US Army Corps of Engineers ®

BUILDING STRONG®

SEATTLE DISTRICT CIVIL WORKS PROGRAM

Contents

Introduction

The U.S. Army Corps of Engineers (Corps of Engineers) is the Nation's primary water resources development agency. Its water resources program began in 1824 when Congress provided funds for improving river navigation. Since then, the Corps of Engineers has been involved in developing recreational and commercial navigation, reducing flood damage and restoring ecosystems. Along with these missions, the Corps of Engineers generates hydropower, makes water supply available to cities and industries and regulates development along navigable waters.

The primary mission areas for the Corps of Engineers Civil Works Program are:

- Navigation
- Flood Risk Management
- Ecosystem Restoration
- Emergency Response
- Recreation

The Corps of Engineers, Seattle District's Civil Works boundaries encompass 99,000 square miles and contain 4,700 miles of shoreline. The boundaries include Western Washington, the Columbia River system upstream of the Yakima River mouth and much of Eastern Washington, Northern Idaho and Western Montana to the Continental Divide.

The Corps of Engineers has a wide range of legislative authorities allowing us to assist local communities with water resources-related issues. This booklet describes some authorities and programs we can use to partner with state, local, tribal and non-governmental agencies to address issues of concern. Corps of Engineers Civil Works authorities require local sponsor support, usually financially, to complete a project or study under one of our programs. Typically, a cost-sharing agreement is executed at the start of each project's major phase and requires financial contributions from sponsors upfront. Cost-share requirements vary from authority to authority and phase to phase.

For more information regarding Corps of Engineers assistance with a water resources study or project, call our office at (855) 828-7015, email nwscivilworks@usace.army.mil or visit us online at http://bit.ly/Civil_Works.

CONTINUING AUTHORITIES

The Continuing Authorities Program (CAP) authorizes the Corps of Engineers to plan, design and construct small scale projects under existing program authority from Congress. Local governments and agencies seeking assistance may request the Corps of Engineers to investigate potential water resource issues that may fit a particular authority.

CAP projects are conducted in two phases. The first phase is a two-step feasibility study, where the federal interest is initially established using up to $100,000 of federal funding. The remaining feasibility study is cost-shared 50 percent federal and 50 percent non-federal. Typically, results in a report documenting the issues, objectives, recommended alternative(s) and environmental compliance required for the project.

Once the feasibility phase is complete and the Corps of Engineers has approved the project, the design and implementation phase is initiated. The non-federal sponsor must agree to the following before a project will enter the design and implementation phase:

- Provide all Lands, Easements, Rights-of-Way, Relocations and Disposal areas (LERRD) necessary for construction and maintenance. The cost of LERRD is applied toward the non-Federal sponsor's cost-share
- Maintain and operate the project after completion without cost to the federal government (most projects)
- Prevent future encroachment, which might interfere with proper functioning of the project
- Assume responsibility for any cash requirements including costs in excess of applicable federal cost limitations

The design and implimentation phase includes completion of design, plans and specifications, and construction. This phase is cost-shared, typically 65 percent federal and 35 percent non-federal.

Section 14 – Emergency Streambank and Shoreline Protection
Flood Control Action of 1946, as amended

The Corps of Engineers is authorized to construct bank stabilization and protection projects to protect endangered public and non-profit infrastructure including highways, bridges, approaches and other essential public services such as hospitals, cultural sites and water supply systems from flood and storm damages due to erosion. Privately owned property and facilities are not eligible for protection under this authority. The maximum federal dollar limit is $1.5 million per project.

Section 103 – Beach Erosion and Hurricane and Storm Damage Reduction
Rivers and Harbors Act of 1962, as amended

This authority allows the Corps of Engineers to assist in the protection of public infrastructure on small beaches against erosion and damages caused by natural storm driven waves and currents. Typical projects include protecting utilities, roadways and other public infrastructure systems. The maximum federal dollar limit is $3 million per project.

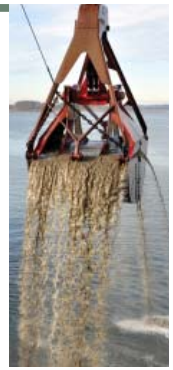
Section 111 – Shore Damage Prevention or Mitigation Caused by Federal Navigation Projects
Rivers and Harbors Act of 1968, as amended

The Corps of Engineers is authorized to investigate and construct projects for prevention or mitigation of shore damages to public and privately owned shores along coastlines that are attributable to federal navigation. The maximum federal dollar limit is $5 million per project.

Section 107 – Navigation Improvements
Rivers and Harbors Act of 1960, as amended

This authority allows the Corps of Engineers to plan, design and construct small projects for commercial navigation purposes such as channels, breakwaters and jetties to ensure safe and efficient use of the nation's navigable waterways.

Section 204 – Beneficial Use of Dredged Material
Water Resources Development Act of 1992, as amended

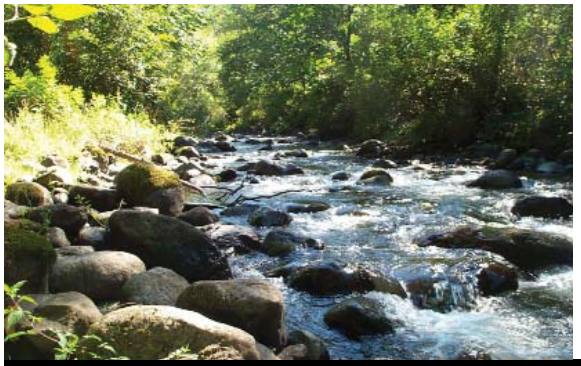


The Corps of Engineers can restore, protect or create aquatic and wetland habitats in connection with construction maintenance dredging of an authorized federal navigation project. The cost-share under this program is 65 percent federal and 35 percent non-federal for all costs above the base disposal plan, where the base disposal plan is the least costly plan for typical disposal of dredged material. The federal government pays 100 percent up to the cost of the base disposal plan.

Section 205 – Flood Control
Flood Control Act of 1948, as amended

The Corps of Engineers is authorized under this authority to investigate and construct local flood control projects by construction or improvement of flood control works. Typical flood control projects include levees, floodwalls, channel modifications, pumping stations or some non-structural measures. The maximum federal limit is $7 million per project.

Section 206 – Aquatic Habitat Ecosystem Restoration
Water Resources Development Act of 1996, as amended



The Corps of Engineers is authorized to restore and protect aquatic ecosystems and wetland habitats to improve the quality of the environment. Examples of projects include creek daylighting, channel modifications and wetland restoration. The maximum federal limit is $5 million per project.

Section 1135 – Project Modifications for Improvement of the Environment
Water Resources Development Act of 1996, as amended

The Corps of Engineers is authorized to assist in the restoration of degraded ecosystems through the modification of Corps of Engineers' structures, operations or implementation of measures in affected areas. The maximum federal limit is $5 million per project.

Section 544 – Puget Sound & Adjacent Waters Restoration, WA
Water Resources Development Act of 2000, as amended

In addition to CAP authorities, Seattle District has a special CAP-like authority called the Puget Sound and Adjacent Waters Restoration Program allowing us to implement ecosystem restoration projects in all waters in the Puget Sound drainage basin and the Strait of Juan de Fuca. Priority projects are selected by the Corps of Engineers by consulting with regional stakeholders including non-profit organizations, and state and federal agencies.

Planning Assistance to States and Tribes

Section 22 of the Water Resources Development Act of 1974

What the Corps of Engineers Can Do
Typical studies are only at the planning level of detail; they do not include detailed design for project construction and do not include any construction funding. The studies generally involve the analysis of existing data for planning purposes, using standard engineering techniques, although some data collection is often necessary. Most studies become the basis for State, Tribal and local planning decisions.

Funding
Federal allotments for each State or Tribe are limited to $500,000 federal funds annually, but typically are much less. Individual studies, of which there may be more than one per State or Tribe per year, generally range in cost from $25,000 to more than $100,000. The cost-share for these studies is 50 percent federal and 50 percent non-federal.

Typical Studies

The program can encompass many types of studies dealing with water resource issues. Types of studies conducted in recent years under the program include:

- **Water Supply and Demand**
- **Water Quality**
- **Environmental Conservation**
- **Environmental Restoration**
- **Wetland Evalution**
- **Dam Safety and Failure**
- **Flood Risk Management**
- **Floodplain Management**
- **Land Use**
- **Master Planning**
- **Economic**
- **GIS Development**

Floodplain Management Services

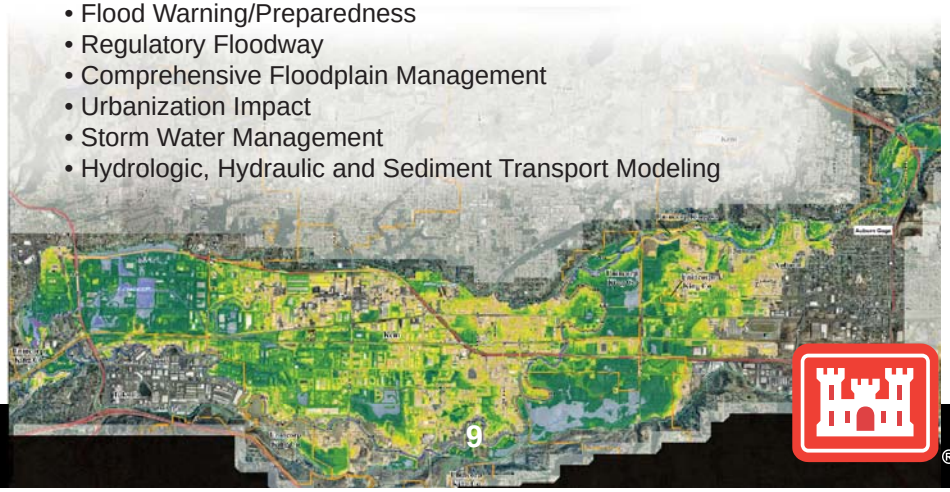
Section 206 of the Flood Control Act of 1960, as amended

What the Corps of Engineers Can Do
The Floodplain Management Services (FPMS) Program provides the full range of technical services and planning guidance needed to support effective floodplain management. Funding cannot support construction. FPMS is 100 percent federally funded.

General Technical Services
The program develops or interprets 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. It also provides information on natural and cultural floodplain resources before and after the use of floodplain management measures.

Special Studies
Special Studies can range from helping a community identify present or future floodplain areas to a broad assessment of the various floodplain management alternatives. Some of the most common types of Special Studies include:

- Floodplain Delineation/Flood Hazard Evaluation
- Dam Break Analysis
- Flood Warning/Preparedness
- Regulatory Floodway
- Comprehensive Floodplain Management
- Urbanization Impact
- Storm Water Management
- Hydrologic, Hydraulic and Sediment Transport Modeling



Estuary Habitat Restoration Program

EHRP

Estuary Restoration Act of 2000
PL 106-457 of the Estuaries and Clean Water Act of 2000, as amended

The purposes of the Estuary Habitat Restoration Program (EHRP) are to promote restoration of estuary habitat; to develop a national Estuary Habitat Restoration Strategy, to provide federal assistance for estuary habitat restoration projects; and to develop and enhance monitoring, data sharing and research. The Corps of Engineers and four other federal agencies created a council under the ERHP responsible for soliciting and evaluating project proposals and submitting a prioritized list of recommended projects for funding in order to implement projects to achieve a federal goal of restoring 1 million acres of estuary habitat. While several federal agencies may fund approved projects, Corps of Engineers projects are funded based on prioritization under the Corps' national program managed by our Headquarters.

EHRP projects are similar to Continuing Authorities Program projects in scale. The Corps or Engineers works in partnership with proponents to develop a project management plan with a schedule of deliverables and identification of reimbursements. Federal funding is provided through a cooperative agreement (CA) overseen by a grants officer and the federal funding share, from all sources, is generally not to exceed 65 percent of total costs, or the CA award amount, whichever is less. However, the federal share of an additional cost that includes a project pilot test or demonstrates innovative technical approaches may be increased to 85 percent of the total. The non-federal sponsor is responsible for all operations and maintenance of any implemented project.

Environmental Infrastructure, Resource Protection and Development Program

Section 595 of the Water Resources Development Act of 1999

The primary objective of this program is to provide design and construction assistance to non-federal sponsor interests for carrying out water related environmental infrastructure and resource protection and development projects in rural Montana and Idaho.

Projects may include wastewater treatment and related facilities, water supply and related facilities, environmental restoration and surface water resource protection and development. The Seattle District manages projects west of the continental divide in the State of Montana and projects in the northern Idaho panhandle area. The Section 595 authorization does not extend to Washington State. This is a cost-shared program, 75 percent federal and 25 percent non-federal. The Corps of Engineers can engage in design, construction or both for projects under this program.

Example projects include storm and sewer systems, water treatment and water delivery.

READINESS AND RESPONSE EMERGENCY RECOVERY

What the Corps of Engineers Can Do

The Emergency Readiness, Response, and Recovery Program allows the Corps of Engineers to undertake activities necessary to ensure that a knowledgeable and experienced work force is always available to respond to natural disasters.

Readiness and Response

Readiness and Response includes development of an emergency management organization, planning, training, and maintaining adequate supplies. The Corps of Engineers maintains an inspection program for federal and non-federal flood control structures to monitor the status of levee systems and notify levee sponsors of potential issues or concerns. The Corps of Engineers may also provide emergency assistance for flood response during a disaster in the form of personnel, material and technical advice. Emergency Readiness and Response is 100 percent federally funded and includes activities such as search and rescue operation, technical advice, emergency repairs and flood-fight material like sandbags, pumps, or rock.

Recovery

Post-flood response activities are intended to save lives and protect property (i.e., public facilities/services and residential/commercial developments) following a major flood event. Assistance to individual homeowners and businesses is not permitted. Authority to perform post-flood activities immediately after a flood is provided by Public Law 84-99 as amended, along with Public Law 93-288 as administered by the Federal Emergency Management Agency (FEMA). Work under this authority after a flood typically includes repair of eligible flood control structures, debris removal, and temporary restoration of critical public services or facilities. Recovery efforts are funded 100 percent federally initially for design and coordination work; implementation of repairs or other work is cost-shared 80 percent federal and 20 percent non-federal.

Specifically Authorized Projects

Projects specifically authorized by Congress allow the Corps of Engineers to provide support for a variety of water resource related issues. These projects differ from projects under other program authorities. First, to initiate a study, the Corps of Engineers requires specific Congressional authorization to address issues within a specified area. Also, the study scope can include one or more different Corps of Engineers mission areas and the total study cost is not limited.

Study Areas

- Flood Risk Management
- Ecosystem Restoration
- Navigation
- Watershed Management
- Water Supply
- Hydro Power
- Recreation

The first phase in the process is the investigation phase which explores the feasibility of constructing a project by identifying problems and opportunities, developing a recommended plan and completing necessary environmental compliance. Once authorized by Congress for construction, the project enters the construction phase in which the final design is completed and the project is constructed.

This program allows the Corps of Engineers to address large-scale projects such as basin-wide flooding issues or ecosystem restoration on an entire river system. The investigation phase is cost-shared 50 percent federal and 50 percent non-federal.

Sample Projects

Seahurst Park Beach Restoration
Section 544, Puget Sound and Adjacent Waters Restoration

Between November 2004 and February 2005, phase one of the project was completed, removing 1,400 feet of failing shoreline armoring. Phase two will restore about 1,200 additional feet of Puget Sound beach in Seahurst Park. A mixture of sands and gravels that restore natural conditions were placed to encourage benthic recolonization and reconnection of upland and marine environments important to many species.

Blair Waterway Channel Deepening
CAP Section 107, Rivers and Harbors Act of 1960, as amended

Blair Waterway provides a deepwater approach from the Pacific Ocean through Puget Sound and into Tacoma Harbor. As the shipping industry continues its transition to newer, larger container vessels, small ports and harbors with shallow channels and narrow berths will struggle to maintain trade volume. The Blair Waterway channel was widened and deepened to accommodate new-age container vessels sailing from Far East trade routes to the United States. The new channel serves industries and marinas in Commencement Bay and the Southern Puget Sound region. Since construction was completed in 2004, the Port of Tacoma has averaged 23-26 million tons of cargo a year. Completion of the Blair waterway project also increased cargo capacity for the Puyallup Tribe.

Nisqually Park Levee Rehabilitation
Flood Control and Coastal Emergencies Act, PL84-99

The Nisqually Park Levee was damaged as a result of two major storm events in November 2008 and January 2009. Located near the entrance to Mt. Rainier National Park, the levee provides protection for the historic park entrance as well as homes and utilities. As a non-federal constructed levee, federal assistance in repairs and rehabilitation following flood events is dependent on the condition of the levee. Since the Nisqually Park Levee was properly maintained to federal levee standards, the Corps of Engineers was able to assist in repair of the 1,700 feet of levee damaged during the two flood events under this program.

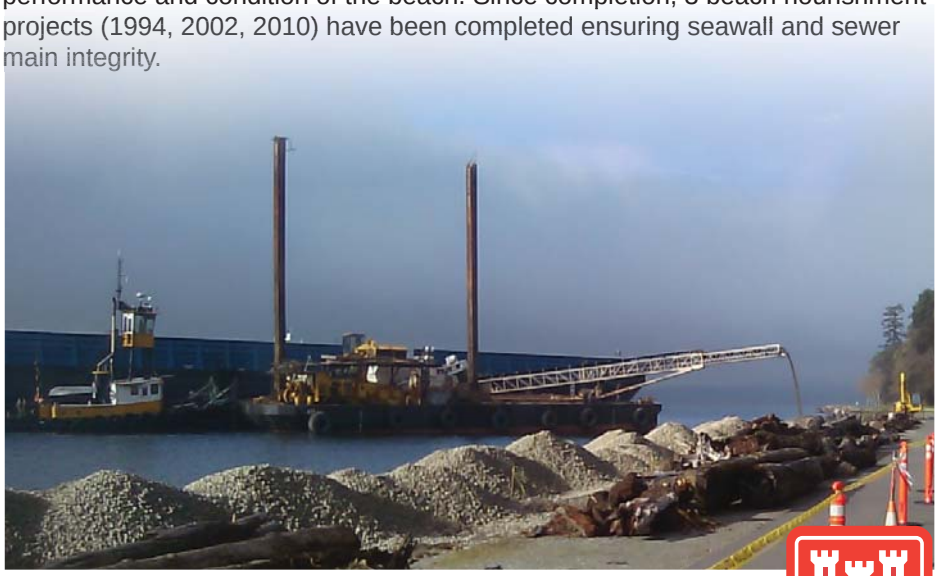
North Wind's Weir Ecosystem Restoration Project
Green and Duwamish River Ecosystem Restoration, Water Resources Development Act

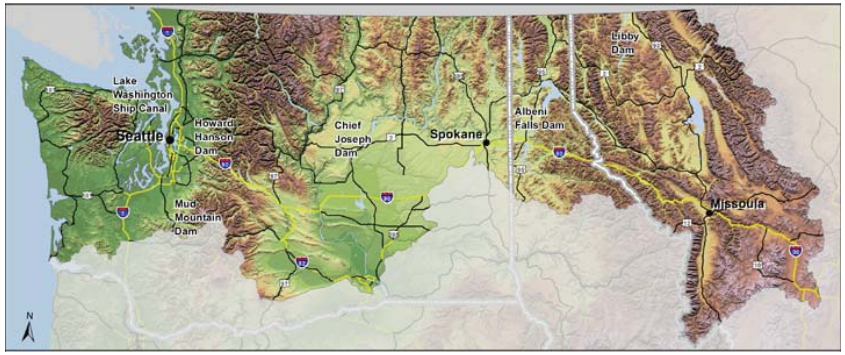
Completed in 2010, the North Wind's Weir Ecosystem Restoration Project offers federally-protected Chinook salmon shallow water habitat, feeding opportunities, and cover as they make the transition from freshwater to saltwater. North Wind's Weir lies at the critical point where the freshwater of the Green/Duwamish River and saltwater of Puget Sound mix. Construction included 2.5 acres of off-channel habitat that allows water to flow onto the land to create a mudflat and vegetated marsh. Surrounding the new embayment are restored upland areas planted with native trees, shrubs, and grasses.

The North Wind's Weir project is part of the larger Green/Duwamish Ecosystem Restoration Project specifically authorized by Congress that includes 45 individual projects like North Wind's Weir.

Lincoln Park Shoreline Erosion Control
CAP Section 103, Rivers and Harbors Act of 1962, as amended

Located along the Williams Point shoreline in Seattle, the Lincoln Park Beach project prevents damage and failure of an existing seawall that supports a City of Seattle sewer force main directly behind the wall. The project is comprised of 2,300 feet of beach renourishment through gravel and sand placement, as well as a 250 foot rock revetment. The project is monitored every 5 years to evaluate performance and condition of the beach. Since completion, 3 beach nourishment projects (1994, 2002, 2010) have been completed ensuring seawall and sewer main integrity.





Seattle District

Civil Works Program Boundaries

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