Civil Works Authorities

Planning Assistance to States was used to assist Metro Parks for the master plan for bicycle access along the Louisville Loop in Louisville, KY.

US Army Corps of Engineers
Louisville District

General Investigations Studies

Partnering with the Corps of Engineers to Solve Water Resources Problems

The US. Army Corps of Engineers (USACE) is authorized to conduct investigations related to its core mission areas of navigation, flood risk management, and ecosystem restoration, to determine if Congressional authorization and implementation of a specific Civil Works project are warranted.

The Civil Works feasibility study is an initial step in the USACE's process for addressing many of the nation's significant water resources needs. A feasibility study is used to investigate the Federal interest, engineering feasibility, economic justification and environmental acceptability of a recommended water resources project.

> The USACE Civil Works Planning Program conducts a broad range of studies, including studies leading to new projects that require Congressional authorization, studies involving evaluation and design of projects under continuing authorities, and reexaminations of existing projects.

After Congress has both authorized and appropriated funds to begin a study, USACE Planners work with a non-federal sponsor (Sponsor) and multi-disciplinary study teams to identify water resources problems, formulate and evaluate solutions, resolve conflicting interests, and prepare recommendations.

The Important Role of the Non-Federal Sponsor

USACE feasibility studies are cost-shared with a Sponsor, reflecting our shared responsibility for the nation's water resources. A Sponsor can be a state, tribe, county, city, town, or any other political

USACE at the beginning of a study, may be amended if the study's scope and complexity justifies a higher total cost level. The Sponsor may provide a percentage of the cost-share requirement through work-in-kind (amounts vary based on program authority); some program authorities may require a minimum cash contribution.

- The Design Agreement covers additional PED activities to prepare plans and specifications for construction of a project, after completion of a final feasibility study report that recommends implementation of a specific water resources project.
- The Project Partnership Agreement (PPA) between the Sponsor and USACE covers construction activities once the project has been authorized by Congress and Construction funding has been appropriated.

In addition to the legal and financial capability to fulfill the cost sharing and local cooperation requirements, the Sponsor also agrees to:

- Provide, without cost to the Federal Government, all lands, easements, rights-of-way, relocations and disposal areas (LERRD) necessary for construction, and OMRR&R of a project, including all necessary access routes and utility relocations. The Sponsor cost share for a project includes eligible LERRD credit and cash contributions.
- Comply with provisions of pertinent Federal laws (e.g., National Environmental Policy Act, Endangered Species Act, Clean Water Act, etc.)
- Once the project is completed, it must be maintained and operated without cost to the Federal Government.

Floodplain Management Services Program

What the US Army Corps of Engineers Can Do

The Floodplain Management Services (FPMS) Program provides the full range of technical services and planning guidance that is needed to support effective floodplain management.

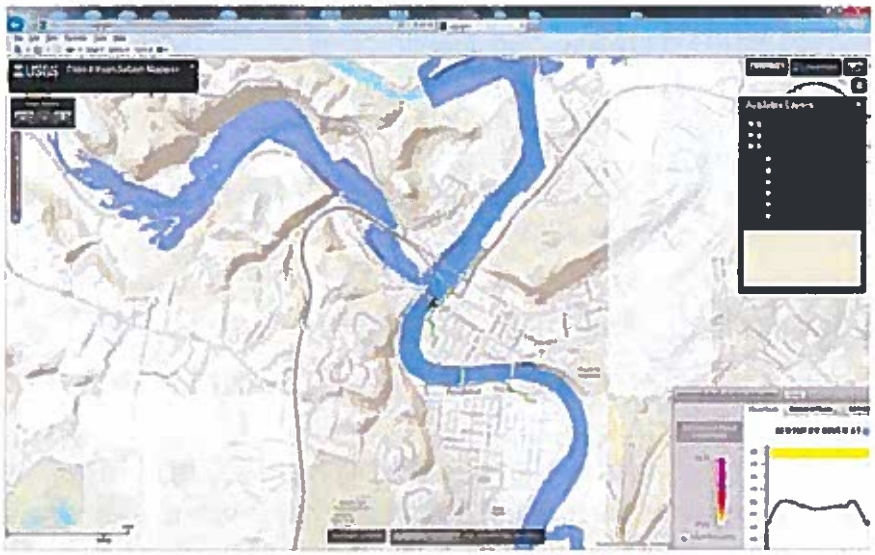
Types of Assistance

General Technical Services:

The Program Develops or interprets site-specific data on flooding issues. It also provides information on natural or cultural floodplain resources before and after the use of floodplain management measures

General Planning Guidance:

On a larger scale, the program provides assistance and guidance 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 are accomplished at 100% Federal cost. However, funding for these studies is very limited and competitive. See the next page for a chart outlining the different floodplain management services we offer. The program also provides guidance and assistance for meeting standards of the National Flood Insurance Program and for conducting workshops and seminars on nonstructural floodplain management



Flood inundation mapping efforts can be undertaken under the Floodplain Management Services Program.

subpart of a state or group of states that has the legal and financial authority and capability to provide the funding and real property requirements needed for a a study and a project.

The Sponsor's role begins before a study is initiated, for example, when a local community, or some element of a community, perceives or experiences a water resources problem that is beyond their ability to solve. A community representative, who may represent the possible sponsoring agency, is invited to meet with their local USACE District staff to discuss avenues of assistance, including a feasibility study and potential recommendation for a Federally authorized water resources project.

Before USACE becomes involved in studying a particular water resources problem, two types of Congressional authority are required: study authority and budget appropriations. A study authority approves the conduct of an investigation to address the identified problems. Once a study authority is available, budget appropriations to allow for the expenditure of Federal funds for the study can be provided by Congress (usually in the annual Energy and Water Development Appropriations Act). In certain cases, USACE can provide technical assistance or planning assistance through other authorities or projects without further Congressional authorization.

In addition to specifically authorized studies, USACE also has numerous programs for which Congress has already provided authorization.

If there is no available study authority, community representatives may contact their Congressional delegation to request a new study authority and may also submit a proposal for Congressional consideration via the Assistant Secretary of the Army's Annual Report to Congress on Future Water Resources Development.

Once an appropriate study authority is available, USACE will follow the normal Federal budgetary process to request Federal funding. Once budget appropriations are available, the study may begin.

What is the Sponsor's Role on the Project Team?

The Sponsor is a study partner and plays many roles during project development. The Sponsor:

- Helps define the water resources problem(s) and opportunities, study scope, tasks, cost estimates and schedules.
- Participates in study decisions, including the type and mix of study objectives, and contributes to the development and evaluation of alternatives and selection of an alternative plan.
- Communicates with the community about study proposals and assists with public communications about a potential project.
- Contributes to project design, including environmental and aesthetic features, and ensures that, to the extent possible, other factors that affect sponsoring communities are addressed during the planning process.

Outline of Steps to Completion of a Civil Works Project:

1. Sponsor Problem Identification
2. Congress Establishes Study Resolution or Authority
3. Congress Appropriates Study Funding
4. Corps/Sponsor Conducts Feasibility Study
5. Administration Review
6. Congressional Authorization of Project
7. Preconstruction, Engineering and Design
8. Congress Appropriates Construction Funding
9. Construction
10. Sponsor Operations, Maintenance, Repair, Replacement, and Rehabilitation (OMRR&R)

What are the Sponsor's Obligations?

A Sponsor must contribute 50 percent of feasibility study costs plus 25-35 percent of Preconstruction, Engineering and Design (PED) costs. The Sponsor and USACE sign three agreements over the course of the project development and construction:

- The Feasibility Cost Sharing Agreement (FCSA) must be signed before the feasibility study can begin. A model FCSA for a $3 million total study cost, signed by the Sponsor and

measures, such as flood proofing and relocation of structures from the floodplain.

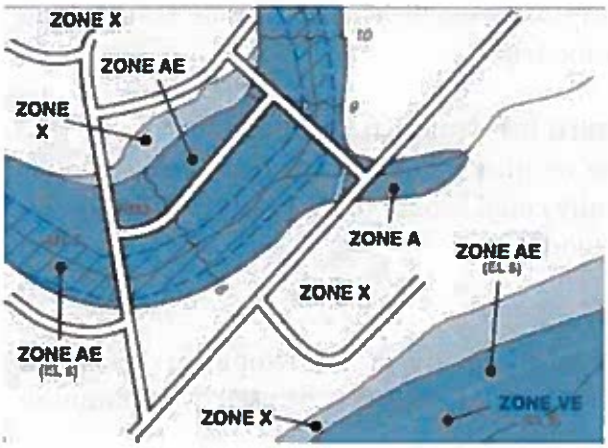
Guides, Pamphlets, and Supporting Studies:

Studies are conducted under the program to improve the methods and procedures for mitigating flood damages. Guides and pamphlets also are prepared on flood proofing techniques, floodplain regulation, floodplain occupancy, natural floodplain resources, and other related aspects of floodplain management

Cost Sharing Information

Program services are provided to state and local governments, other non-Federal public agencies without charge based on available funding. Voluntary contribution of funds by States, Local Governments, and Native American Tribes for the purposes of expanding the scope of services requested under Floodplain Management Services is also allowed.

Program services also are offered to non-water resource Federal agencies and to the private sector on a 100-percent cost recovery basis. For most of these requests, payment is required before services are provided. A schedule of charges is used to recover the cost of services taking up to one day to provide. Letter requests or signed agreements are used to charge for those that take longer.



Existing floodplain maps, including Flood Insurance Rate Maps can be reviewed and analyzed under the Floodplain Management Services Program.

Floodplain Management Services Offered

Flood Damage Mitigation Study
A study of flooding problems within a community with recommendations of measures to alleviate flooding or reduce damages.

Elevation Reference Mark Database
This could include reference elevations for community planning purposes or for use by individuals.

Flood Warning or Preparedness Study
This may include a report or the design of a warning system and emergency evacuation plan based on river stages and rates of rise.

Flood Control Planning Database
A state-wide inventory of all flood control structures and specific information about each.

Stormwater Management Study
Analysis of flooding problems caused by inadequate stormwater drainage and recommend improvements. Dam Failure Analysis Model and prepare maps showing the effects of a dam failure using a 3-dimensional flow model.

Special Flood Hazard Information Report
Delineate the 100-year or other frequency floodplain and/or floodway. A local community could submit this report to FEMA to extend or revise FIS floodplains.

Urbanization Analysis
This could look at the effects of watershed development on flood flows and floodplain boundaries. This may be used by a community to set development policy.

GIS Floodplain Maps
Mapping of floodplains using Geographic Information System.

HEC-1 and HEC-2 Workshops

Conduct Workshops on HEC-1 (hydrologic) and HEC-2 (stream profile) computer models.

Floodplain Delineation/Inundation Maps

Showing areas flooded at various river stages. This could be used for emergency planning or to set floodplain development policies.

Floodproofing Workshops

Conduct workshops on floodproofing methods for existing buildings located in floodplains.

Community Flood Zone Database:

This could contain flood zone information of properties and structures located within designated floodplains.

Community Rating System Support

Assistance in qualifying for and preparing applications for FEMA's Community Rating System. This may include several of the above items as well as design of floodproofing for repetitive loss structures.

Emergency Streambank and Shoreline Stabilization Section 14, 1946 Flood Control Act

What the US Army Corps of Engineers Can Do

The US Army Corps of Engineers is authorized to construct bank protection works to protect vital public facilities that are being threatened by streambank erosion. Some examples of the types of facilities that are eligible for protection are public buildings, roads, sewage treatment plants, municipal water supply systems, non-profit schools and hospitals, bridges, etc. Private property, facilities, or vacant lands are NOT eligible for protection under this authority. In addition the erosion protection must be more cost effective than relocating the facility.

Study Process

Before the Federal Government can participate in implementing a flood risk management project, a planning study must be conducted to determine if the project is economically justified (benefits exceed the costs), technically feasible, and environmentally acceptable.

Pre-Project Condition

Cost Sharing Information

Initial study is 100% federally funded up to $100,000. The remainder of the study phase is cost shared 50% Federal and 50% non-Federal. The sponsor must contribute 35 percent of the total project design and construction cost as cash, in-kind services or Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs). Each project is limited to a Federal Cost of no more than $5 million. The national program limit for these projects is $20 million per year.

Post-Project Condition

Project Sponsor Responsibility

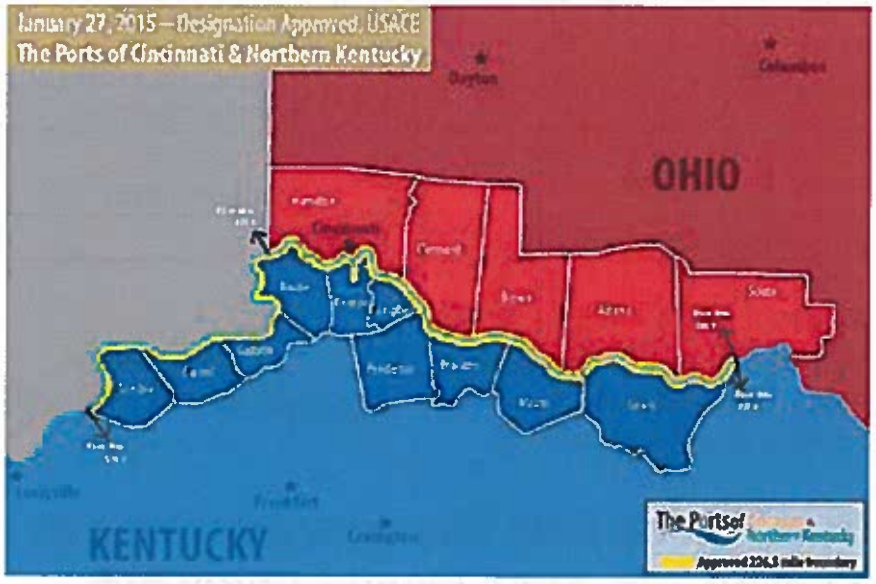
A Feasibility Cost Sharing Agreement (FCSA) must be executed for studies in excess of $100,000. Formal assurance in the form of a Project Partnership Agreement must be executed with the project sponsor. The Corps of Engineers would oversee project construc-

tion; however, once constructed, the operation and maintenance of the project would be the responsibility of the project sponsor.

Planning Assistance to States Section 22, 1974 Flood Control Act

What the US Army Corps of Engineers Can Do

Every year, each State, local government, or other non-Federal entity can provide the Corps of Engineers its request for studies under the program, and the Corps of Engineers then accommodates as many studies as possible within the funding allotment. Typical studies are only planning level of detail; they do not include detailed design for project construction. The studies generally involve 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, and local planning



Planning Assistance to States was used for a statistical boundary redesignation for the Port of Cincinnati to encompass facilities along the Ohio River in Ohio and Kentucky.

decisions. Congress funds the Planning Assistance to States (PAS) Program annually. Federal allotments for each State or Tribe from the nationwide appropriation are limited to $5 million annually, but typically are much less. Individual studies, of which there may be more than one per state each year, generally range in cost from $35,000 to over $100,000.

Study Process

Typical Studies encompass many types of studies dealing with water and related land resources issues. Types of studies conducted in recent years under the program include the following:

Water Supply and Demand Water Quality	Navigation
Environmental Conservation and/or Restoration	Recreational Master Planning
Dam Safety	GIS Development
Flood Risk and/or Floodplain Management	Engineering Analysis
Land Use	Drainage analysys
Master Planning	Erosion and Sedimentation
Brownfield Assessment	

Cost Sharing Information

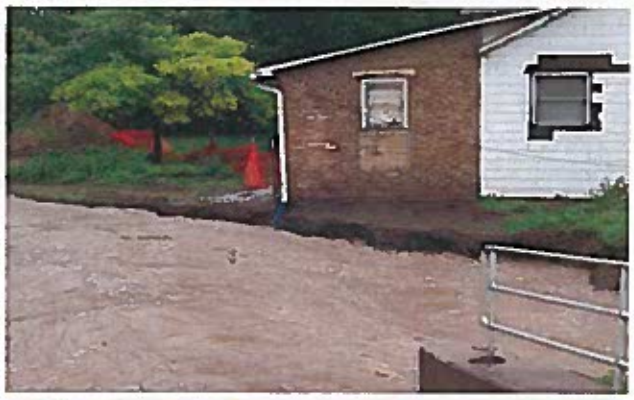
PAS Studies are cost shared on a 50% Federal, 50% non-Federal basis. The non-Federal cost share may be made up of cash, in-kind services, or a mixture of both.

Small Flood Risk Management Projects Section 205, 1948 Flood Control Act

What the U.S. Army Corps of Engineers Can Do

The Small Flood Risk Management Project program provides local flood risk management by the construction or site specific. Typical

flood risk management projects may include levees, floodwalls, impoundments, pumping stations, and channel modifications as well as non-structural measures. Non-structural measures reduce flood damages by changing the use of floodplains or by accommodating existing uses to the flood hazard. Examples include flood proofing, relocation of structures, and flood warning and preparedness systems. The US Army Corps of Engineers oversees planning, design, and construction of flood risk management projects in close coordination with the project sponsor.



The Feather Creek Project in Clinton, Indiana reaped benefits before project completion as seen in the top photograph.

Study Process

Before the Federal Government can participate in implementing a flood risk management project, a planning study must be conducted to determine if the project is economically justified (benefits exceed the costs), technically feasible, and environmentally acceptable.

Cost Sharing Information

Initial study is 100% federally funded up to $100,000. The remainder of the study phase is cost shared 50% Federal and 50% non-Federal. The sponsor must contribute 35 percent (minimum 5 percent cash) of the total project design and construction cost as cash, in-kind services or Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs). Each project is limited to a Federal Cost of no more than $10 million. The national program limit for these projects is $55 million per year.

Project Sponsor Responsibility

A Feasibility Cost Sharing Agreement (FCSA) must be executed for studies in excess of $100,000. Formal assurance in the form of a Project Partnership Agreement must be executed with the project sponsor. The Corps of Engineers would oversee project construction; however, once constructed, the operation and maintenance of the project would be the responsibility of the project sponsor.

Aquatic Ecosystem Restoration Section 206, 1996 Water Resources Development Act

What the US Army Corps of Engineers Can Do

Section 206 of the 1996 Water Resources Development Act allows the US Army Corps of Engineers to carry out aquatic ecosystem restoration and protection projects. Projects typically involve environmental restoration of aquatic and floodplain areas including creation/restoration of wetlands and riparian areas, as well as small dam removal. Other types of projects include providing water management, planting of hardwood trees or native grasses, and other types of restoration to improve and enrich aquatic habitat. Limited recreational features can also be included in the project, provided they are compatible with the ecosystems outputs of the project.

Pre-Project Condition

Post-Project Condition

Study Process

Before the Federal Government can participate in implementing Section 206 project, a planning study must be conducted to determine if the project is economically justified (benefits exceed the costs), technically feasible, and environmentally acceptable.

Cost Sharing Information

Initial study is 100% federally funded up to $100,000. The remainder of the study phase is cost shared 50% Federal and 50% non-Federal. The design and implementation of the project are cost shared on a 65% federal, 35% non-Federal basis. The non-Federal portion may be made up of a mixture of cash, in-kind contri-

butions, and Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs). Each project is limited to a Federal Cost of no more than $10 million, and the national program limit for these projects is $40 million per year.

Project Sponsor Responsibility

The local sponsor is responsible for provision of the LERRDs necessary for the project. A Feasibility Cost Sharing Agreement (FCSA) must be executed for studies in excess of $100,000. Formal assurance in the form of a Project Partnership Agreement must be executed with the project sponsor. The Corps of Engineers would oversee project construction; however, once constructed, the operation and maintenance of the project would be the responsibility of the project sponsor.

Project Modification for Improvements to the Environment Section 1135, 1986 Water Resources Development Act

What the US Army Corps of Engineers Can Do

This authority provides for the review and modification of structures and operations of water resources projects constructed by the Corps for the purpose of improving the quality of the environment when it is determined that such modifications are feasible, consistent with the authorized project purposes, and will improve the quality of the environment in the public interest. In addition, if it is determined that a Corps water resources project has contributed to the degradation of the quality of the environment, restoration measures may be implemented at the project site or at other locations that have been affected by the construction or operation of the project, if such measures do not conflict with the authorized project purposes.

Study Process

Before the Federal Government can participate in implementing Section 1135 project, a planning study must be conducted to de-

termine if the project is economically justified (benefits exceed the costs), technically feasible, and environmentally acceptable.

Cost Sharing Information

Initial study is 100% federally funded up to $100,000. The remainder of the study phase is cost shared 50% Federal and 50% non-Federal. The design and implementation of the project are cost shared on a 75% federal, 25% non-Federal basis. The non-Federal portion may be made up of a mixture of cash, in-kind contributions, and Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs). Each project is limited to a Federal Cost of no more than $10,000,000, and the national program limit for these projects is $25,000,000 per year.

Project Sponsor Responsibility

The local sponsor is responsible for provision of the LERRDs necessary for the project. A Feasibility Cost Sharing Agreement (FCSA) must be executed for studies in excess of $100,000. Formal assurance in the form of a Project Partnership Agreement must be executed with the project sponsor. The Corps of Engineers would oversee project construction; however, once constructed, the operation and maintenance of the project would be the responsibility of the project sponsor.

Civil Works Authorities at a

Authority	Description
Section 14	Emergency Streambank Stabilization
Section 107	Navigation
Section 205	Flood Risk Management
Section 208	Flood Snagging/Clearing
Section 206	Aquatic Ecosystem Restoration
Section 1135	Ecosystem Restoration

Unless otherwise noted, cost sharing is 65% federal, 35% non-federal.

- Section 14 – Emergency erosion protection for public facilities and utilities (roads, bridges, sewers, schools, etc.)
- Section 107 – Small navigation projects (boat harbors, etc.). Cost sharing varies.
- Section 205 – Small flood risk management projects (levees, floodwalls, channel widening, etc.)
- Section 208 – Clearing and snagging for flood risk management (logjam removal)
- Section 206 – Aquatic environmental restoration (wetland creation, stream restoration, etc.)
- Section 1135 – Modifications of Corps projects for ecosystem restoration purposes. 75/25 cost share.

Glance:

Per Project Cost Limit ($M)	Per Program Cost Limit ($M)
5	20
10	50
10	55
0.5	7.5
10	40
10	25

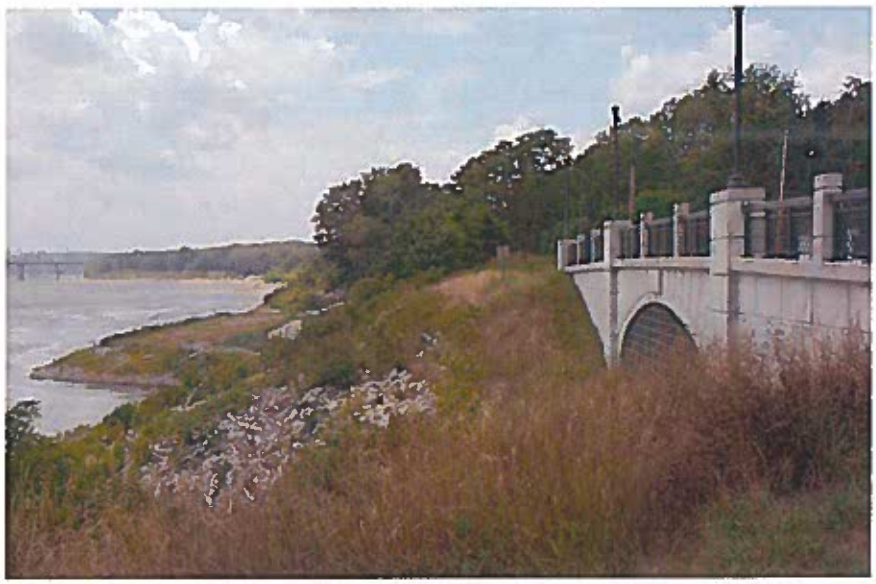
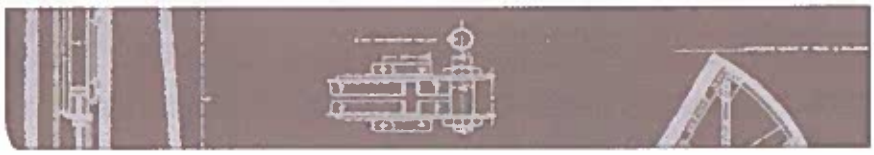
Partnering agency members discuss Aquatic Ecosystem Restoration in the Green River area.

Requesting Assistance and Information

An investigation of a prospective project under any of the civil works authorities can be initiated upon receipt of a request from a sponsoring agency empowered under State law to provide local partnership.

For additional information:

Brandon R. Brummett, P.E., PMP
US Army Corps of Engineers Louisville District
Outreach Coordinator
502-315-6883
brandon.r.brummett@usace.army.mil



This streambank protection project along the Ohio River at Mill Creek is an example of Emergency Streambank stabilization under Section 14.