners. Although each State's Silver Jackets team is unique, common agency participants include State agencies with mission areas of hazard mitigation, emergency management, floodplain management, and natural resources management or conservation. Federal participation typically includes, but is not limited to, USACE, the Federal Emergency Management Agency (FEMA), the National Weather Service, the U.S. Geological Survey, the U.S. Environmental Protection Agency, and the U.S. Department of Housing and Urban Development. USACE Silver Jackets coordinators can assist State and Federal agencies interested in expanding their Silver Jackets teams. Resources for activities associated with the Silver Jackets team come through the individual programs of participating agencies within the constraints of available budgets.

Silver Jackets teams work together to:

- Facilitate strategic life-cycle flood risk management.
- Create or supplement a continuous mechanism to collaboratively solve state-prioritized issues and implement or recommend those solutions.
- Improve processes, identify and resolve gaps and counteractive programs.
- Leverage and optimize resources.
- Improve and increase flood risk communication and present a unified interagency message.
- Establish close relationships to facilitate integrated post-disaster recovery solutions.

The relationships and teamwork established in a Silver Jackets team often pay dividends, benefitting response and recovery efforts when flooding or large-scale events do occur.

# PARTNERING IN TIMES OF NEED: EMERGENCY RESPONSE AND EMERGENCY MANAGEMENT

**E**ach year, USACE responds to domestic and world-wide disasters. In the event of a natural or man-made disaster, USACE is prepared and ready to respond as part of the Federal Government's unified national response to disasters and emergencies. In any disaster, USACE's top priorities are to save lives and protect property, and to support the Federal Government's immediate emergency response priorities.

USACE has many subject matter experts that support the Department of Defense and other Federal agencies in response to disasters around the world in areas such as emergency management, flood risk management, landslides, construction, urban search and rescue, oceanography, hydrology and hydraulics, and engineering.

## FEMA Support

Domestically, USACE supports the Department of Homeland Security and the Federal Emergency Management Agency (FEMA), the Nation's primary disaster response agency. USACE assists FEMA by coordinating Federal public works and engineering-related support, as well as providing technical assistance, engineering expertise, and construction management to prevent, prepare for, respond to, and/or recover from domestic incidents or disasters.

Under the National Response Framework, USACE is assigned as the primary agency for the Public Works and Engineering Emergency Support Function, which establishes responsibilities and expertise beyond its three primary civil works mission areas. USACE Emergency Operations responsibilities include conducting needs assessments, debris management, providing emergency power to public facilities, emergency infrastructure assessments, temporary housing, temporary roofing, critical public facility restorations, demolition or structural stabilization, and technical assistance.

## Public Law 84-99 and the Flood Control and Coastal Emergencies Act

During natural disasters and other emergencies, USACE can respond under its own emergency management authority, Public Law 84-99 (PL 84-99) authorized by the Flood Control and Coastal Emergency Act (33 U.S.C. 701n) (69 Stat. 186)). Under PL 84-99, USACE can undertake a variety of activities. Some activities require a Project Cooperation Agreement (PCA) between USACE and non-Federal partners:

- Disaster Preparedness, ensuring that USACE activities are available to respond to a broad range of disasters and emergencies, including coordination, planning, training, and exercises with key local, State, Tribal, and Federal stakeholders/partners under USACE statutory authorities and in support of FEMA. For example, disaster preparedness authorities provide for the purchase and stockpiling of critical supplies and equipment for flood fighting efforts. Levees and other flood risk management projects are inspected to identify issues that may keep the project from providing reliable design-level flood risk management during the next flood or coastal storm.
- Advance Measures Assistance may be provided in order to prevent or reduce damages when there is an imminent threat of unusual flooding. Technical assistance may be provided when there is a significant potential that an imminent threat of unusual flooding will develop, and is provided to Tribes, States, and local communities to help them prepare for the threat. Advance Measures projects are temporary projects that prevent or reduce impacts of floods that pose a significant threat to life and/or improved property, and are beyond the capability of Tribal, State, or local interests to perform in a timely manner. Advance Measures projects must be engineeringly feasible and capable of being constructed in time to meet the anticipated threat.

- Emergency Operations during flood and storm-related disasters include activating USACE Emergency Operations Centers to command and control the operation, providing liaisons to FEMA, States, Tribes, and local governments, providing technical assistance and direct assistance for flood fighting, and conducting rescue operations. Technical assistance includes advice on flood fighting methods and techniques, inundation mapping, flood modeling, and historical data. Direct assistance includes the provision of sandbags, pumps, and other types of flood fight materials, and emergency contracting to raise and stabilize threatened flood risk management projects.
- The Rehabilitation Program provides for the inspection and rehabilitation of Federal and non-Federal flood risk management projects damaged or destroyed by floods and coastal storms. There are approximately 9,500 miles of levees in the Rehabilitation Program, and all projects must meet certain standards in order to be eligible for rehabilitation assistance. Rehabilitation of eligible non-Federal flood risk management projects is cost-shared 80% Federal 20% local funding; rehabilitation of eligible Federal projects may be 100% percent federally funded.
- The Restoration Program provides for the inspection and restoration of Federal coastal storm damage reduction projects damaged or destroyed by floods and coastal storms. All projects must meet certain standards in order to be eligible for restoration assistance.
- Drought Assistance includes technical assistance, well drilling in limited circumstances, and transportation (but not purchase) of water to drought-distressed areas to make up for inadequate supplies of water.
- Emergency Water Assistance due to a contaminated water source may be provided when a locality is confronted with a source of contaminated water causing, or likely to cause, a substantial threat to the public health and welfare of the local inhabitants. Emergency water assistance includes technical assistance, purchase of water, transport of water to local water points, delivery of bulk or bottled water to community-level distribution points, temporary connection of a new water supply to the existing distribution system, and installation of temporary filtration.

Interested Federal and non-Federal partners should contact their local District office to get more information or request assistance.

# FOR MORE INFORMATION

**Find a local contact** – the District public affairs or project management office is the best “first stop” for most questions.

- *Corps District and Division Office Locator:*  
<https://www.usace.army.mil/Locations/>

## **Study and Project Partnership Agreement Models**

- *HQUSACE Project Partnership Agreement website:*  
<https://www.usace.army.mil/Missions/Civil-Works/Project-Partnership-Agreements/>

## **Technical Services & Engagement**

- *Floodplain Management Services Fact Sheet:*  
[https://planning.erdc.dren.mil/toolbox/library/FactSheets/fpmsfactsheet\\_June2017.pdf](https://planning.erdc.dren.mil/toolbox/library/FactSheets/fpmsfactsheet_June2017.pdf)
- *Planning Assistance to States Fact Sheet:*  
[https://planning.erdc.dren.mil/toolbox/library/FactSheets/PAS\\_FS\\_Aug2019.pdf](https://planning.erdc.dren.mil/toolbox/library/FactSheets/PAS_FS_Aug2019.pdf)
- *Silver Jackets Program:* <https://silverjackets.nfrmp.us/>

## **Emergency Management & Emergency Response**

- *HQUSACE Emergency Operations website:* <https://www.usace.army.mil/Missions/Emergency-Operations/>

## **Submit a proposal for Congressional authority for a water resources study or project**

- *Report to Congress on Future Water Resources Development website, HQUSACE:*  
<https://www.usace.army.mil/Missions/Civil-Works/Project-Planning/WRRDA-7001-Proposals/>

## **Project Planning & Feasibility Studies**

- *HQUSACE Project Planning website:* <https://www.usace.army.mil/Missions/Civil-Works/Project-Planning/>
- *Corps Planning Community Toolbox:* <https://planning.erdc.dren.mil/toolbox/index.cfm>
- *Continuing Authorities Program:* [https://planning.erdc.dren.mil/toolbox/processes.cfm?Id=229&Option=Continuing%20Authorities%20Program%20\(CAP\)](https://planning.erdc.dren.mil/toolbox/processes.cfm?Id=229&Option=Continuing%20Authorities%20Program%20(CAP))
- *Tribal Partnership Program:* <https://www.usace.army.mil/Missions/Civil-Works/Tribal-Nations/>
- *Planning Manual:* <https://planning.erdc.dren.mil/toolbox/library/IWRServer/96r21.pdf>
- *Planning Manual Part II: Risk Informed Planning:*  
[https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII\\_IWR2017R03.pdf](https://planning.erdc.dren.mil/toolbox/library/Guidance/PlanningManualPartII_IWR2017R03.pdf)
- *SMART Planning Feasibility Studies: A Guide to Coordination and Engagement with the Services:*  
[https://planning.erdc.dren.mil/toolbox/library/smart/SmartFeasibility\\_Guide\\_highres.pdf](https://planning.erdc.dren.mil/toolbox/library/smart/SmartFeasibility_Guide_highres.pdf)

# COMMONLY USED ACRONYMS & ABBREVIATIONS

It can seem as though USACE has created its own language consisting of numerous acronyms and abbreviations, some of which are highlighted in this guide. To non-Federal partners, it can be a daunting task to understand the USACE vernacular. While some of these entries are common throughout business, government, or the construction industry, many are unique to USACE. If you are meeting with a USACE partner and do not understand an acronym or abbreviation being used, please ask for clarification.

**ASA(CW)** – Assistant Secretary of the Army for Civil Works

**ATR** – Agency Technical Review

**BCR** – Benefit Cost Ratio

**CAP** – Continuing Authorities Program

**CSRSM** – Coastal Storm Risk Management

**CW** – Civil Works

**DCG** – Deputy Commanding General

**DCG-CEO** – Deputy Commanding General for Civil and Emergency Operations

**DCW** – Director of Civil Works

**DE** – District Engineer /or/ Division Engineer

**DEIS** – Draft Environmental Impact Statement

**EA** – Environmental Assessment

**EIS** – Environmental Impact Statement

**EOC** – Emergency Operations Center

**ER** – Engineer Regulation

**ERDC** – Engineer Research & Development Center

**ESA** – Endangered Species Act

**FCCE** – Flood Control and Coastal Emergencies

**FCSA** – Feasibility Cost Sharing Agreement

**FEIS** – Final Environmental Impact Statement

**FEMA** – Federal Emergency Management Agency

**FERC** – Federal Energy Regulatory Commission

**FID** – Federal Interest Determination

**FONSI** – Finding of No Significant Impact

**FPMS** – Floodplain Management Services

**FR** – Federal Register

**FRM** – Flood Risk Management

**GRR** – General Reevaluation Report

**H&H** – Hydrology and Hydraulics

**HQSACE** – Headquarters, U. S. Army Corps of Engineers

**HSDR** – Hurricane and Storm Damage Reduction (now Coastal Storm Damage Reduction or Coastal Storm Risk Management)

**HTRW** – Hazardous, Toxic, and Radioactive Wastes

**IEPR** – Independent External Peer Review

**IPR** – In-Progress Review

**IWR** – Institute for Water Resources

**LERRD** – Lands, Easements, Rights-of-Way, Relocations, and Disposal

**LOI** – Letter of Intent

**LPP** – Locally Preferred Plan /or/ Local Protection Project

**LRB** – Buffalo District

**LRC** – Chicago District

**LRD** – Great Lakes & Ohio River Division (Cincinnati, OH)

**LRE** – Detroit District

**LRH** – Huntington District

**LRL** – Louisville District

**LRN** – Nashville District

**LRP** – Pittsburgh District

**MFR** – Memorandum for Record

**MOA** – Memorandum of Agreement

**MOU** – Memorandum of Understanding

**MSC** – Major Subordinate Command

**MVD** – Mississippi Valley Division (Vicksburg, MS)

**MVK** – Vicksburg District

**MVM** – Memphis District

**MVN** – New Orleans District

**MVP** – St. Paul District

<b>MVR</b> – Rock Island District	<b>POD</b> – Pacific Ocean Division (Honolulu, HI)
<b>MVS</b> – St. Louis District	<b>POH</b> – Honolulu District
<b>NAB</b> – Baltimore District	<b>PPA</b> – Project Partnership Agreement
<b>NAD</b> – North Atlantic Division (New York, NY)	<b>RED</b> – Regional Economic Development
<b>NAE</b> – New England District	<b>ROD</b> – Record of Decision
<b>NAN</b> – New York District	<b>RPED</b> – Regional Planning and Environmental Division (of MVD; North or South)
<b>NAO</b> – Norfolk District	<b>SAC</b> – Charleston District
<b>NAP</b> – Philadelphia District	<b>SAD</b> – South Atlantic Division (Atlanta, GA)
<b>NED</b> – National Economic Development	<b>SAJ</b> – Jacksonville District
<b>NEPA</b> – National Environmental Policy Act	<b>SAM</b> – Mobile District
<b>NER</b> – National Ecosystem Restoration	<b>SAR</b> – Safety Assurance Review
<b>NFIP</b> – National Flood Insurance Program	<b>SAS</b> – Savannah District
<b>NFS</b> – Non-Federal Sponsor	<b>SAW</b> – Wilmington District
<b>NGO</b> – Non-Governmental Organization	<b>SHPO</b> – State Historic Preservation Office
<b>NHPA</b> – National Historic Preservation Act	<b>SMART</b> – Specific Measurable Attainable Risk- Informed Timely (ref. SMART Planning)
<b>NOAA</b> – National Oceanic and Atmospheric Administration	<b>SPA</b> – Albuquerque District
<b>NWD</b> – Northwestern Division (Portland, OR)	<b>SPD</b> – South Pacific Division (San Francisco, CA)
<b>NWK</b> – Kansas City District	<b>SPK</b> – Sacramento District
<b>NWO</b> – Omaha District	<b>SPL</b> – Los Angeles District
<b>NWP</b> – Portland District	<b>SPN</b> – San Francisco District
<b>NWS</b> – Seattle District	<b>SWD</b> – Southwestern Division (Dallas, TX)
<b>NWW</b> – Walla Walla District	<b>SWF</b> – Fort Worth District
<b>O&amp;M</b> – Operation and Maintenance	<b>SWG</b> – Galveston District
<b>OASA(CW)</b> – Office of the Assistant Secretary of the Army (Civil Works)	<b>SWL</b> – Little Rock District
<b>OMRR&amp;R</b> – Operations, Maintenance, Repair, Replacement and Rehabilitation	<b>SWT</b> – Tulsa District
<b>P&amp;G</b> – Principles and Guidelines for Water and Land Related Resources Implementation Studies (short title: Principles and Guidelines)	<b>TAD</b> – Transatlantic Division
<b>PACR</b> – Post-authorization Change Report	<b>TSP</b> – Tentatively Selected Plan
<b>PAS</b> – Planning Assistance to States	<b>USACE</b> – U. S. Army Corps of Engineers
<b>PDT</b> – Project Delivery Team	<b>WRDA</b> – Water Resources Development Act
<b>PED</b> – Preconstruction Engineering and Design	<b>WRRDA</b> – Water Resources Reform and Development Act (2014)
<b>PL</b> – Public Law	
<b>PMP</b> – Project Management Plan	
<b>POA</b> – Alaska District	



# Institute for Water Resources



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