US Army Corps of Engineers®
Rock Island District

Civil Works Policy Guidebook

BUILDING STRONG®

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Introduction

The U.S. Army Corps of Engineers is the Nation's primary water resources development agency. Congress assigned the Corps of Engineers this civil works responsibility.

The Corps of Engineers' 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 recreation 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 industry, and regulates development along navigable waters.

The Corps of Engineers is responsible for the Inland Waterway Navigation System, which includes the locks and dams on the Mississippi River and Illinois Waterway. We are also involved with river habitat, managing the Upper Mississippi River System - Environmental Management Program, which focuses on habitat rehabilitation and enhancement projects, such as island creation and wetland enhancement, as well as long-term resource monitoring. We have also worked with many communities to plan, design and construct flood risk management projects.

The primary mission areas of the Corps of Engineers are:

- Commercial Navigation
- Flood Risk Managment
- Ecosystem Restoration
- Emergency Response
- Clean Water Act Compliance Regulation
- Recreation
- Federal Real Estate Management
- Regulatory

The following provides information on the services that the Corps of Engineers can provide sponsors and partners.

If your community, local or state government, or non-government organization is seeking a partner to assist with a water and related land resources study or project, call our office or send a letter to the address below. A sample letter is provided for reference.

District Engineer
U.S. Army Engineer District, Rock Island
ATTN: Planning, Programs and Project Management Division
Clock Tower Building - P.O. Box 2004
Rock Island, Illinois 61204-2004
(309) 794-5341 • customeroutreach@usace.army.mil

Sample Letter

for General Request for Assistance

(Date)

District Engineer
U.S. Army Engineer District, Rock Island
ATTN: Planning, Programs and Project Management Division
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Sir or Madam:

This letter is to request assistance from the U.S. Army Corps of Engineers to address (briefly describe the problem or need, including, if appropriate, the name of the body of water or waterway, and City, and/or County, and State).

Please contact (name, title, phone number, email address) to arrange a further discussion of this inquiry.

Sincerely,

Signature and Title

Ecosystem Restoration

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Ecosystem Restoration

Ecosystem restoration activities examine the condition of existing ecosystems and determine the feasibility of restoring degraded ecosystem structure, function, and dynamic processes to a less degraded, natural condition. The Corps of Engineers' ecosystem restoration program seeks to provide a comprehensive approach for addressing the problems associated with disturbed and degraded ecological resources.

Corps of Engineers activities in ecosystem restoration concentrate on engineering solutions to water and related land resource problems. The principal focus is on those ecological resources and processes that are directly associated with the hydrology of the ecosystem and watershed.

What the Corps of Engineers Can Do:

The Corps of Engineers has been authorized by Congress to perform ecosystem restoration in conjunction with water resource and related land resource issues. These services can be performed by seeking specific project authority or through the Continuing Authorities Program, aimed at smaller projects. Each of the programs requires a study (decision) process and a cost-share sponsor prior to a study or before implementation of a project.

Specific Project: This approach is applied to larger projects that require specific authorization and appropriation of funds from the Congress. Typical projects include investigation and restoration of watersheds and river basins. Currently, the Rock Island District is working on the Illinois River Basin Restoration, Peoria Riverfront Development, and the Upper Mississippi River System - Environmental Management Program.

Study Process (Specifically Authorized Studies and Projects):

Before the Federal Government can participate in implementing a project, planning studies must be conducted to determine if the project is feasible. Planning studies are typically conducted in two phases — reconnaissance and feasibility. A description of these phases is as follows:

Reconnaissance Phase:

The reconnaissance phase is fully funded by the Federal Government (limited to $100,000) and is usually completed in less than 12 months. The purposes of the reconnaissance phase are to:

1. Define the problems and opportunities, and to identify potential solutions;
2. Determine whether or not planning should proceed into the feasibility phase based on a preliminary assessment of the Federal interest, and environmental impacts of the identified alternatives;
3. Estimate the cost of the feasibility phase; and,
4. Determine if there is a sponsor that will cost-share the project and the feasibility phase.

The reconnaissance phase is completed upon the signing of a Feasibility Cost Sharing Agreement (FCSA) by the Corps of Engineers and the sponsor. The feasibility study cannot be initiated until the FCSA is signed.

Feasibility Phase:

The feasibility phase optimizes the plan or plans to be built, and can take up to 3 years to complete if adequate funding is received in a timely manner. The feasibility phase is cost shared equally between the Corps of Engineers and the non-Federal sponsor. The non-Federal share of feasibility phase costs may be a combination of cash and in-kind products or services.

The feasibility report results in a recommendation to Congress for or against Federal participation in solutions to the water resources problems and opportunities identified in the study. There is national policy on how the Corps of Engineers determines when the Federal involvement is merited. A recommendation for Federal participation precedes a recommendation for construction authorization.

The recommendation for implementation is forwarded to Congress to ultimately decide if the project will be authorized. A project must be authorized by Congress for it to be implemented.

Project Implementation and Local Partnership:

Following authorization for construction of a project, the sponsor enters into a Project Partnership Agreement to define the responsibilities of each party. The sponsor must normally agree to the following:

1. Provide without cost to the United States all lands, easements, rights-of-way, relocations and disposal areas (LERRDs) necessary for the construction and subsequent maintenance of the project;
2. Provide without cost to the United States all necessary alterations of buildings, utilities, highways, bridges, sewers, and related and special facilities;
3. Hold and save the United States free from damages due to the construction and subsequent maintenance of the project, except damages due to the fault or negligence of the United States or its contractors;
4. Maintain and operate the project after completion without cost to the United States;
5. Prevent future encroachment, which might interfere with proper functioning of the project;
6. Assume responsibility for all costs in excess of applicable Federal cost limitations;
7. If the value of the sponsor's contribution above does not equal or exceed 35 percent of the project cost, provide a cash contribution to make the sponsor's total contribution equal to 35 percent.

How to Request Assistance:

General Investigation Study requests should be directed to:

Hank DeHaan
office: (309) 794-5853
Henry.C.DeHaan@usace.army.mil

Continuing Authorities Program

Ecosystem Restoration

This program allows the Corps of Engineers to plan, design, and construct smaller projects under existing program authorities in place from Congress. The potential cost-share sponsor must request the Corps of Engineers to investigate potential water or land related resource issues that might fit the program. Once the Corps of Engineers determines that the project fits the program, the District can request funds to initiate a planning process to determine Federal interest in proceeding with the project. The planning process is done in two phases – reconnaissance and feasibility. There are three ecosystem restoration authorities within this program:

- Section 1135 - Project Modifications for Improvements to the Environment
  (Authorized by Section 1135 of the Water Resources Development Act of 1986, as amended)
- Section 204 - Beneficial Use of Dredged Materials
  (Authorized by Section 204 of the Water Resources Development Act of 1992)
- Section 206 - Aquatic Ecosystem Restoration
  (Authorized by Section 206 of the Water Resources Development Act of 1996)

Sample Request Letter

for Ecosystem Restoration Services

(Date)

District Engineer
U.S. Army Engineer District, Rock Island
ATTN: Planning, Programs and Project Management Division
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Sir or Madam:

This letter is to request assistance from the U.S. Army Corps of Engineers to address an ecosystem problem at (location: the name of the body of water or waterway, and City, and/or County, and State). (Provide a description of the problem including the proposed study area and habitat type.)

The (sponsor) hereby expresses our willingness to serve as the non-Federal sponsor. We would like further information on the process, funding, and level of effort required. Please contact (person) at (phone) to discuss this inquiry.

Sincerely,

Signature and Title

Section 1135
Project Modification for Improvements to the Environment

Section 1135 of the Water Resources Development Act of 1986, as amended

What the Corps of Engineers Can Do:

The Corps of Engineers can assist in the restoration of degraded ecosystems through the modification of Corps of Engineers' structures, operations, or implementation of measures in affected areas.

Charges for Assistance:

The initial study is 100% federally funded up to $100,000. All planning costs after the first $100,000 are cost shared 50/50. All design and construction costs are cost shared 75% Federal and 25% non-Federal. The Federal cost limit is $5,000,000. The non-Federal sponsor cost share can be a contribution of cash, Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs), or work-in-kind. Work-in-kind may be provided subsequent to the execution of a Project Partnership Agreement (PPA), and the value may not exceed 80% of the non-Federal share.

Responsibility of Project Sponsor:

Formal assurance in the form of a Project Cooperation Agreement must be executed with the project sponsor. In addition, the project sponsor must normally agree to the following:

- Provide without cost to the United States all Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs) necessary for the construction and subsequent maintenance of the project.
- Maintain and operate the project after completion without cost to the United States.
- Assume responsibility for all costs in excess of the Federal cost limitation of $5,000,000.
- If the value of the sponsor's land contribution above does not equal or exceed 25 percent of the project cost, provide cash or work-in-kind contributions to make the sponsor's total contribution equal to 25 percent.

How to Request Assistance:

An ecosystem restoration project under Section 1135 can be initiated upon receipt of a request from a prospective project sponsor.

Section 1135 project requests should be directed to:

Hank DeHaan
office: (309) 794-5853
Henry.C.DeHaan@usace.army.mil

Authority and Scope:
Section 1135 of the Water Resources Development Act of 1986, as amended, provides authority for the Corps of Engineers to determine the need for project modifications in the structures and operations of Corps of Engineers projects for improving the environment in the public interest. Measures at other locations that have been affected by the construction or operation of the project can be undertaken, if such measures do not conflict with the authorized project purposes.

Section 204 Beneficial Use of Dredged Materials

Section 204 of the Water Resources Development Act of 1992

What the Corps of Engineers Can Do:

The Corps of Engineers can create aquatic and wetland habitats in connection with construction or maintenance dredging of an authorized Federal navigation project. In the Rock Island District this authority applies only to the Mississippi River and Illinois Waterway.

Charges for Assistance:

All project planning costs are 100% federally funded. Design and construction costs are cost shared 65% Federal and 35% non-Federal. The Federal cost limit is $5,000,000.

The non-Federal sponsor cost share can be a contribution of cash or Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs). No work-in-kind is allowed. Only the increased cost above the cost of the planned dredge disposal that would have been implemented without ecosystem restoration (referred to as the base plan) is cost shared. The sponsor pays 35% of the project costs above the base plan in a Section 204 project.

Responsibility of Project Sponsor:

Formal assurance in the form of a Project Partnership Agreement must be executed with the project sponsor. The project sponsor must normally agree to the following:

- Provide without cost to the United States all Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs) necessary for the construction and subsequent maintenance of the project.
- Maintain and operate the project after completion without cost to the United States.
- Assume responsibility for all costs in excess of the Federal cost limitation of $5,000,000.
- If the value of the sponsor's land contribution above does not equal or exceed 35 percent of the project cost, provide cash or work-in-kind contributions to make the sponsor's total contribution equal to 35 percent.

Authority and Scope:
Section 204 of the Water Resources Development Act of 1992, as amended, provides authority for the Corps of Engineers to restore, protect, and create aquatic and wetland habitats in connection with construction or maintenance dredging of an authorized Federal navigation project.

How to Request Assistance:

An ecosystem restoration project under Section 204 can be initiated upon receipt of a request from a prospective project sponsor.

Section 204 project requests should be directed to:

Hank DeHaan
office: (309) 794-5853
Henry.C.DeHaan@usace.army.mil

Section 206
Aquatic Ecosystem Restoration

Section 206 of the Water Resources Development Act of 1996

What the Corps of Engineers Can Do:

The Corps of Engineers can carry out aquatic ecosystem restoration and protection projects. Such projects generally include manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. A project is adopted for construction only after a detailed investigation determines that the project will improve the quality of the environment and is in the best interest of the public.

Charges for Assistance:

The initial study is 100% federally funded up to $100,000. All planning costs after the first $100,000 are cost shared 50/50. All design and construction costs are cost shared 65% Federal and 35% non-Federal. The Federal cost limit is $5,000,000. The non-Federal sponsor cost share can be a contribution of cash, Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs) or work-in-kind. Work-in-kind may be provided subsequent to the execution of a Project Partnership Agreement (PPA).

Responsibility of Project Sponsor:

Formal assurance in the form of a Project Partnership Agreement must be executed with the project sponsor. The project sponsor normally agrees to the following:

- Provide without cost to the United States all LERRDs necessary for the construction and subsequent maintenance of the project
- Maintain and operate the project after completion without cost to the United States
- Assume responsibility for all costs in excess of the Federal cost limitation of $5,000,000
- If the value of the sponsor's land contribution above does not equal or exceed 35 percent of the project cost, provide cash or work-in-kind contributions to make the sponsor's total contribution equal to 35 percent

Authority and Scope:

Section 206 of the Water Resources Development Act of 1996, as amended, provides authority for the Secretary of the Army to carry out an aquatic ecosystem restoration and protection project. Such projects will usually include manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. A project is adopted for construction only after a detailed investigation determines that the project will improve the quality of the environment and is in the best interest of the public, and clearly shows the engineering feasibility and environmentally justification of the improvement. Each project is limited to a Federal cost share of not more than $5 million. The Federal limitation includes all project-related costs for feasibility studies, planning, engineering, construction, and supervision and administration.

How to Request Assistance:

An ecosystem restoration project under Section 206 can be initiated upon receipt of a request from a prospective project sponsor.

Section 206 project requests should be directed to:

Hank DeHaan
office: (309) 794-5853
Henry.C.DeHaan@usace.army.mil

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Flood Risk Management

Federal involvement in flood risk management began in the early nineteenth century in the Mississippi River Basin when interrelationships between navigation and flood risk management became apparent. As the Nation developed, disastrous floods endangered life and property, as well as transportation. In the Flood Control Act of 1936, Congress extended Federal interest in flood risk management to the entire Nation.

Although efforts of Federal, state, tribal and local interests to reduce flood risk have been substantial, flooding still accounts for 90 percent of all natural disaster damage. Flooding forces several hundred thousand people to be evacuated from homes and work places every year. The purpose of flood risk management is to help prevent or reduce flood risk by using either structural or non-structural means or a combination of the two.

Structural Measures: Structural measures are physical modifications designed to reduce the frequency of damaging levels of flood inundation. Structural flood risk management measures include dams and reservoirs, channel modifications, levees or floodwalls.

Non-Structural Measures: Non-structural measures reduce flood damages without significantly altering the nature or extent of the flooding by changing the use of floodplains or by accommodating existing uses to the flood hazard. Non-structural measures include modifying homes, businesses, and other facilities to reduce flood damages by elevating the structure or removing them from the floodplain. Remaining land can be used for ecosystem restoration, outdoor recreation, or natural open space. Flood warning systems are also considered non-structural measures.

What the Corps of Engineers Can Do:

The Corps of Engineers has been authorized by Congress to perform flood risk management. These services can be performed under two different types of authorities: (1) specifically authorized flood risk management projects, and (2) the Continuing Authorities Program. Each of the authorities requires a study process and a cost share sponsor before implementation of a project.

Specifically Authorized Flood Risk Management Projects: With specific congressional authorization, the Corps of Engineers can evaluate flood problems, potential solutions, and recommend to Congress whether or not a project should be authorized. This approach is used for larger projects. Typical project features include dams, channel modifications, levees, and other flood control structures.

Study Process, Project Implementation, and Local Partnership:

NOTE: This process only applies to specifically authorized Flood Risk Management Projects and Section 205 Small Flood Risk Management Projects.

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 feasible (benefits exceed the costs), and environmentally acceptable. Planning studies are typically conducted in two phases — reconnaissance and feasibility.

Reconnaissance Phase:

The reconnaissance phase is fully funded by the Federal Government (limited to $100,000) and is usually completed in less than 12 months. The purposes of the reconnaissance phase are to:

- Define the problems and opportunities, and to identify potential solutions;
- Determine whether or not planning should proceed into the feasibility phase based on a preliminary assessment of the Federal interest (costs versus benefits) and environmental impacts of the identified alternatives;
- Estimate the cost of the feasibility phase;

- Assess support of the sponsor for continuing into the feasibility study, and potential implementation of a project.

The reconnaissance phase (for a project indicating Federal interest and a willing sponsor) is completed upon the signing of a Feasibility Cost Sharing Agreement (FCSA) by the Corps of Engineers and the project sponsor. The feasibility study cannot be initiated until the FCSA is signed.

Feasibility Phase:

The feasibility phase evaluates the problem and potential solutions in detail. It typically takes 18 months to three years to complete. The feasibility phase is cost shared equally between the Corps of Engineers and the non-Federal sponsor. The non-Federal share of feasibility phase costs may be a combination of cash and in-kind products or services.

The feasibility report results in a recommendation for or against Federal participation in solutions to the water resource problems and opportunities identified in the study. A recommendation for Federal participation may be made if the feasibility phase finds that the project is economically justified (benefits exceed the costs), technically feasible, and environmentally acceptable. A project recommended for implementation can be submitted to Congress for authorization. Certain small flood risk management projects do not require a specific project authorization, and can be constructed under the Continuing Authorities Program.

Project Implementation and Project Partnership:

Before implementation of a project, the sponsor is required to enter into a Project Partnership Agreement to define the responsibilities of each party. The sponsor must normally agree to the following:

- Provide without cost to the United States all lands, easements, rights-of-way, and disposal areas (LERRDs) necessary for the construction and subsequent operation and maintenance of the project;
- Provide without cost to the United States all necessary alterations of buildings, utilities, highways, bridges, sewers, and related and special facilities;
- Hold and save the United States free from damages due to the construction and subsequent maintenance of the project, except damages due to the fault or negligence of the United States or its contractors;
- Operate and maintain operate the project after completion without cost to the United States;
- Prevent future encroachment, which might interfere with proper functioning of the project for flood control;
- Assume responsibility for all costs in excess of applicable Federal cost limitations;
- Provide guidance and leadership in preventing unwise future development of the floodplain by use of appropriate floodplain management techniques to reduce flood losses;
- Provide a minimum cash contribution of 5% of the project cost; and
- If the value of the sponsor's contribution above does not equal or exceed 35 percent of the project cost, provide a cash contribution to make the sponsor's total contribution equal to 35 percent.

Charges for Assistance:

The reconnaissance phase is 100% federally funded up to $100,000. The feasibility phase is cost shared 50/50 with the sponsor and 25% of it can be provided through in-kind services. Design and construction are cost shared at 65% Federal and 35% non-Federal.

How to Request Assistance:

Requests to initiate flood risk management studies or questions related to flood risk management projects should be directed to:

Thomas Heinold
office: (309) 794-5203
thomas.d.heinold@usace.army.mil

Continuing Authorities Program

Flood Risk Management

This program allows the Corps of Engineers to plan, design, and construct smaller projects without specific authorization from Congress. The potential sponsor must request the Corps of Engineers to investigate potential flood risk management issues that might fit the program. Once the Corps of Engineers determines that the project fits the program, the District will request funds to initiate a reconnaissance effort to determine potential Federal interest in proceeding to a feasibility study. There are three authorities available for this program:

- Section 14 - Emergency Streambank and Shoreline Protection.
  Authorized by Section 14 of the Flood Control Act of 1946, as amended.
- Section 205 - Small Flood Risk Management Projects.
  Authorized by Section 205 of the Flood Control Act of 1948, as amended.
- Section 208 - Clearing and Snagging of Waterways.
  Authorized by Section 208 of the Flood Control Act of 1954, as amended.

Sample Request Letter

for Flood Risk Management Services

(Date)

District Engineer
U.S. Army Engineer District, Rock Island
ATTN: Planning, Programs and Project Management Division
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Sir or Madam:

This letter is to request assistance from the U.S. Army Corps of Engineers to address a water resource and/or emergency streambank protection problem at (location: the name of the body of water or waterway, and City, and/or County, and State). (Provide a description of the problem including, as appropriate, the proposed study area, erosion site, public infrastructure being threatened, etc.)

The (sponsor) hereby expresses our willingness to serve as the non-Federal sponsor. We would like further information on the process, funding, and level of effort required. Please contact (person) at (phone and/or email) to discuss this inquiry.

Sincerely,

Signature and Title

Section 14
Emergency Streambank and Shoreline Protection

Section 14 of the Flood Control Act of 1946, as amended

What the Corps of Engineers Can Do:

The Corps of Engineers is authorized to construct bank protection works to protect endangered highways, highway bridge approaches, and other essential, important public works, such as municipal water supply systems and sewage disposal plants, churches, hospitals, schools, and non-profit public services and known cultural sites that are endangered by flood-caused bank or shoreline erosion. Privately owned property and facilities are not eligible for protection under this authority.

Study Process:

The first $100,000 of the Planning Design Analysis (PDA) phase (normally limited to 12 months) is a Federal expense. All PDA costs after the first $100,000 are cost shared 50/50. All construction costs are cost shared 65% Federal and 35% non-Federal. Each project is limited to a total Federal cost of $1.5 million.

Responsibility of Project Sponsor:

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. The sponsor must contribute 35 percent of the total project implementation cost as cash or Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs). If the value of the LERRDs plus the cash contribution does not equal or exceed 35 percent of the project cost, the sponsor must pay the additional amount necessary so that the sponsor's total contribution equals 35 percent of the project cost.

How to Request Assistance:

An investigation of a prospective emergency streambank or shoreline protection project under Section 14 can be initiated upon receipt of a request from a sponsoring agency empowered under State law to provide local partnership.

Project requests should be directed to:

Thomas Heinold
office: (309) 794-5203
thomas.d.heinold@usace.army.mil

Authority and Scope:
Section 14 of the Flood Control Act of 1946 provides a continuing authority for the Corps of Engineers to develop and construct emergency streambank and shoreline protection projects to prevent erosion damages to endangered highways, highway bridge approaches, public works facilities such as water and sewer lines, churches, public and private non-profit schools and hospitals, and other non-profit public facilities, without the need for specific congressional authorization. A project is recommended for implementation only after a study clearly shows the engineering feasibility and economic justification of the improvement.

Section 205 - Small Flood Risk Management Projects

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

What the Corps of Engineers Can Do:

The Small Flood Risk Management Project program provides local flood risk management by the construction or improvement of flood control works or non-structural measures. The types of studies and/or projects are tailored to be 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 Corps of Engineers oversees planning, design, and construction of flood risk management projects in close coordination with the project sponsor.

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. Planning studies are typically conducted in two phases - reconnaissance and feasibility.

Charges for Assistance:

Initial study is 100% federally funded up to $100,000. The remainder of the project is cost shared 65% Federal and 35% non-Federal. The sponsor must contribute 35 percent (minimum 5 percent cash) of the total project implementation cost as cash or Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs). If the value of the LERRDs plus the cash contribution does not equal or exceed 35 percent of the project cost, the sponsor must pay the additional amount necessary so that the sponsor's total contribution equals 35 percent of the project cost.

Responsibility of Project Sponsor:

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.

Authority and Scope:
Section 205 of the Flood Control Act of 1948, as amended, provides a continuing authority for the Corps of Engineers to develop and construct small flood control projects without the need of specific congressional authorization. A project is recommended for implementation only after a feasibility study clearly shows the engineering feasibility and economic justification of the improvement. Each project is limited to a Federal cost share of not more than $7 million. This Federal limitation includes all project-related costs for feasibility studies, planning, design, construction, and supervision and administration.

How to Request Assistance:

An investigation of a prospective small project under Section 205 can be initiated upon receipt of a request from a sponsoring agency empowered under State law to provide local partnership.

Project requests should be directed to:

Thomas Heinold
office: (309) 794-5203
thomas.d.heinold@usace.army.mil

Section 208 - Clearing and Snagging of Waterways

Section 208 of the Flood Control Act of 1954, as amended

What the Corps of Engineers Can Do:

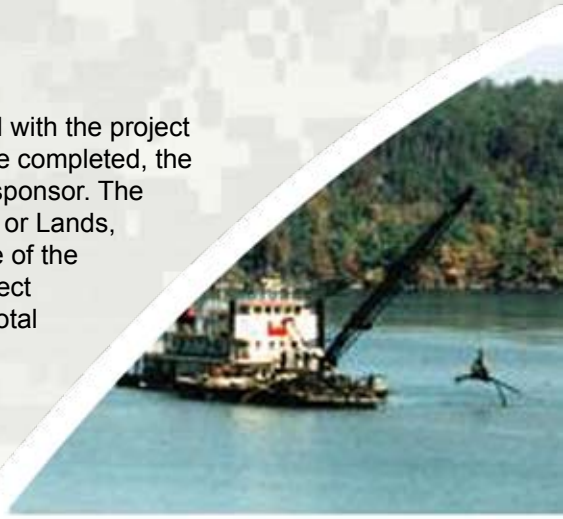
In the interest of flood control, the Corps of Engineers can conduct clearing, snagging, or channel excavation. Limited embankment construction can be provided by utilizing the materials from the cleaning operation.

Study Process:

Planning and design activities are combined into a Planning and Design Analysis (PDA) phase, which is normally limited to 12 months. The first $40,000 of PDA costs is at Federal expense and all costs over $40,000 require a 35 percent local cost share. Each project is limited to a total Federal cost of $500,000. This Federal limitation includes all project-related costs for planning, engineering, construction, and supervision and administration.

Responsibility of Project Sponsor:

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 completed, the operation and maintenance of the project would be the responsibility of the project sponsor. The sponsor must contribute 35 percent of the total project implementation cost as cash or Lands, Easements, Rights-of-way, Relocations, and Disposal areas (LERRDs). If the value of the LERRDs plus the cash contribution does not equal or exceed 35 percent of the project cost, the sponsor must pay the additional amount necessary so that the sponsor's total contribution equals 35 percent of the project cost.



How to Request Assistance:

An investigation of a prospective clearing and snagging project under Section 208 can be initiated upon receipt of a request from a sponsoring agency empowered under State law to provide local partnership.

Project requests should be directed to:

Thomas Heinold
office: (309) 794-5203
thomas.d.heinold@usace.army.mil

Authority and Scope:
Section 208 of the Flood Control Act of 1954 (Public Law 83-780) provides a continuing authority for the Corps of Engineers to study, develop, and construct in-stream clearing and snagging projects in the interest of flood risk management without the need for specific congressional authorization. Work under this authority is limited to clearing and snagging or channel excavation and improvement with limited embankment construction. If investigation indicates that placement of revetment or protection is needed to provide a complete and fully effective project, the sponsor is responsible for the costs of such revetment or protection.

Planning Assistane to States and Tribes

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Planning Assistance to States and Tribes

Section 22 of the Water Resources Development Act of 1974

What the Corps of Engineers Can Do:

The needed planning assistance is determined by the individual State or Native American Tribe. Every year, each State, Native American Tribe, 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 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.

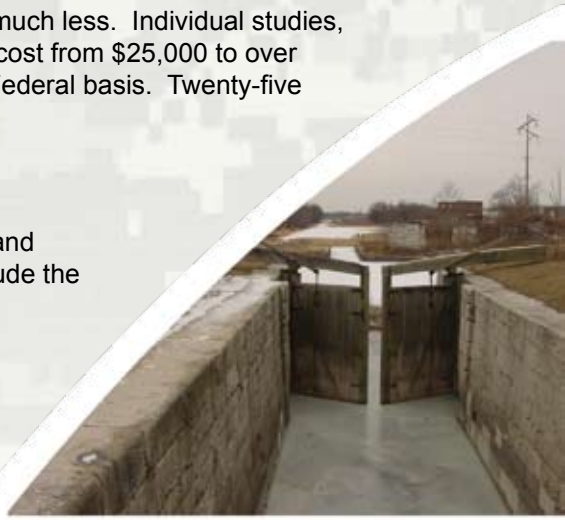
Funding:

Congress funds the Planning Assistance to States (PAS) Program annually. Federal allotments for each State or Tribe from the nationwide appropriation are limited to $500,000 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 over $100,000. These studies are cost shared on a 50 percent Federal, 50 percent non-Federal basis. Twenty-five percent of the non-Federal cost share can be provided as work-in-kind.

Typical Studies:

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

- Water Supply and Demand Studies
- Water Quality Studies
- Environmental Conservation Studies
- Environmental Restoration Studies
- Wetland Evaluation Studies
- Dam Safety/Failure Studies
- Flood Risk Management Studies
- Floodplain Management Studies
- Land Use Studies
- Master Planning
- Brownfields Environmental Assessments
- GIS Development



Authority and Scope:
Section 22 of the Water Resources Development Act (WDRA) of 1974, as amended, provides authority for the Corps of Engineers to assist the states, local governments, and other non-Federal entities in the preparation of comprehensive plans for the development,utilization, and conservation of water and related land resources. Section 208 of WRDA of 1992 amended the WRDA of 1974 to include Native American Tribes.

How to Request Assistance:

Contact the Rock Island District's
Planning Assistance to States Coordinator:

Jerry Skalak
office: (309) 794-5605
Jerry.A.Skalak@usace.army.mil

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Floodplain Management Services

What the 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 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.

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.

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

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

Authority and Scope:
The program's authority is provided by Section206 of the Flood Control Act of 1960, as amended. Its objective is to foster public understanding of options for dealing with flood hazards and to promote prudent use and management of the Nation's floodplains.

Land use adjustments based on proper planning and the employment of techniques for reducing flood damages provide a rational way to balance the advantages and disadvantages of human settlement on floodplains. These adjustments are the key to sound floodplain management.

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 flood-plain resources, and other related aspects of floodplain management.

Charges for Assistance:

Upon request, program services are provided to state, regional, and local governments, Native American Tribes, and other non-Federal public agencies without charge, based on available funding.

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.

All requesters are encouraged to furnish available field survey data, maps, historical flood information, and the like to help reduce the cost of services.

In addition, Section 202 of the WRDA of 1999 authorized the voluntary contribution of funds by States, local governments, and Native American Tribes for the purpose of expanding the scope of services requested under Floodplain Management Services by these entities.

How to Request Assistance:

Agencies, governments, organizations, and individuals interested in flood-related information or assistance should contact the Rock Island District's Floodplain Management Services Program Coordinator:

Jerry Skalak
(309) 794-5605
Jerry.A.Skalak@usace.army.mil


Emergency

Emergency Readiness and Response

Public Law 84-99

Preparedness Assistance:

Preparedness planning activities allow the Corps of Engineers to take the necessary steps to maintain a knowledgeable and experienced work force that is available for responding to natural and man-made disasters. These planning activities include writing plans, developing training, participating in exercises, maintaining adequate response supplies, and execution of an inspection program for flood damage reduction structures in the rehabilitation program. The Corps provides preparedness assistance by:

- Participation in planning workshops and exercises when requested by state or local officials
- Inspection of flood damage reduction structures in the Public Law 84-99 rehabilitation program, and advisement to local officials of needed maintenance.
- Technical assistance for development of plans at the state and local levels.

Response and Recovery Assistance:

The Corps of Engineers is authorized to provide emergency assistance for flood response, under Public Law 84-99. During a flood event, emergency assistance can be requested from the Corps by the State, to supplement state and local efforts. Assistance can be in the form of technical assistance or direct assistance, and will be used to project life and improved property such as critical infrastructure, residential areas, and public facilities.

Advanced measures may be used prior to flooding or flood fighting activities to protect against loss of life or infrastructure.

Technical Assistance:

- Providing technical expertise for guidance on flood fight techniques and emergency construction methods
- Providing technical expertise for inspection of existing flood protection projects or dams to identify problem areas and recommend corrective actions
- Providing hydraulic or hydrologic analysis, geotechnical evaluations, topography and stream data, maps and historic flood or storm information

Authority and Scope:
Public Law 84-99 provides authority for the Corps of Engineers to provide immediate and effective response and recovery assistance during emergencies and disasters.

Direct Assistance:

- Issuance of flood fight supplies and loan of equipment, such as sandbags, polyethylene sheeting, and flood pumps.
- Directing flood fighting operations.
- Contingency contracting.

All flood fight equipment and supplies are to be returned in the condition it was lent, replaced in-kind, or reimbursement made to the Corps.

Following a flood event a levee sponsor can request recovery assistance for a project that is currently eligible in the Corps' rehabilitation program. Damage must exceed items of normal project maintenance and must have a repair cost of more than $15,000. This assistance can be requested by formal letter to the Rock Island District.

How to Request Information:

Contact the Rock Island District's Emergency Management Division:

Rodney Delp
office: (309) 794-5325 or (309) 794-5230
Rodney.L.Delp@usace.army.mil

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Additional Areas of Work

In addition to our primary civil works missions, the Corps of Engineers has been involved in improving recreation and controlling beach erosion. Along with these missions, the Corps of Engineers generates hydropower, supplies water to cities and industry, regulates development in navigable waters, and manages a recreation program.

Regulatory

The Corps of Engineers has been involved in regulating activities by others in navigable waterways through the granting of permits since passage of the River and Harbor Act of 1899. At first, this program was meant to prevent obstructions to navigation, although an early 20th century law gave us regulatory authority over the dumping of trash and sewage. Passage of the Clean Water Act in 1972 greatly broadened this role by giving the Corps of Engineers authority over dredging and filling in the “waters of the United States,” including many wetlands.

A major aspect of the Regulatory program is determining which areas qualify for protection as wetlands. In reaching these decisions, the Corps of Engineers uses its 1987 Wetland Delineation Manual along with the appropriate regional supplement (available in PDF format). In making decisions on whether to grant, deny, or set conditions on permits, District Commanders are required to consider “all factors in the public interest,” including economic development and environmental protection. Numerous relatively minor activities in wetlands are covered by regional or nationwide general permits, allowing the regulatory staff to concentrate on cases that are more complex. Of the approximately 1,100 people who carry out this mission, about 70 percent have academic backgrounds in biology and environmental sciences. As the lead Corps of Engineers district for regulatory matters in Iowa and Illinois, the Rock Island Districtwe reviews more than 1,800 permits requests a year for the construction of structures and facilities, and discharge of dredged material and fill in wetlands and navigable waterways.

How to Request Information:

Contact the Rock Island District’s Regulatory Branch: (309) 794-5370

Environmental Stewardship

The U.S. Army Corps of Engineers (Corps) is the steward of approximately 12 million acres of land and water at 456 water resources projects located in 43 states. This property consists of hundreds of lakes, thousands of miles of rivers and streams, hundreds of reservoirs, 40,000 archeological sites, and 5,000 historic sites. These areas are comprised of various types of habitat that support a variety of fish and wildlife. The archeological and historic sites are significant to our cultural and historical heritage.

Benefits from the Rock Island District Stewardship Program include those associated with managing natural resources in a healthy and sustainable condition, fostering healthy lands and waters by balancing public uses and needs, protecting our cultural heritage and providing public outdoor recreational opportunities. These efforts are performed in partnership with Federal, State and local government entities, quasi-public organizations, and the private sector and include state and federal fish hatcheries, state wildlife management areas, and federal wildlife refuges. As part of our ongoing effort to raise awareness about environmental issues, our staff provides hundreds of environmental education programs every year that reach thousands of people.

Corps lands and waters provide thousands of jobs and billions of dollars in revenue for local communities. More than 500 private concessionaires, with $1 billion in assets, provide support services and facilities at Corps lakes such as: marinas, bait shops, and grocery stores. Non-federal interests manage 42 percent of the recreation and natural resources areas. This includes: approximately 200 state wildlife management areas, 25 federal wildlife refuges, 50 state and federal fish hatcheries, and hundreds of state and local government parks.

Other Engineering Services

In addition to military and civil works programs, the Corps of Engineers provides engineering support to 60 non-Department of Defense Federal agencies, States, and local governments under the Interagency and International

Support program. The types of support we provide include toxic waste cleanup for the Environmental Protection Agency's "Superfund" program, construction support for the Nation's space program, and facilities for the Drug Enforcement Agency and the Immigration and Naturalization Service.

We have provided engineering, construction, and contract support services to the Corps of Engineers' Louisville District, Rock Island Arsenal, and the 88th Regional Support Command. Our architects and engineers have designed a wide range of projects.

The Rock Island District is also allowed to carry out cost-reimbursable work for other Federal, State and local agencies. Projects include:

- Flood insurance studies and water supply studies following natural disasters for FEMA.
- Hydropower review of plans for Federal Energy Regulatory Commission.
- Inspection of low-income housing for Housing and Urban Development.
- Wetland easement layout for the U.S. Department of Agriculture.
- Flood damage repairs for the U.S. Fish and Wildlife Service.

Recreation

The Corps of Engineers is the Nation's largest provider of outdoor recreation, operating more than 2,500 recreation areas at 463 projects (mostly lakes) and leasing an additional 1,800 sites to State or local park and recreation authorities or private interests. The Corps of Engineers hosts about 360 million visits a year at its lakes, beaches, and other areas, and estimates that 25 million Americans (one in ten) visit a Corps of Engineers project at least once a year. Supporting visitors to these recreation areas generates 600,000 jobs. For many citizens, the rangers at the recreation sites will represent their only contact with the Department of the Army.

The Rock Island District provides recreational opportunities to the public. We offer the largest recreational facilities and services in Iowa at our three reservoirs, in addition to a multitude (25) of facilities along our reaches of the Mississippi River. The District operates five visitor centers, one on the Mississippi at Lock and Dam 15, one on Illinois River at Starved Rock Lock and Dam, and one each at Coralville, Saylorville, and Red Rock reservoirs.

The United States Department of Agriculture (USDA) has awarded a contract to provide a single, interagency federal recreation information and reservation service called the National Recreation Reservation Service (NRRS) at **www.recreation.gov.** This web site will provide a comprehensive source of information about thousands of federal recreation areas and opportunities. Interactive maps and text searches will allow customers to discover which parks, forests, lakes, museums, and other recreation sites managed by government agencies are near a particular area or offer specific recreational opportunities.

This new service is part of the President's E-Gov Recreation One-Stop Initiative and will offer one-stop shopping to the public for a wide range of federal recreation areas, facilities and opportunities— more than 57,000 campgrounds, cabins, parks, and tours of national sites, historic homes and caves.

Participating agencies include the USDA's Forest Service, the Department of the Interior's National Park Service, Bureau of Land Management and Bureau of Reclamation, and the U.S. Army Corps of Engineers.

This reservation service will operate through multiple sales channels, including telephone contact centers, on-line reservations, and walk-up field reservations at some locations. This service will offer the recreation seeker additional choices among campgrounds and other facilities available through one convenient reservation service.

Sample Projects

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Mad Creek, Muscatine, Iowa

Flood Risk Management (Section 205)

The Mad Creek watershed drains approximately 17.3 square miles in the eastern portion of the City of Muscatine and areas to the north in Muscatine County. Due to the nature of the watershed and intensive development in the downtown area, Mad Creek is prone to flash flooding, experiencing flooding events in 1991, 1993, and 1998. Alternative plans were developed and evaluated based on appropriate engineering, economic, environmental, cultural, and social factors.

Major components of the selected plan include:

- Raising the height of approximately 2,300 linear feet of existing levees, 1,700 linear feet of existing floodwalls by 2 feet;
- 230 linear feet of new floodwall;
- New bulkhead closure gate at Mississippi Drive;
- New overhead closure gate at 2nd Street;
- New swing gate just upstream on 2nd Street;
- Installation of a new closure structure across the railroad south of Washington Street.

The selected plan also includes improving a section of the Mad Creek channel upstream of 2nd Street to reduce flood stages and installing an enhanced flood warning system. The project cost estimate is $3.45 million and the estimated benefit-cost ratio is 3.4 to 1.

Waterloo, Iowa

Planning Assistance to States

In the 1920's, the Corps built a floodwall to protect the City of Waterloo. Since then, a local flood protection project was constructed behind the 1920's floodwall, where the actual levee and flood wall system were completed in the early 1980's and were designed for a 100-year level of flood protection. However, the same floodwall that protects the City from the ravages of floods also creates a barrier to the water during times of normal flow. While the City is delighted with the protection the floodwall has provided, it would like the community to have better access to the riverfront. The City also wants to examine how, during times of low flow, it could maintain a steadier pool through the Cedar River Corridor to allow community access. Additionally, the City wants to examine the structural integrity of two dams, noting the lower dam is key to maintaining such a pool in the corridor.

Finally, the City would like to determine how the Rath Neighborhood Area could be incorporated in the Riverwalk area. The Rath Neighborhood Area is a designated Environmental Protection Agency (EPA) Brownfields Demonstration Pilot. A Brownfields, as defined by the EPA, is a site, or portion thereof, that has actual or perceived contamination and an active potential for redevelopment or reuse. The City requested the Corps' assistance in identifying potential land uses once it has completed site assessment and remediation.

The Corps developed the following analyses for the City and incorporated them into one report:

Hydraulic/Hydrologic Analysis

The Corps conducted a hydraulic and hydrologic analysis to determine the effects of modifying the area between the 1920's floodwall and the recently built floodwall to accommodate a proposed "Riverwalk" and greenspace. This analysis included considerations for potential pool regulation to promote recreational use of the river, effects of a regulated pool on sedimentation, storm sewer system, floodplain, and dam requirements. A summary of the analysis will be included in the Land Use Plan report.

Structural Analysis

The Corps inspected the existing dam structure to determine its level of structural integrity. A structural stability analysis was done to determine the stability of the structure as it is currently used and with modification to accommodate rise of the pool.

North Fabius River Scotland County, Missouri

14 Emergency Streambank and Shoreline Protection (Section 14)

In the 1950's, the North Fabius River channel was straightened north of State Route A so that flows could be directed through the State Route A Bridge at this location (also called Rainbow Bridge). Since that time, meandering processes have reestablished and migration is occurring down valley. In addition, when the North Fabius River meets or exceeds its channel capacity, the river continues to remove the earth embank-ments upstream of State Route A Highway and Rainbow Bridge. This has caused the loss of approximately 2,340 linear feet of bankline, vegetation, and trees. The channel cross section is changing, thus shifting concentrated flows to the right side of the bridge abutments, threatening the integrity of the bridge structure and roadway embankments. Erosion is caused from high water periods, bank sloughing, over-bank flooding, and runoff. Since the upstream channel was straightened, a comparison of aerial photographs shows a significant difference in conditions upstream of the bridge over time.

The outer bank has eroded to the point that concentrated near-bank currents are misaligned with the opening of the bridge.

There is also a large point bar on the right descending bank beginning approximately 10 feet upstream of the bridge. These problems have threatened the viability of the Rainbow Bridge structure and State Route A roadway embankments. The Missouri Department of Transportation reports that State Route A at the Rainbow Bridge has an average daily traffic count of 320 vehicles. Loss of this road and bridge would be a hardship for area residents and would require a 38-mile detour route.

Four alternatives were reviewed, and the following was selected:

Provide streambank protection in two areas upstream of the bridge:

- In Area 1, excavate approximately 11,000 cubic yards of sand fill from the point bar (shoal); fill and shape existing bankline with riprap on the same reach; and
- Place longitudinal stone fill toe and riprap protection in Area 2 with tiebacks for a distance of approximately 1,000 feet.

Des Moines and Raccoon River • Des Moines, Iowa

Flood Damage Reduction (Specifically Authorized)

The study area is the City of Des Moines in Polk County, Iowa. Des Moines is located in central Iowa at the confluence of the Des Moines and Raccoon Rivers. In addition to the Des Moines and Raccoon Rivers, portions of several smaller tributaries, including Walnut Creek, Fourmile Creek, and 7th Ward Ditch, are contained within the City.

The Des Moines River above the confluence with the Raccoon River has a drainage area of 6,245 square miles, draining areas north of Des Moines in north-central Iowa and southwest Minnesota. The Raccoon River enters the Des Moines River from the west near the Des Moines central business district and has a drainage area of 3,629 square miles. Although Saylorville Dam and Reservoir largely regulate the Des Moines River, significant storm events such as in July 1993 and June of 2008 caused flooding in areas throughout Des Moines. The Raccoon River has no major flood control reservoirs and exhibits significant fluctuations in its flows.

The Red Rock Dam and Lake Red Rock project is located on the Des Moines River just downstream from the City of Des Moines.

The principal focus of a study completed in 2005 was to identify alternatives for flood risk management within the City of Des Moines. The study recommends:

- Reconstructing the Birdland Park Levee
- Improving the recreational trail at Birdland Park
- Improving the levee to protect the Central Place Business District
- Reconstructing 19 levee closures in downtown Des Moines
- Creating 16 acres of wetlands and upland forest habitat at the Chichaqua mitigation site

Construction was authorized in the Water Resources Development Act of 2007 and in the 2010 Energy and Water Development Appropriations Act.

Construction on the Birdland Park and Central Place Levee System projects began in 2010 and is anticipated to be completed in 2011.

Ventura Marsh at Clear Lake • Clear Lake, Iowa

Aquatic Ecosystem Restoration (Section 206)

Ventura Marsh is a large wetland complex located within an approximately 800-acre Iowa Department of Natural Resources wildlife area. It flows into Clear Lake, which is the third largest natural lake in Iowa, covering 3,600 acres.

Ventura Marsh is an aging wetland system. In the 1940s, a water control (stoplog) structure was constructed at the marsh outlet to impound water higher in the marsh. The stable high water level has caused portions of it to accelerate to an open marsh stage. Rough fish foraging and spawning activities in Ventura Marsh stir up the highly organic bottom sediments, thereby decreasing the marsh water quality and reducing the vegetation coverage. These factors limit usage of the marsh by aquatic birds and furbearers. Consequently, the marsh's habitat potential for these species is not being reached.

Systemically, the marsh is also limiting the habitat value of Clear Lake because it does not act as a natural filtering system for the water entering the lake and because it is used by rough fish, specifically carp, for recruitment. As a result, the water quality of Clear Lake and the quality of the Clear Lake fishery are decreased. The success of the Clear Lake restoration efforts that are being undertaken by the state depends on solving these problems in the marsh.

This project presents the opportunity to improve site specific and systemic habitat benefits through improved marsh structure and function. The site specific goal is to improve Ventura Marsh aquatic habitat quality and diversity and maintain it as a high quality hemi-marsh (50:50 ratio open water and emergent vegetation). The systemic goal is to provide habitat-related water quality and fishery benefits to the Clear Lake Ecosystem by improving the Ventura Marsh's ability to process and store nutrients. Objectives for meeting these goals are as follows:

- Increase Rooted Emergent and Submergent Vegetation Coverage and Diversity in Ventura Marsh
- Increase Sediment Compaction in Ventura Marsh
- Decrease the Amount of Nutrients and Sediment in the Ventura Marsh Discharge
- Decrease Rough Fish Population in Ventura Marsh
- Increase the Suitability of Aquatic Bird Breeding Habitat
- Increase Suitability of Furbearer Habitat

In order to achieve the goals and objectives of this project, a number of management measures were considered in the categories of water control, improved marsh function, and rough fish control. These were compared based on habitat benefits and cost to determine the best overall project alternative. The Recommended Plan consists of the following activities:

- demolishing the existing stoplog structure and grate;
- constructing a new controlled spillway;
- constructing a marsh pump station and outlet to Clear Lake;
- dredging a water flow channel from the deepest section of the marsh to the pump station;
- dredging forebay immediately adjacent to the pump station;
- constructing two grade control structures;
- excavating one sediment detention basin;
- constructing approximately 10,000 lineal feet of vegetation cutting in the upper marsh; and
- installing rough fish control features at the pump station and the new controlled spillway.

Illinois River Ecosystem Restoration

General Investigation

The study area encompasses the entire Illinois River Watershed. The study will identify the Federal and State interest in addressing problems related to the loss of backwaters and side channels due to sedimentation, destabilized tributary streams, changed hydrologic regimes and water fluctuations, and other impacts on the system caused by human activity.

For simplicity, the tasks are best viewed in major groupings. There are generally two types of efforts: (1) system evaluations focused on assessing the overall watershed needs and general locations for restoration, and (2) site-specific evaluations focused on developing detailed restoration options for possible implementation at specific sites. A final grouping of tasks relates to report preparation and processing.

The system and site-specific evaluations will investigate restoration opportunities falling into four focus areas:

1. Watershed Stabilization - Address tributary alterations and land uses, conservation easements, wetlands, water retention, riparian filter strips, and stream restoration.
2. Side Channel and Backwater Modification - Consider opportunities to restore habits in these areas, including off-channel deep water habitat, backwater lakes, side channels, constructing islands, etc. acquisition or conservation easements of some floodplain lands.
3. Water Level Management - Evaluate options to reduce rapid fluctuations and naturalize flows.
4. Floodplain Restoration and Protection - Evaluate floodplain use, potential restoration of floodplain function, and value/potential for use of Conservation Reserve Enhancement Program (CREP).

The system evaluations of these four areas will begin shortly after the study is initiated. Then, as the system needs and the most promising project locations are identified, efforts will begin on the site-specific evaluations. Due to cost and time limitations, only two to three specific sites will be developed in detail during the study. If greater system needs were identified, then a larger list of potential improvements would be prepared and recommended for authorization based on a lesser level of detail.

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