



US Army Corps
of Engineers



NRCS / USACE Partnership Handbook



*A Field Guide to
Working Together
Toward
Shared Goals*

*First Edition
April 2011*

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1. Introduction

A. Purpose of this document

The basic purpose of this handbook is to stimulate and facilitate active cooperation and collaboration between Natural Resources Conservation Service (NRCS) and the U.S. Army Corps of Engineers (USACE) on water resource issues and challenges facing our Nation. With this aim in mind, this document is designed to convey to field staff of both NRCS and USACE basic information about each agency's missions, programs, capabilities, and modes of operation. It suggests which programs and authorities from both agencies might be leveraged towards shared goals with examples of successful collaborative on-the-ground projects. It also identifies some of the difficulties and challenges that can arise during collaborative efforts and some possible solutions.

This handbook, which highlights the benefits of a NRCS/USACE partnership, is intended to be a resource for both agencies and hopefully an impetus to those at the field level to work on improving communication between the agencies and building stronger working relationships. By understanding the other agency's role and mission and maintaining an open line of communication, we will experience greater collaborative success in accomplishing our mission.

B. General Benefits of Partnering

Words like 'collaboration' and 'partnering' abound in both USACE and NRCS today. They are in both agencies' Strategic Plans and in nearly every speech by those in leadership positions. Forming strategic alliances, both through formal agreements and informal working relationships, is becoming a way of doing business in USACE, NRCS, other governmental and non-governmental agencies and organizations as well. Forces driving this movement are the complexity and far-reaching impacts of today's water resource problems, in conjunction with the limited financial resources and expertise found in any single organization. There is an increasing commitment to partnerships, such as the NRCS/USACE Partnership Agreement, as a means of accomplishing shared goals.

Partnering is a way of working together that creates and fosters a commitment between two or more entities for achieving mutually beneficial objectives and for creating synergy by maximizing the effect of each organization's resources. Although organizational mandates are important, the real impetus for partnering is the fact that the people involved in real, on-the-ground work at the field level are seeing that partnering works.

Effective partnerships can result in actions and accomplishments that would not be possible by each agency acting alone. Some hallmarks of a successful partnership are: a shared vision; common objectives; and an action plan that outlines specific activities and products. However, many of the benefits of partnerships are intangible and difficult to measure such as improved communication, trust, and interpersonal relationships.

Partnering helps to break down organizational barriers that block performance. It empowers organizational representatives to implement programs in ways that maximize the resources of all participating groups. Partnering is a tool for creating a spirit of teamwork even though the participants represent different organizations.

Strong partnering relationships are based upon trust, dedication to common goals, and an understanding of each other's expertise, expectations, and values. The critical elements of partnering include up-front visioning on the goals of the partnership, appropriate empowerment of personnel, and ongoing support of the partnering process.

Basic Principles of Partnering (Source: Partnering Guide for DOD Environmental Missions, IWR, USACE, Fort Belvoir, VA 1994).

Teamwork can overcome organizational impediments.
The team should be empowered down the line.
The best approach to resolving disputes is to prevent them.
Shared responsibility involves shared risks and benefits.
Open communication and flexible boundaries between organizations
Partners maximize each other's resources

In partnering, organizations work together to produce a synergy that is

Following basic partnering principles can also result in quantifiable and even monetary benefits. A functional and productive partnership can leverage the resources of the agencies and lead to cost savings, elimination of redundancies, time savings and in some cases improved customer service. For example, by working together on the Mississippi Coastal Improvements Program, described in Section 9, NRCS and USACE discovered that both agencies had been working on separate solutions to the same problem. This discovery led to the blending of the projects, with one agency completing the effort and the other directing the unused funds to solve a different water resources issue.

Partnering between USACE and NRCS could also generate significant savings in real estate costs. NRCS has many programs that involve placing easements on land to achieve specific purposes (i.e. Wetland Reserve Program, floodplain easements, etc.). USACE, on the other hand, typically requires fee simple ownership by either the non-federal sponsor or the federal government of land upon which their projects are constructed. NRCS has the authority to contract with landowners using long term easements to accomplish goals in the federal interest without actually purchasing the land. If USACE and NRCS work together on a project, the easement approach might be used to save the Federal government money and eliminate the need to purchase a large amount of land to accomplish project goals.

C. NRCS/USACE Partnership History

The formal NRCS/USACE Partnership had its beginnings in 2002. In August of that year, NRCS, National Water Management Center and USACE, Mississippi Valley Division initiated an exchange of personnel (Liaisons). The purpose of the exchange was to increase cooperation relating to our water resource missions so that both agencies could provide timely and effective assistance to members of the public with water resource concerns. The liaisons were physically stationed at the other agency's office. They focused on evaluating the state of cooperation between NRCS and USACE. By meeting with personnel from several USACE Districts and NRCS state offices, the liaisons compiled examples of successful collaboration, opportunities for future collaboration, and barriers to collaboration. These initial NRCS and USACE Liaisons prepared an Exit Report that contained a summary of their findings and a recommendation to enter into a Memorandum of Agreement.

In July of 2005, a [Partnership Agreement](#) (PA) and the accompanying Partnership Principles (PP) was signed. The purpose of the PA is to promote a long-term working relationship between the U.S. Department of Agriculture (USDA) through NRCS, and the Department of the Army (DA) through USACE, on collaborative efforts to improve the management of water and related natural resources under the missions and authorities of the two agencies.

Furthermore, a [Memorandum of Agreement between USACE and USDA](#) was signed in December 2005 establishing a framework governing the respective responsibilities for the provision of goods and services between the agencies.

Once the framework for partnering was in place, a Partnership Team was established consisting of the Liaison positions and other agency leadership. The Partnership Team tackled development of an Action Plan and Annual Plan of Work. In addition, the Partnership Team initiated Monthly Partnering Teleconferences and developed both a Partnership Web site and Partnership Brochure. In 2006, regular Face-to-Face Deputy Level Partnership Progress Reviews began which allowed the senior leaders in both agencies to become more aware of and involved in Partnership activities. This led to yearly Senior Leader's Conferences beginning in 2007.

NRCS and USACE have continued to work together to spread the word about the Partnership, including giving joint presentations at the National Conference on Ecosystem Restoration in 2007 and 2009 and participating jointly in the USACE Planning Community of Practice Conferences in 2008 and 2010.

2. The Agencies: NRCS and USACE

A. NRCS: Its Mission, Authorities, and Organization

NRCS Mission

The mission of the NRCS is to provide national leadership in the conservation of soil, water, and related natural resources. The NRCS provides balanced technical assistance and cooperative conservation programs to landowners and land managers throughout the United States as part of the USDA.

NRCS was originally established by Congress in 1935 as the Soil Conservation Service (SCS). Since then, NRCS has expanded to become a conservation leader for all natural resources, ensuring private lands are conserved, restored, and more resilient to environmental challenges, like climate change. Seventy percent of the land in the United States is privately owned, making voluntary stewardship by private landowners absolutely critical to the health of our Nation's environment.

NRCS works with landowners through conservation planning and assistance designed to benefit the soil, water, air, plants, and animals that result in productive lands and healthy ecosystems. Science and technology are critical to good conservation. NRCS experts from many disciplines come together to help landowners conserve natural resources in efficient, smart and sustainable ways. NRCS works closely with individual farmers and ranchers, landowners, local conservation districts, government agencies, Tribes, Earth Team volunteers and many other people and groups that care about the quality of America's natural resources.

NRCS also provides products and services that enable people to be good stewards of the Nation's soil, water, and related natural resources on non-Federal lands. With the help of NRCS, landowners are better able to conserve, maintain, or improve their natural resources. This good stewardship involves actions to:

- Maintain the condition of the natural resources through continued good management where adequate conservation is already in place.
- Prevent damage to the natural resources where assessment of social, economic, and environmental trends indicates potential for environmental degradation.
- Enhance the natural resources for further productivity and environmental health.
- Restore the natural resources to a healthy condition where damage has already occurred

NRCS Authorities. Many of the programs administered by NRCS are authorized under these two laws: [Food Security Act of 1985](#) (P.L. 99-198) (FSA), [Food, Conservation, and Energy Act of 2008](#), (Farm Bill), PL83-534, PL 83-566

NRCS Organization. NRCS works at the local level, – in field offices at [USDA Service Centers](#) in nearly every county in the Nation.

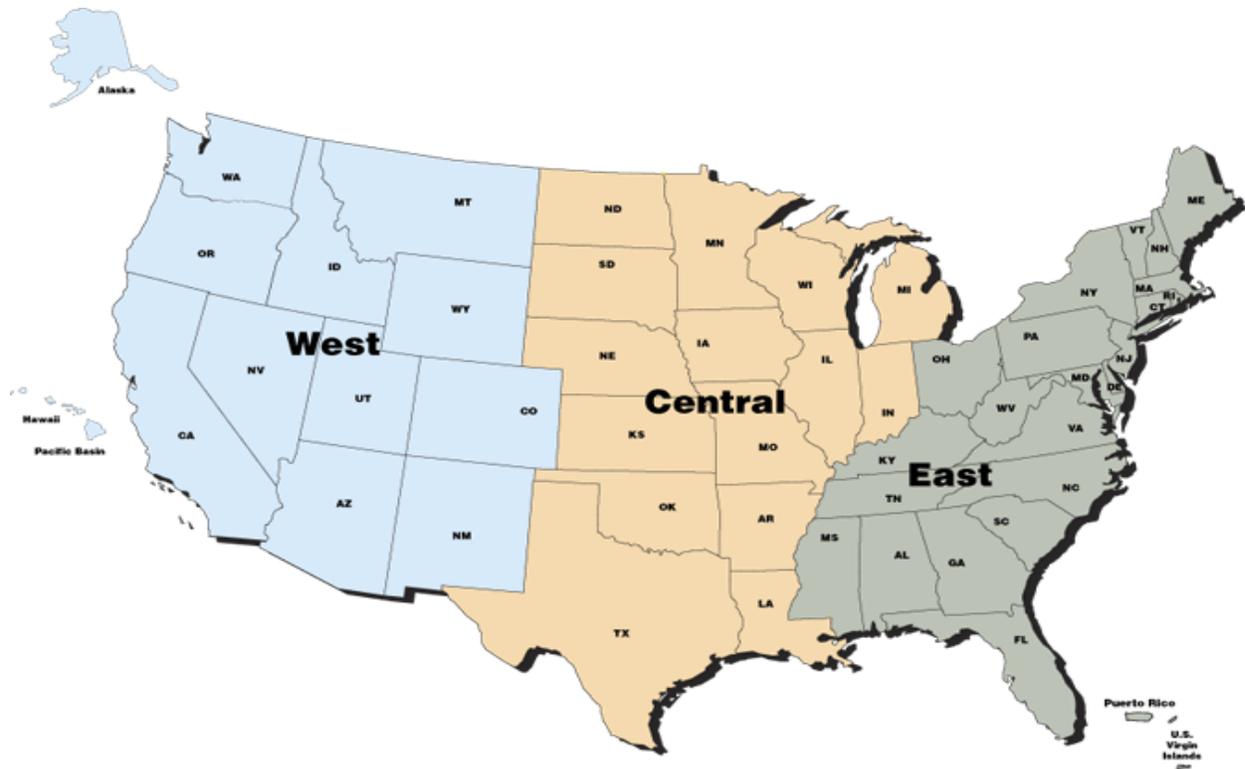


Figure 1 - NRCS Regions

NRCS is a line and staff agency led by the Office of the Chief (see organizational chart in Figure 2). The [Chief](#) provides overall leadership for the activities of the NRCS to help people conserve, maintain, and improve our natural resources and environment. Staff personnel provide support to line officers at all levels within the agency. The Chief is appointed by the President.

Regional Conservationists are line officer representatives of the Chief and are responsible for providing overall direction of NRCS programs and activities consistent with the Chief's guidance. They act as representatives of the Chief at meetings and supervise the State Conservationists and the Directors of the Pacific Basin and Caribbean Areas. The U.S. and its territories are administratively divided into three regions: East, Central and West.

State Conservationists are line officers reporting directly to the respective Regional Conservationist and are responsible for operations within the state.

Area Conservationists are line officers reporting directly to the State Conservationist and are responsible for operations within a designated area within the state.

District Conservationists are line officers reporting directly to the Area Conservationist and are typically responsible for operations within a single county. Some District Conservationists have responsibility for more than one county. District Conservationist work closely with a local Conservation District Board of Directors to set priorities for conservation work within the county.

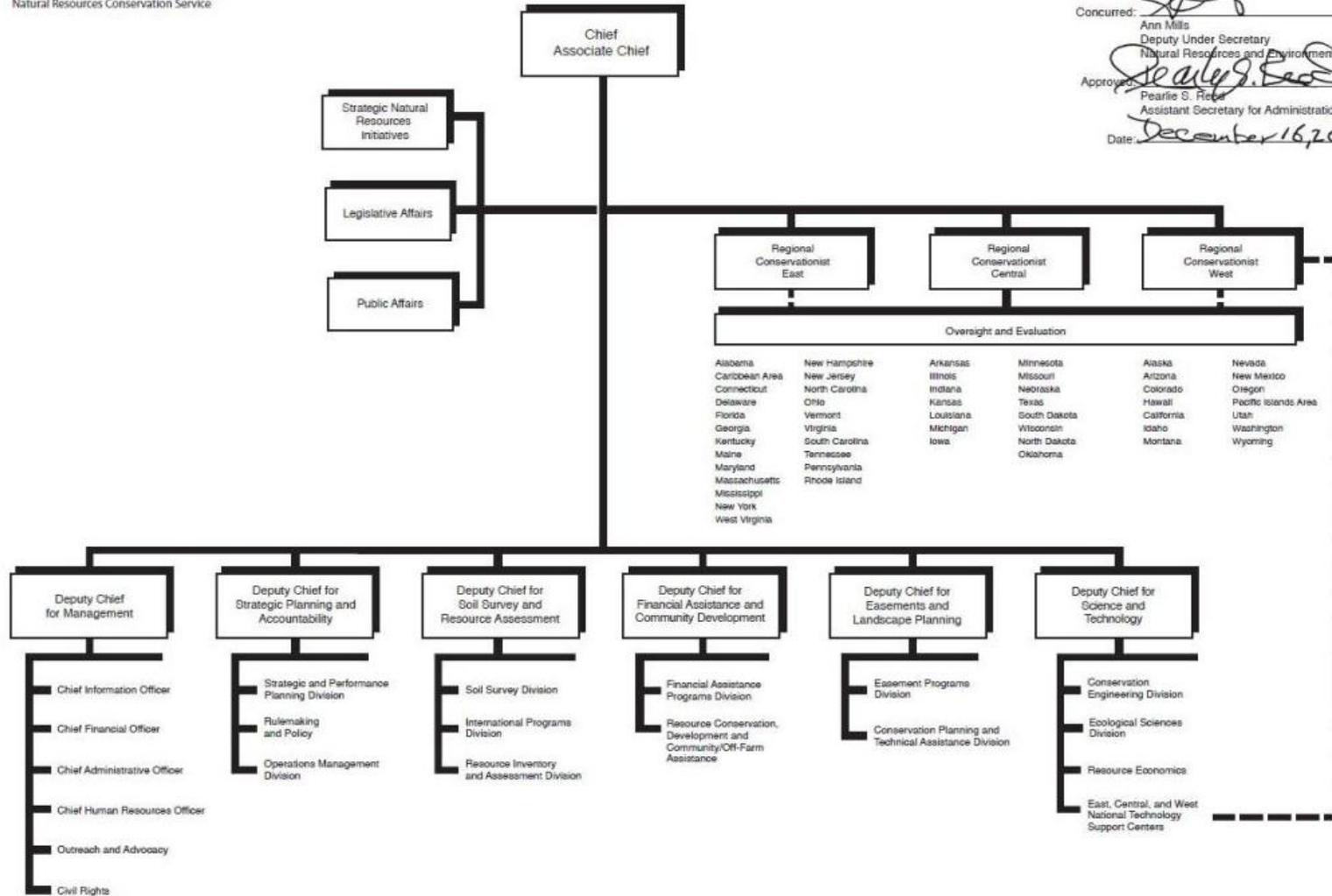


Recommended: *Dave White*
 Dave White
 Chief
 Natural Resources Conservation Service

Concurred: *Ann Mills*
 Ann Mills
 Deputy Under Secretary
 Natural Resources and Environment

Approved: *Pearlie S. Reber*
 Pearlie S. Reber
 Assistant Secretary for Administration

Date: *December 16, 2009*



Effective January 3, 2010

Helping People Help the Land

Figure 2 - NRCS Organizational Structure

B. USACE: Its Mission, Authorities, and Organization

USACE Mission

The overall mission of USACE is to provide design and engineering services, and construction support for a variety of military and civilian projects worldwide.

The Civil Works mission of USACE is to contribute to the national welfare and serve the public by providing the Nation and the Army with quality and responsive

- Development and management of the Nation's water resources;
- Protection and management of the natural environment;
- Restoration of aquatic ecosystems;
- Flood risk and emergency management; and
- Engineering and technical services

in an environmentally sustainable, economic, and technically sound manner with a focus on public safety and collaborative partnerships.

USACE is the Federal government's largest water resources development and management agency. USACE develops and manages water infrastructure for commercial navigation, flood risk management, hydropower generation, recreation, and water supply. USACE protects and restores the environment through regulatory, shore protection, and ecosystem restoration responsibilities. USACE has implemented water resources and marine transportation programs and projects that strengthen America's economic competitiveness; that reduce the risks from floods and hurricanes, and help people recover more quickly from disasters; that provide American farms, businesses, and homes with water and power; that provide opportunities for citizens to enjoy and appreciate our natural resources; and that restore, protect and sustain the natural environment, including wetlands and associated aquatic ecosystems.

(The USACE's Regulatory mission will be discussed in Section 6: Working Together on Section 10/404 Permitting.)

USACE Authorities (How USACE Accomplishes its Civil Works Mission)

In order for USACE to develop specific projects in support of its missions, two steps are necessary, a study to determine the Federal interest in participating in the project followed by implementation of the project. The USACE must have authority for each of these steps.

Study Authorities

House Committee on Transportation and Infrastructure and Senate Committee on Environment and Public Works resolutions and specific legislation generally provide basic authorization for feasibility studies by the USACE. Studies may also be conducted under the authorities included in the Continuing Authorities Program (CAP) or the standing authority provided by Section 216 of the Flood Control Act of 1970, which authorizes the review of completed projects. In accordance with Section 105 of the Water Resources Development Act (WRDA) of 1986, as amended, feasibility studies generally cannot commence until a non-Federal sponsor agrees, in

writing, to contribute 50% of the cost of the study during the period of the study. All or part of the non-Federal share may take the form of in-kind contributions. Exceptions to the cost-sharing requirement for studies include studies for inland navigation projects and studies undertaken under CAP authorities where the total study cost is less than \$100,000.

Implementation Authorities

Generally, implementation of USACE projects is undertaken either under a specific project authority enacted in law, usually WRDA, or under an authority included in the CAP program. A non-Federal sponsor must enter into an agreement with USACE, prior to the initiation of construction, to fulfill certain items of local cooperation that vary by project purpose but generally include providing lands, easements, rights of way, relocations, and disposal areas; contributing a share of the project costs; holding and saving the Federal Government harmless; and assuming responsibility for operation and maintenance of the project.

Continuing Authorities Program (CAP)

Congress has provided a number of programmatic authorities, collectively referred to as the Continuing Authorities Program, under which USACE can study and implement projects in response to a variety of water resources problems without the need to obtain specific congressional authorization or appropriations for each project. This can decrease the amount of time required to develop, approve, and fund a potential project for construction. There are, however, specified limits on Federal expenditures per project as well as specified annual limits on program funding. USACE has constructed numerous small projects under CAP and has developed a wide diversity of technical experience in solving problems associated with shoreline and streambank erosion, navigation, flood risk management, and aquatic ecosystem restoration. Most cooperative work between NRCS and USACE can be done under the CAP.

Individually Authorized Projects

Implementation of projects not eligible under the CAP authorities must be specifically authorized by Congress. Individually authorized studies and projects can address a wide variety of water resource problems, including ecosystem restoration, navigation, and flood risk management. Unlike the CAP, there are no project specific Federal cost limitations for these projects.

Other Standing Authorities

USACE has other authorities that can be used without the need for specific authorization from Congress. These do not generally result in a project but USACE can provide some flood plain management services and provide planning assistance to states using existing standing authorities.

USACE Organization

The USACE is made up of approximately 34, 600 civilians and 650 military employees, responsible for providing responsive engineering services worldwide. The Civil Works program is headed by the Assistant Secretary of the Army for Civil Works (ASA(CW)) who is appointed by the President and is the Administration's policy maker for the USACE civil works program.

The Chief of Engineers, in the USACE Headquarters (HQ) in Washington DC, oversees the USACE' civil and military operations and reports on civil works matters to the ASA(CW). However, most of the responsibilities for managing the Civil Works program is delegated to the

Deputy Commanding General for Civil and Emergency Operations and to the Director of Civil Works.

Reporting to HQ are 8 Division offices in the U.S which are headed by Division Commanders. These are the regional offices responsible for the supervision and management of their subordinate districts. The 38 District offices are the foundation of the civil works program. (There are seven additional Districts and two Divisions outside the U.S.) Each District office is led by a District Commander (sometimes referred to as the District Engineer). The Districts are responsible for conducting and completing civil works studies, projects, and programs. They do this through Project Delivery Teams (PDTs), which are led by a Project Manager and composed of members from the planning, engineering, construction, operations, and real estate functions. The PDTs manage water resources projects over the entire life cycle.

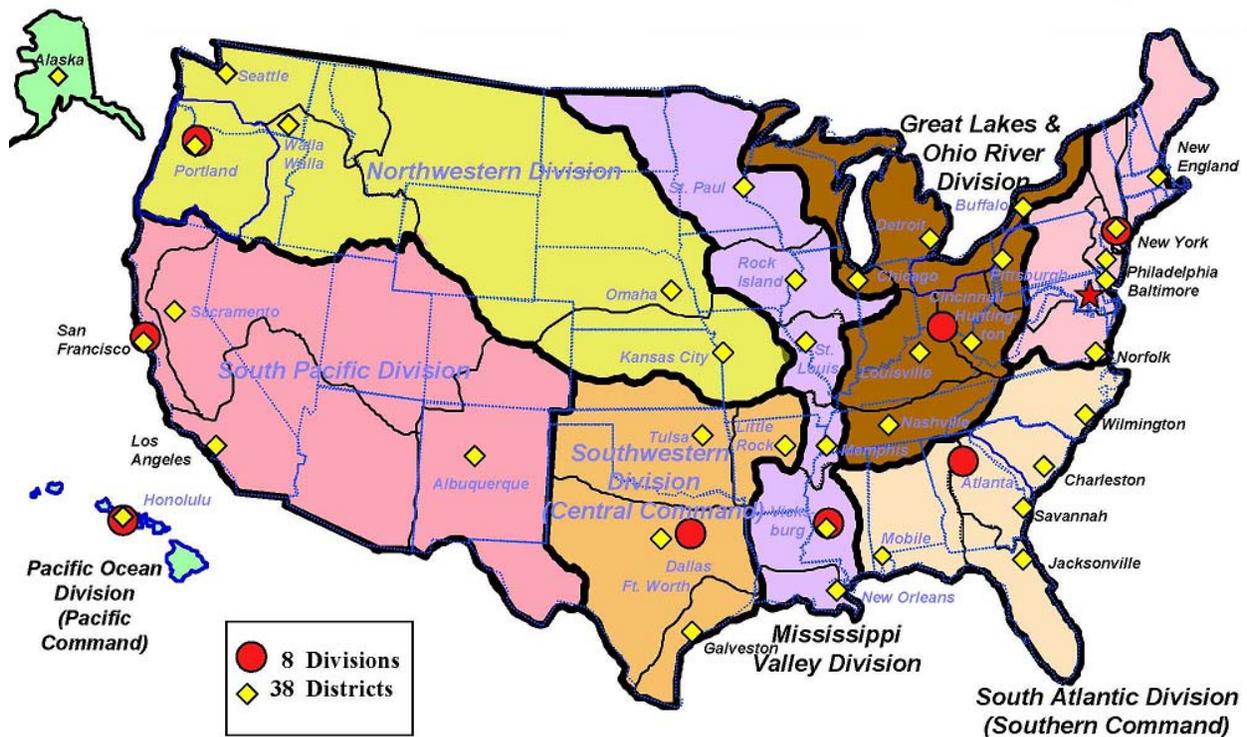


Figure 3 - USACE Divisions and Districts

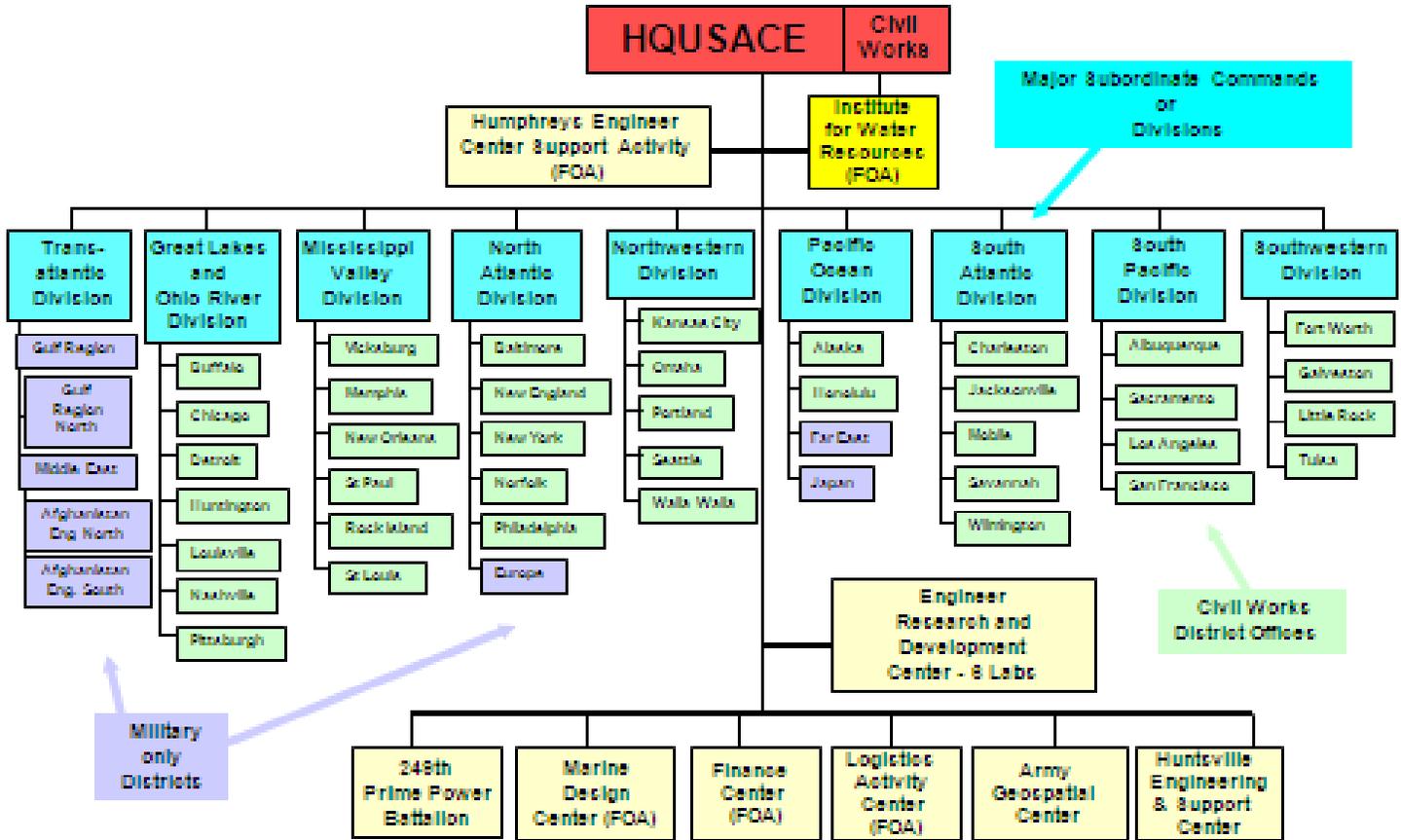


Figure 4 - USACE Organizational Structure

Matching up Agency Offices

Most USACE Districts encompass parts of several states, and some NRCS State offices encompass several USACE Districts. Where more than one District operates in a particular state, often a lead District is designated. Table 1 lists the lead USACE District for each state. This list can also be found on the [Partnership website](#). In some cases, the boundaries vary by program. For example, the Civil Works Program boundaries can be different than the boundaries of the Regulatory or Military Programs.

An additional resource for locating the appropriate District office is located on the USACE Regulatory Headquarters Homepage. This [interactive tool](#) guides the user to the responsible district office and is especially helpful in states covered by more than one USACE District.

Table 1 - Matching up NRCS State Offices with USACE District Offices

State	Lead USACE District	State	Lead USACE District
Alabama	Mobile District	Montana	Omaha District
Alaska	Alaska District	Nebraska	Omaha District
Arizona	Los Angeles District	Nevada	Sacramento District
Arkansas	Little Rock District	New Hampshire	New England District
California	Sacramento District	New Jersey	Philadelphia District
Colorado	Albuquerque District	New Mexico	Albuquerque District
Connecticut	New England District	New York	New York District
Delaware	Philadelphia District	North Carolina	Wilmington District
Florida	Jacksonville District	North Dakota	Omaha District
Georgia	Savannah District	Ohio	Huntington District
Hawaii	Honolulu District	Oklahoma	Tulsa District
Idaho	Walla Walla District	Oregon	Portland District
Illinois	Rock Island District	Pennsylvania	Baltimore District
Indiana	Louisville District	Rhode Island	New England District
Iowa	Rock Island District	South Carolina	Charleston District
Kansas	Kansas City District	South Dakota	Omaha District
Kentucky	Louisville District	Tennessee	Nashville District
Louisiana	New Orleans District	Texas	Galveston District
Maine	New England District	Utah	Sacramento District
Maryland	Baltimore District	Vermont	New England District
Massachusetts	New England District	Virginia	Norfolk District
Michigan	Detroit District	Washington	Seattle District
Minnesota	St. Paul District	West Virginia	Huntington District
Mississippi	Vicksburg District	Wisconsin	St. Paul District
Missouri	Kansas City District	Wyoming	Omaha District

The NRCS USACE Partnership liaisons can also be contacted for assistance with locating the appropriate USACE office or subject matter experts.

If you are not sure where to start or need additional information, call your liaison.

NRCS Liaison to USACE – (501) 210-8918
 USACE Liaison to NRCS – (703) 428-6413

C. Leveraging NRCS and USACE Programs and Authorities toward Shared Goals

NRCS and USACE have complementary responsibilities relating to water resources, but possess different authorities to accomplish those missions. Combining these differing agency authorities can result in more comprehensive solutions to the complex water resource problems facing the Nation today.

Table 2 shows how USACE and NRCS programs and authorities can be utilized together to accomplish the shared goals of wetland protection and restoration, flood risk management, wildlife habitat creation, sediment management, natural disaster recovery, and integrated water resources management.

Synergies between the work of NRCS and USACE can also arise from simply sharing information about one another's programs and activities. For example, NRCS has provided USACE access to a database which contains the locations of Wetland Reserve Program and Floodplain easements. This information is particularly useful to USACE staff working in the Regulatory program who are evaluating proposed wetland mitigation or mitigation bank sites and to those in the Flood Risk Management program who are looking for nonstructural measures to reduce future flood risk. For details on how to access this information, contact your liaison.

Table 2 – Leveraging Programs and Authorities of NRCS and USACE

	NRCS Programs					
USACE Programs	Wetland Reserve Program (WRP) Wildlife Habitat Program (WHIP)	Conservation Technical Assistance, Environmental Quality Incentives (EQIP) Grassland Reserve Program	Emergency Watershed Protection Program Floodplain Easements	Emergency Watershed Program - Traditional Stream clearance and Restoration, Debris Removal Dam program	Watershed Programs Rapid Watershed Assessments Mississippi River Basin Initiative Great Lakes Restoration Initiative	Wetland Conservation Provisions of the Food Security Act (FSA-Swampbuster)
CAP Ecosystem Restoration Authorities: (Sec. 1135, Sec. 206)	Wetland Restoration Wildlife Habitat		Wetland Restoration Flood Risk Management			
CAP - Beneficial Uses of Dredged Material (Sec. 204) Regional Sediment Management Program		Sediment Management				
Emergency Management Program, erosion control, clearing of streams (Sec 14) (Sec 208)				Natural Disaster Recovery		
CAP and Individually Authorized Flood Risk Management Projects, Dam Safety Assurance Program			Flood Risk Management	Flood Risk Management		
Watershed Programs – Technical Assistance to States, Watershed and River Basin Assessments (Sec 729)					Integrated Water Resource Management	
Regulatory Program (Sec 10 R&H/ Sec 404 CWA)						Wetland Protection

3. Working Together on Ecosystem Restoration

A. Relevant NRCS Programs and Authorities

NRCS Conservation Programs, such as the Wetland Reserve Program, Conservation Technical Assistance Program, Environmental Quality Incentives Program, and Wildlife Habitat Incentive Program, help people reduce soil erosion, enhance water supplies, improve water quality, increase wildlife habitat, and reduce damages caused by floods and other natural disasters. Public benefits include enhanced natural resources that help sustain agricultural productivity and environmental quality while supporting continued economic development, recreation, and scenic beauty.

Wetland Reserve Program

The Wetlands Reserve Program (WRP) is a voluntary program offering landowners the opportunity to protect, restore, and enhance wetlands on their property. The NRCS provides technical and financial support to help landowners with their wetland restoration efforts. The NRCS goal is to achieve the greatest wetland functions and values, along with optimum wildlife habitat, on every acre enrolled in the program. This program offers landowners an opportunity to receive financial incentives to restore, protect, and enhance wetlands in exchange for retiring marginal land from agriculture. WRP Program participants benefit by:

- Receiving financial and technical assistance in return for restoring and protecting wetland functions and values;
- Seeing a reduction in problems associated with farming potentially difficult areas;
- Having incentives to develop wildlife recreational opportunities on their land.

Land is not eligible if it is owned by any governmental entity. Private lands eligible for WRP must have been altered for agricultural use in the past through filling or draining and must now be restorable and suitable for wildlife benefits. To offer a conservation easement, the private landowner must typically have owned the land for at least 7 years prior to enrolling it in the program. Eligible land may include:

- Wetlands farmed under natural conditions;
- Farmed wetlands;
- Prior converted cropland;
- Farmed wetland pasture;
- Farmland that has become a wetland as a result of flooding;
- Riparian areas which link protected wetlands;
- Pasture or production forest land where the hydrology has been significantly degraded;
- Lands adjacent to protected wetlands that contribute significantly to wetland functions and values; and
- Previously restored wetlands that need long term protection.

Participants voluntarily limit future use of the land, but retain private ownership. On acreage subject to a WRP easement, participants control access to the land, and may lease the land for hunting, fishing, and other undeveloped recreational activities. NRCS and the landowner jointly determine the restoration plan for the wetlands, but the landowner is required to implement the restoration plan with NRCS financial assistance.

Enrollment options include: 1) Permanent Easement; or 2) Restoration Cost-Share Agreement. If a permanent easement is chosen the landowner receives the lowest of three values as an easement payment: the site value based on a market analysis; a geographic area rate cap established by the NRCS State Conservationist; or the landowner offer. NRCS pays 100 percent of all costs associated with acquiring the easement, and all costs for restoration and future maintenance activities.

If a restoration cost-share agreement is chosen, it is for a minimum of 10 years, but may be longer. NRCS provides technical assistance to design, and reimburses 75 percent of the cost of establishing degraded or lost wetland habitat. During the period of the agreement, any maintenance activities may also be reimbursed at the same rate.

After restoration, NRCS continues to provide assistance to landowners. This assistance may be in the form of reviewing restoration measures, clarifying technical and administrative aspects of the easement and project management needs, and providing basic biological and engineering advice on how to achieve optimum results for wetland dependent species.

Conservation Technical Assistance Program

NRCS is the USDA's principal agency for providing conservation technical assistance to private landowners, conservation districts, tribes, and other organizations. NRCS delivers conservation technical assistance through its voluntary Conservation Technical Assistance Program (CTA). CTA is available to any group or individual interested in conserving our natural resources and sustaining agricultural production in this country. The CTA program functions through a national network of locally-based, professional conservationists located in nearly every county of the United States. The working relationships that landowners and communities have with their local NRCS staff are unique. One-on-one help through flexible, voluntary programs occurs every day in local NRCS offices across the country.

CTA provides technical guidance to land users to address opportunities, concerns, and problems related to the use of natural resources and to help land users make sound natural resource management decisions on private, tribal, and other non-federal lands.

This assistance can help land users:

- Maintain and improve private lands and their management
- Implement better land management technologies
- Protect and improve water quality and quantity
- Maintain and improve wildlife and fish habitat
- Enhance recreational opportunities on their land
- Maintain and improve the aesthetic character of private land

- Explore opportunities to diversify agricultural operations and
- Develop and apply sustainable agricultural systems

This assistance may be in the form of resource assessment, practice design, resource monitoring, or follow-up of installed practices.

Although the CTA program does not include financial or cost-share assistance, clients are encouraged to develop conservation plans, which may serve as a springboard for participation in USDA financial assistance programs. CTA planning can also serve as a door to financial assistance and easement conservation programs provided by other Federal, State, and local programs.

NRCS and its partners use the CTA program to provide technical assistance to:

- farmers
- ranchers
- local units of government
- citizen groups
- recreation groups
- Tribal governments
- professional consultants
- State and Federal agencies
- and others interested in conserving natural resources

This voluntary program is delivered to private individuals, groups of decision-makers, tribes, units of governments, and non-governmental organizations in all 50 States, the District of Columbia, Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, the Commonwealth of the Northern Mariana Islands, the Federated States of Micronesia, the Republic of Palau, and the Marshall Islands.

All owners, managers, and others who have a stake and interest in natural resource management are eligible to receive technical assistance from NRCS. To receive technical assistance, the individual may contact their local NRCS office or the local conservation district.

Environmental Quality Incentives Program

The Environmental Quality Incentives Program (EQIP) was reauthorized in the Food, Conservation, and Energy Act of 2008 (Farm Bill) to provide a voluntary conservation program for farmers and ranchers that promotes agricultural production and environmental quality as compatible national goals. EQIP offers financial and technical help to assist eligible participants to install or implement structural and management practices on eligible agricultural land.

EQIP offers contracts with a minimum term that ends one year after the implementation of the last scheduled practices and a maximum term of ten years. These contracts provide financial assistance to implement conservation practices. Owners of land in agricultural production or persons who are engaged in livestock or agricultural production on eligible land may participate in the EQIP program. Program practices and activities are carried out according to an EQIP

program plan of operations developed in conjunction with the producer that identifies the appropriate conservation practice or measures needed to address the resource concerns. The practices are subject to NRCS technical standards adapted for local conditions.

EQIP provides payments up to 75 percent of the eligible costs and income foregone of certain conservation practices and activities. However certain historically underserved producers (limited resource farmers/ranchers, beginning farmers/ranchers, socially disadvantaged producers) may be eligible for payments up to 90 percent of the estimated eligible costs and income foregone. Farmers and ranchers may elect to use a certified Technical Service Provider (TSP) for technical assistance needed for certain eligible activities and services. The new Farm Bill established a new payment limitation for individuals or legal entity participants who may not receive, directly or indirectly, payments that, in the aggregate, exceed \$300,000 for all program contracts entered during any six year period. Projects determined as having special environmental significance may, with approval of the NRCS Chief, have the payment limitation raised to a maximum of \$450,000.

Wildlife Habitat Incentive Program

The Wildlife Habitat Incentive Program (WHIP) is a voluntary program for conservation-minded landowners who want to develop and improve wildlife habitat on agricultural land, nonindustrial private forest land, and Indian land.

The Food, Conservation, and Energy Act of 2008 reauthorized WHIP as a voluntary approach to improving wildlife habitat in our Nation. NRCS administers WHIP to provide both technical assistance and up to 75 percent cost-share assistance to establish and improve fish and wildlife habitat. WHIP cost-share agreements between NRCS and the participant generally last from one year after the last conservation practice is implemented but not more than 10 years from the date the agreement is signed.

In order to provide direction to the State and local levels for implementing WHIP to achieve its objective, NRCS has established the following national priorities:

- Promote the restoration of declining or important native fish and wildlife habitats.
- Protect, restore, develop or enhance fish and wildlife habitat to benefit at-risk species
- Reduce the impacts of invasive species on fish and wildlife habitats; and
- Protect, restore, develop or enhance declining or important aquatic wildlife species' habitats.

B. Relevant USACE Programs and Authorities

The USACE mission in the area of aquatic ecosystem restoration is to help restore aquatic habitat to a more natural condition in ecosystems whose structures, functions and dynamic processes have become degraded. The emphasis is on restoration of nationally or regionally significant habitat where the solution primarily involves modifying the hydrology and geomorphology.

USACE activities in ecosystem restoration concentrate on engineering solutions to water and related land resources problems. The USACE principal focus in ecosystem restoration is on those ecological resources and processes that are directly associated with, or directly dependent upon, the hydrological regime of the ecosystem and watershed.

Restoration projects range in size from very small to very large. The following paragraphs give a brief description of the types of activities USACE can do in rivers, lakes, wetlands, and coasts.

Rivers. While USACE undertakes the dredging and construction projects crucial to keeping our nation's rivers safe for navigation, environmental considerations are factored in as well.

Through a wide array of initiatives the USACE environmental program is improving our nation's rivers by helping to:

- protect and restore river habitats;
- increase connectivity between rivers and nearby lakes or wetlands;
- restore floodplains and associated wetlands;
- re-establish natural river flows; and
- achieve other important environmental objectives.

An excellent example of USACE efforts is the Sustainable Rivers Project. Through this program, USACE is working in partnership with The Nature Conservancy to preserve and restore rivers in over 13 states. The program grew out of an ongoing successful effort to restore Kentucky's Green River, which is the nation's fourth most diverse river for fish and mussels. By changing how water is released from the Green River dam to more closely mimic natural conditions, the project should encourage fish and mussel spawning, and provide other significant benefits to plants and animals downstream while continuing to meet the needs of area residents. Similar changes are planned at the other sustainable river projects.

Regional Sediment Management (RSM) is an approach for managing projects involving sand and other sediments that incorporates many of the principles of integrated watershed resources management. While the initial emphasis of RSM was on sand in coastal systems, the concept has been extended to riverine systems and finer materials to more completely address sources and processes important to sediment management.

NRCS is a natural partner for RSM efforts. The NRCS started as the Soil Conservation Service and worked with farmers to demonstrate soil conservation methods in watershed based demonstrations. Even though the name has changed, NRCS remains an expert in working on private lands to implement conservation practices designed to reduce soil erosion and conserve our nation's natural resources. This ability to work on private lands and uplands, where USACE cannot, lends itself to a comprehensive watershed approach to handling issues relating to sediment.

For several years, the Mobile District has been implementing RSM efforts in coastal areas. The Mobile Bay Basin RSM project is looking at the entire watershed as it links to the coast. The goal is to ultimately create a watershed management plan to make better decisions with regard to sediment. For the last two years the District has collected background information, identified

possible stakeholders, and held workshops to identify watershed issues. It was also necessary to identify those stakeholders who are able to supply data to the effort, those which are seeking access to specific data, currently available tools and models, as well as what tools/models need to be developed.

Lakes. USACE manages 425 lakes and associated lands nationwide. USACE is dedicated to caring for these wonderful natural resources by:

- preserving and restoring habitats for plants, fish and wildlife;
- protecting rare, endangered and threatened species;
- operating fish hatcheries and wildlife refuges in cooperation with state agencies; and
- monitoring water quality.

For instance, at Lake Ouachita in Arkansas, USACE is part of a cooperative effort involving the Arkansas Watershed Advisory Group. This effort is aimed at developing a watershed approach to lake management. Projects to date have included workshops on aquatic vegetation, watershed management and marine sanitation, and the introduction of new legislation pertaining to marine sanitation. Successful pilot projects will serve as role models for nationwide improvement efforts on federal lakes.

Wetlands. Wetlands are often called the nurseries of life because they provide a rich mix of nutrients, insects and plants that make them ideal nesting, resting, feeding and breeding grounds for many different types of creatures. Over a third of all federally listed rare and endangered species live in or depend upon wetlands. In addition, wetlands control flooding, improve water quality and serve as rest stops for migratory birds. Through its ecosystem restoration and regulatory programs USACE:

- protects and preserves existing wetlands;
- restores degraded wetlands; and
- creates new wetlands.

An example of these efforts is the Vic Fazio Yolo Wildlife Area in California. USACE restored wetlands in this area lost during the creation of the Sacramento River Flood Control Project and Yolo Bypass floodway system. The goal was to restore wetlands while meeting flood control, agricultural and wildlife objectives. This cooperative restoration project involved more than 20 organizations and resulted in the largest wetlands restoration (3,700 acres) in the western United States and has recently expanded to 16,000 acres.

Another example is the Barataria Bay Waterway Wetland Restoration on Queen Bess Island in Jefferson Parish, Louisiana. Erosion had caused the island to shrink dramatically. The island was losing nearly an acre per year. This ultimately led to a reduction in size from 45 to 17 acres, which increased the frequency of storm-induced overwash, degrading the island's role as a crucial nesting habitat for Louisiana's state bird, the endangered brown pelican. By employing the concept of Regional Sediment Management, and using maintenance-dredged sediments from

the adjacent Barataria Bay Waterway, USACE enlarged the island. An additional nine acres of vegetated wetland were created.

Coasts. The fragile ecosystems in our nation's coastal areas are in peril from development and storms. The importance of protecting our nation's coasts grows each year as more and more Americans move to coastal areas. To help address this challenge, USACE has joined as a major partner in Coastal America, a coalition of 13 federal agencies, including the USDA-NRCS, (and many state, local and private organizations that are working together to address environmental problems along the nation's coasts). USACE has been the lead agency on many of the nearly 400 completed projects recognized by Coastal America.

USACE is also involved in a number of other coastal protection and restoration projects aimed at:

- preserving and restoring coastal wetlands and estuaries;
- reducing shore erosion; and
- restoring beach habitat and oyster beds.

For example, USACE is proud to be a key partner in the Coastal Louisiana project. This monumental effort seeks to restore and protect Louisiana's coastal wetlands, which are being lost at a rate of 25 to 35 square miles per year. These wetlands provide valuable habitat for a wide variety of fish, birds and other wildlife and offer important commercial, recreational, cultural, and physical benefits. Their loss also threatens: the billion dollar Gulf of Mexico seafood industry; the city of New Orleans and many other urban, industrial, and agricultural areas that rely on the wetlands as natural protection from hurricanes and storm damage; winter habitat for 70 percent of the Nation's waterfowl; a multi-billion dollar a year oil and gas industry; and the Nation's largest port complex, which passes about 16 percent of our waterborne commerce. A \$35 million feasibility study is currently examining a variety of major actions over a 10-year period, ranging from barrier island protection to the reintroduction of inflows and the addition of sediment to replenish wetlands.

USACE Authorities Which Can Be Used for Aquatic Ecosystem Restoration

Continuing Authority Programs (CAP)

Many ecosystem restoration projects can be done under the CAP and thus do not require specific Congressional authorization. Three of the CAPs are designed specifically for ecosystem restoration.

Project Modifications for Improvement of the Environment

Work under this authority provides for modifications in the structures and operations of water resources projects constructed by USACE to improve the quality of the environment.

Additionally, USACE may undertake restoration projects at locations where an existing USACE project has contributed to the degradation. The primary goal of these projects is ecosystem restoration with an emphasis on projects benefiting fish and wildlife. The project must be consistent with the authorized purposes of the existing USACE project which is being modified. These projects are authorized by Section 1135 of the Water Resources Development Act of 1986, as amended. The Federal share of each separate project may not exceed \$5 million, including studies, plans and specifications, and construction. A non-Federal sponsor is required to provide 25% of the cost of the project.

Aquatic Ecosystem Restoration

Work under this authority may carry out aquatic ecosystem restoration projects that will improve the quality of the environment, are in the public interest, and are cost-effective. There is no requirement that these projects be associated with any existing USACE project. Authorized by Section 206 of the Water Resources Development Act of 1996, the non-Federal share of these projects is 35 percent and the Federal share is limited to \$5 million, including studies, plans and specifications, and construction.

Beneficial Uses of Dredged Material

Work under this authority provides for the use of dredged material from new or existing Federal projects to protect, restore, or create aquatic and ecologically related habitats, including wetlands. In addition to the benefits justifying the costs, the project must not result in environmental degradation. Authorized by Section 204 of the Water Resources Development Act of 1992, as amended, the cost sharing (35% non-Federal, 65% Federal) would be applied to the incremental cost above the least cost method of dredged material disposal consistent with engineering and environmental criteria.

C. Towards More Collaboration on Ecosystem Restoration

The value of using NRCS and USACE ecosystem restoration programs together is perhaps best illustrated by the Emiquon Ecosystem Restoration project. This effort basically combines NRCS's WRP with USACE's Section 206 Aquatic Ecosystem Restoration authority. The site lies along the Illinois River, and it had been isolated from the river by dikes, drained by pumps, and used for agricultural cultivation for several decades. The Nature Conservancy, owner of the land, entered it into the WRP with a 30 year easement. NRCS not only helped by providing the easement, but also with vegetative restoration of parts of the site. USACE's contribution was infrastructure designed to manage the water levels and flows between the site and the river. A managed connection was needed to maintain the site as a productive wetland. This is because the level of the Illinois River at that point is artificially elevated due to navigation improvements (locks and dams), so just breaching the dikes and letting the water level on the site be the same elevation as the river would result in an open water lake rather than a wetland. (The Emiquon project is further discussed in Section 9).

There are likely many more sites which could benefit from similar combinations of NRCS and USACE programs. Each agency has its niche and particular expertise. NRCS works directly with people on the land, by providing technical and financial support for private landowners to protect, restore, and enhance wetlands on their property. USACE's strength is engineering solutions that involve managing the water and the geomorphology of water bodies.

Another area where increased coordination could yield large benefits is in the siting of ecosystem restoration activities. Ecologists and wildlife biologists often point out the value of contiguous wetlands. Two wetlands adjacent to each other provide more valuable habitat than they would if they were separated. NRCS has recently shared the locations of its wetland reserve and floodplain easements with USACE. This information is very useful to planners at USACE. Similarly, locations of USACE ecosystem restoration projects might be a useful piece of information for NRCS to have in focusing their WRP program, especially since 'riparian areas

which link protected wetlands' and 'lands adjacent to protected wetlands that contribute significantly to wetland functions and values' are eligibility criteria for their WRP program. USACE and NRCS should be aware of each other's existing projects so that their benefits can be considered and leveraged when making decisions for future Federal projects.

4. Working Together on Flood Risk Management

As a nation, we face many challenges in managing flood risks. Developments are often located in flood prone areas which are protected by aging and poorly maintained flood risk reduction infrastructure. The responsibility for managing the Nation's flood risks does not lie exclusively with any single Federal or non-Federal entity. Rather, it is shared across multiple Federal, State, and local government agencies with a complex set of programs and authorities, as well as with private citizens.

A. Relevant NRCS Programs and Authorities

Emergency Watershed Protection Program - Floodplain Easement

Background

Section 382 of the Federal Agriculture Improvement and Reform Act of 1996, Public Law 104-127, amended the Emergency Watershed Protection Program (EWPP) to provide for the purchase of floodplain easements as an emergency measure. Since 1996, the NRCS has purchased floodplain easements on lands that qualify for EWPP assistance. Floodplain easements restore, protect, maintain, and enhance the functions of the floodplain; conserve natural values including fish and wildlife habitat, water quality, flood water retention, ground water recharge, and open space; reduce long-term federal disaster assistance; and safeguard lives and property from floods, drought, and the products of erosion.

Land Eligibility

NRCS may purchase EWPP easements on any floodplain lands that have been impaired within the last 12 months or that have a history of repeated flooding (i.e., flooded at least two times during the past 10 years).

Easement Payments

Under the floodplain easement option, a landowner voluntarily offers to sell to the NRCS a permanent conservation easement that provides the NRCS with the full authority to restore and enhance the floodplain's functions and values. In exchange, a landowner receives the lowest of the three values established for WRP as an easement payment

- a value based on a market analysis,
- a geographic rate established by the NRCS State Conservationist or
- the landowner offer.

Restoration of the Floodplain

The easement provides NRCS with the authority to fully restore and enhance the floodplain's functions and values to natural conditions to the greatest extent practicable. NRCS may pay up to 100 percent of the restoration costs. NRCS actively restores the natural features and characteristics of the floodplain through re-creating the topographic diversity, increasing the

duration of inundation and saturation, and providing for the re-establishment of native vegetation. NRCS may pay 75 percent of the cost of removing buildings when appropriate.

Landowner Use

Landowners retain several rights to the property, including:

- quiet enjoyment
- the right to control public access and
- the right to undeveloped recreational use such as hunting and fishing.

At any time, a landowner may obtain authorization from NRCS to engage in other activities, provided that NRCS determines it will further the protection and enhancement of the easement's floodplain functions and values. These compatible uses may include managed timber harvest, periodic haying, grazing, or prescribed burning. NRCS determines the amount, method, timing, intensity, and duration of any compatible use that might be authorized. While a landowner can realize economic returns from an activity allowed for on the easement area, a landowner is not assured of any specific level or frequency of such use, and the authorization does not vest any right of any kind to the landowner.

NRCS Dams

Local communities and local watershed improvement districts, with NRCS assistance, have constructed over 11,000 dams in 47 states since 1948. Most of these structures were constructed as part of the Small Watersheds Program (PL-534 Flood Control Act of 1944 and PL-566 Watershed Protection and Flood Prevention Act) with the primary purposes as flood control and sediment storage. In some cases municipal water supply storage was added to the flood pool requirements at the expense of the local sponsor. These structures typically consist of a compacted earth fill embankment, a concrete/steel pipe principal spillway with concrete riser overflow structure, and a vegetated earthen auxiliary spillway. In most cases, these structures were constructed on private lands with perpetual easements granted to or purchased by the local sponsor. The local sponsor has full responsibility for the operation, management, control, and maintenance of these structures. NRCS can, and typically does, provide inspection assistance and engineering services at the request of the local sponsor.

Many of these dams are nearing the end of their 50-year design life. Rehabilitation of these dams is needed to address critical public health and safety issues in these communities. NRCS currently has a [Watershed Rehabilitation Program](#) which can provide technical and financial assistance to local sponsors for rehabilitation of these structures to current standards and to extend the design life well into the future. Non-structured approaches to flood risk reduction are also authorized by both PL-566 and the Rehabilitation Amendments of 2000. The purchase of floodplain easements as well as the removal and relocation of buildings at risk from dam failure, are authorized.

Rehabilitation projects may be cost shared between the federal government and local sponsors. NRCS may provide 65 percent of the total cost of the rehabilitation project. Local sponsors can provide the remaining 35 percent in cash or through "in kind" costs for the value of land rights, project administration, and other planning and implementation costs associated with the project. Federal funds cannot be used for operation and maintenance activities.

In addition to addressing human health and safety issues, rehabilitation provides opportunities for communities to provide new benefits, such as adding municipal and irrigation water supplies, recreation, and wetland and wildlife enhancements.

B. Relevant USACE Programs and Authorities

How USACE can Help with Flood Risk Management

USACE involvement in Flood Risk Management began with the passage of the Flood Control Act of 1936. This Act established that Federal investigations and improvements to rivers and other waterways for flood control purposes was to be carried out by USACE. These improvements consisted of what we now call structural flood damage reduction. Structural flood damage reduction measures consist of means designed to control, divert, or exclude the flow of water from the flood prone areas and include detention, diversion, levees and floodwalls, and hydraulic channel modifications. It evolved to include non-structural flood damage reduction techniques including relocation, acquisition, flood proofing, flood insurance, flood preparedness/warning/response and public education.

Over the years, USACE's mission of addressing the causes and impacts of flooding has evolved from flood control and flood prevention to more comprehensive flood risk management. These changes reflect a greater appreciation for the complexity and dynamics of flood problems – the interaction of natural forces and human development – as well as the federal, state, local and individual partnerships necessary for thorough management of the risks caused by coastal storms and heavy rains.

The Flood Risk Management Program is aimed at reducing risk to human safety and property damage in the event of floods and coastal storms. The Civil Works program has constructed 8,500 miles of levees and dikes, 383 reservoirs, and more than 90 storm damage reduction projects along 240 miles of the nation's 2,700 miles of shoreline. Upon completion, and with the exception of reservoirs, most of the infrastructure built under this program is transferred to the sponsoring cities, towns, and special levee districts that own and operate the projects.

Flood risk is a shared responsibility between federal, state, and local agencies and individual property owners. There are many ways that risk can be reduced. Buying down risk is a concept that has been around for several years which is shown graphically below in Figure 5. There are several places where NRCS and USACE may overlap or have information sharing needs.

Shared Flood Risk Management: Buying Down Risk

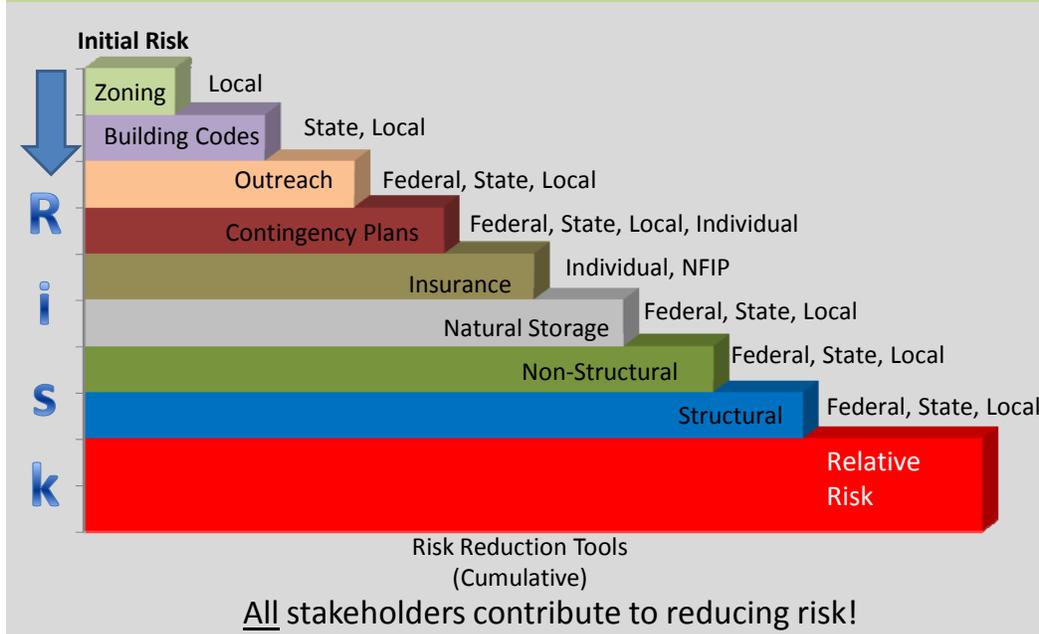


Figure 5 - Buying Down Risk

Risk management is defined as the process of identifying, evaluating, selecting, implementing and monitoring actions taken to mitigate levels of risk. The goal of risk management is scientifically sound, cost-effective, integrated actions that reduce risks while taking into account social, cultural, environmental, ethical, political and legal considerations. The USACE’s approach to flood risk management includes collaborations with partners and stakeholders—i.e., the Federal Emergency Management Agency (FEMA), the Department of Housing and Urban Development, the NOAA, state governments, sponsors and affected citizens, as well as NRCS.

Additional information on the USACE Flood Risk Management program can be found at <http://www.nfrmp.us/>. Similarly, more details on the USACE Levee Safety Program can be found at <http://www.usace.army.mil/leveesafety/Pages/main.aspx>.

Risk Management Center

USACE has a center of expertise dedicated to Risk Management. The Risk Management Center was established in 2009 and is part of the USACE Institute for Water Resources. Its mission is to support the USACE Civil Works program by managing and assessing risks for dam and levee systems, support dam and levee safety activities, and to develop policies, methods, tools and systems to enhance those activities.

Silver Jackets

The National Response Plan issued in December 2004 by the Department of Homeland Security provided the framework for collaboration between Federal, state, local, and tribal agencies, in addition to, nongovernmental organizations, private-sector, and emergency management entities in order to prepare for, respond to, and recover from major disasters. The planning and implementation of preventive solutions to these disasters have typically been achieved through individual agency processes and procedures. Even though many agencies and local governments have been successful in maintaining strong partnerships, overall national interagency collaboration for pre-disaster activities has been intermittent.

Because flooding is the nation’s leading natural disaster, as a starting point, an interagency pilot program with focus on flood mitigation was implemented. The pilot program was termed Silver Jackets to symbolize the unity of Federal effort. Teams are initiated at the state level, typically with representatives from USACE, FEMA, the State National Flood Insurance Program (NFIP) coordination office, and the State Hazard Mitigation Office. The scope of these teams is flood risk management, and the state may elect to focus on any part of the flooding life-cycle (Response, Recovery, Mitigation and Preparation/Training). They may expand and contract according to their focal areas. NRCS is participating on these interagency teams in several states.



Figure 6. Silver Jackets

Silver Jackets teams operate continuously; they are not linked to a particular project, but instead provide a unified interagency approach to addressing a state's priorities. No single agency has the 100 percent solution, but each may have one or more pieces to contribute. The Silver Jackets team is the forum where all agencies come together with the state to leverage their resources and implement a solution.

The primary goals of the Silver Jackets program are to:

- Facilitate strategic life-cycle flood risk reduction,
- Create or supplement a continuous mechanism to collaboratively solve state-prioritized issues and implement or recommend those solutions,
- Improve processes, identifying gaps and counteractive programs, and preventing duplication,
- Optimize resources, including talent, data/information and funding,
- Improve and increase flood risk communication and present a unified interagency message, and
- Establish close relationships to facilitate integrated post-disaster recovery solutions.

The multitude of USACE programs and authorities are available to teams as they determine how best to jointly address the issues, but two authorities are most often utilized. These are the Flood Plain Management Services Program (described on page 34) and the Planning Assistance to States Program (described in Section 7). Additional information on the Silver Jackets program can be found at www.nfrmp.us/state.

Individually Authorized Studies and Projects

Dam Safety Assurance Program (DSAP) Section 1203, WRDA 1986 (P.L. 99-662)

This authority provides for modification of completed USACE dams and related facilities for safety purposes due to new hydrologic or seismic data or changes in state-of-the-art design or construction criteria. Dam safety modifications which do not qualify under DSAP are accomplished under Operations and Maintenance, General funding (for smaller projects) or as Major Rehabilitation under Construction, General funding (for larger projects). Fifteen percent of dam modification costs under DSAP are paid by non-Federal sponsors or agreement signatories in the same proportion as the initial project construction costs.

Standing Authorities

Review of Completed Projects.

Flood Plain Management Services Program. The program's authority stems from Section 206 of the 1960 Flood Control Act (PL 86-645), as amended. Its objective is to foster public understanding of the options for dealing with flood hazards and to promote prudent use and management of the Nation's flood plains. Upon request, program services may be provided to state, regional, and local governments, Native American Indian Tribes, and other non-federal public agencies without charge. Program services also are offered to non-water resource federal agencies and to the private sector on a 100 percent cost recovery basis. Those eligible for 'free' services may choose to voluntarily contribute funds to increase the scope of services.

Continuing Authorities Program

Flood Control Projects (Section 205 of the 1948 Flood Control Act) provides that without specific authorization, USACE may study, adopt, and construct flood damage reduction projects. Work under this authority provides for local protection from flooding by the construction or improvement of flood control works such as levees, channels, and dams. Non-structural alternatives are also considered and may include measures such as installation of flood warning systems, raising and/or flood proofing of structures, and relocation of flood prone facilities. Non-Federal sponsors must comply with the Federal flood insurance program and prepare a floodplain management plan within one year after signing a PCA and implement the plan one year after project completion. The non-Federal share for these projects is 35 percent and the Federal share of costs for any one project may not exceed \$7 million. The Federal program is limited to \$55 million per year.

Emergency Streambank and Shoreline Erosion (S. 14 of the 1946 Flood Control Act) authorizes USACE to study, adopt and construct emergency streambank and shoreline protection works to protect public highways and bridges, other public works, and nonprofit public services such as churches, hospitals, and schools. The non-Federal share for these projects is 35 percent and the Federal share of costs for any one project may not exceed \$1.5 million. The annual program limit for Federal expenditures is \$15,000,000

Snagging and Clearing for Flood Control (S. 208 of the 1954 Flood Control Act) provides that without specific authorization, USACE may study, adopt and construct in-stream clearing and snagging projects in the interest of flood control. The Federal share of costs for any one project may not exceed \$500,000 (per Section 915(b), P.L. 99-662). Non-Federal sponsors must participate in project costs in accordance with the established requirements as previously set forth for structural flood control projects or measures under the Section 205 authority. The non-Federal sponsor is also responsible for all costs in excess of the Federal cost limit.

Intergovernmental Flood Risk Management Committee (IFRMC) is a national forum with core leadership from USACE, FEMA, Association of State Flood Plain Managers (ASFPM), and the National Association of Flood and Stormwater Management Agencies (NAFSMA). This committee has been expanded to include other stakeholder groups, such as the Association for State Dam Safety Officials (ASDSO). Through this committee, organizational leadership uses or when possible even changes existing policies and programs to transition into a comprehensive and shared process of lowering or “buying down” flood risks. As the transition occurs, the IFRMC identifies and recommends necessary administrative, policy, and legislative changes for complete implementation of the collaborative risk-informed decision process for managing flood risks.

Federal Interagency Floodplain Management Task Force (Task Force). Responding to the mandate in the 1968 National Flood Insurance Act, the Task Force was first established in 1975 to develop a “unified national program for floodplain management.”¹

¹ The Task Force was created by the Water Resources Council pursuant to Public Law 90-448, Section 1302(c). Responsibility for conduct of the Task Force was later reassigned by the Office of Management and Budget to the Federal Emergency Management Agency (FEMA) by letter dated September 9, 1982.

Recently, FEMA, with support of the USACE has reconvened the Task Force with the overall goal of protecting the health, safety, and welfare of the public by reducing flood losses and protecting the natural environment. Ten federal agencies (including USACE and USDA) are involved in the Task Force and have been meeting since October 2009 and have begun to develop a Work Plan and strategies to:

- Improve communication, coordination, and collaboration among the federal agencies in floodplain management efforts, and work closely with state and local governments, the private sector, and non-profit organizations;
- Prepare reports for the President to transmit to the Congress on any further actions or proposals necessary to achieve a unified national program for floodplain management;
- Conduct studies and assessments of floodplain management efforts and set realistic national objectives for reducing flood losses and protecting and restoring the natural resources and functions of floodplains; and
- Identify and address federal policies and programs that have conflicting program missions or that are not consistent with achieving the goals of floodplain management.

C. Regional Flood Risk Management Team (RFRMT): USACE and NRCS Working Together

After the June 2008 flood disaster in the states of Wisconsin, Indiana, Illinois, Iowa, and Missouri, an Interagency Levee Task Force (ILTF) was established to bring together state agencies and federal agencies with flood recovery roles to join forces to effectively meet short-term recovery needs while exploring short-term and long-term solutions for reducing flood risk into the future. Operating under the guidance of the ILTF were individual state-level Interagency Levee Working Groups (ILWG), established within the framework of the FEMA Joint Facility Office for each of the impacted states. It was the ILWGs that also, as part of the solution development process, evaluated alternative structural and non-structural methods for long-term risk reduction. The members of the ILTF and the ILWGs resoundingly declared the collaboration and communication of the organizations a huge success.

For example, the Iowa ILWG developed a non-structural alternative project in Louisa County, Iowa that resulted in a non-structural alternative to a proposed structural repair. The alternative required the cooperation of the levee's public sponsor, county and state mitigation agencies, USACE and NRCS to implement. The alternative combined over 300 acres of NRCS flood plain easements with significantly reduced structural repairs to protect a state highway. As a result of the collaborative actions, over 1200 acres were reconnected to the floodplain, gaining not only improved environmental habitat, but increase flood storage capacity, while continuing to protect an important state road.

The existence of the NRCS Emergency Watershed Protection (EWP) easements were a crucial factor due to the fact that that flood protection of those lands no longer provided benefits to support the Benefit Cost Ratio for full repair. Had the ILWG interagency team not been involved, it is more likely that USACE would have repaired the entire levee, and the ecological and flood storage benefits gained by leaving the lower end of the levee system breached, thus reconnecting these floodplain lands to the Iowa River, would have been lost.

The ILTF charter expired in August 2009; however, the state and federal partners agreed to continue the regional efforts for the long-term as a Regional Flood Risk Management Team (RFRMT). The RFRMT integrates pre-flood mitigation planning with a long-term strategy to plan and implement pre- and post-flood emergency actions, while developing promising nonstructural alternatives and other flood risk mitigation actions recognized to reduce future flood risk within the region. The RFRMT is comprised of representatives from the states of Illinois, Iowa, Minnesota, Missouri and Wisconsin. Other team members include representatives from the FEMA, NRCS, National Weather Service, USACE, EPA, U.S. Fish and Wildlife Service (USFWS) and the U.S. Geological Survey (USGS). The RFRMT has evaluated processes and developed white papers on recommended changes to policy and programs at the national level based on their recent flood experiences. Learn more about the RFRMT at www.mvd.usace.army.mil/rfrmt/.

5. Working Together on Natural Disaster Recovery

When our Nation is faced with a natural disaster, the federal government in its entirety must work together to provide essential and lifesaving services to the public. The Stafford Act (42 U.S.C. §5170b) authorizes FEMA to direct federal agencies to use their resources to provide assistance in the event of a major disaster or emergency declaration by the President. The National Response Framework (NRF) is a guide that identifies how the Nation conducts all-hazards response. It integrates the response actions of federal, state and local agencies as well as non-governmental organizations. The NRF identifies the importance of Partnership among government agencies at all levels.

Engaged partnerships are essential to preparedness. Effective response activities begin with a host of preparedness activities conducted well in advance of an incident. Preparedness involves a combination of planning, resources, training, exercising, and organizing to build, sustain, and improve operational capabilities. Preparedness is the process of identifying the personnel, training, and equipment needed for a wide range of potential incidents, and developing jurisdiction-specific plans for delivering capabilities when needed for an incident.

Source: National Response Framework, U.S. Department of Homeland Security, January 2008

Both NRCS, through USDA, and USACE, through the Department of Defense, have roles in the NRF. In addition, both agencies play an important role in natural disaster recovery through their own programs and authorities.

A. Relevant NRCS Programs and Authorities

Emergency Watershed Protection – Traditional Program

The purpose of the Emergency Watershed Protection (EWP) program is to undertake emergency measures, including the purchase of flood plain easements, for runoff retardation and soil erosion prevention to safeguard lives and property from floods, drought, and the products of erosion on any watershed whenever fire, flood or any other natural occurrence is causing or has caused a sudden impairment of the watershed.

It is not necessary for a national emergency to be declared for an area to be eligible for assistance. Program objective is to assist sponsors and individuals in implementing emergency measures to relieve imminent hazards to life and property created by a natural disaster. Activities include providing financial and technical assistance to remove debris from streams, protect destabilized streambanks, establish cover on critically eroding lands, repairing conservation practices, and the purchase of flood plain easements. The program is designed for installation of recovery measures.

Public and private landowners are eligible for assistance but must be represented by a project sponsor. The project sponsor must be a public agency of state, county, or city government, or a special district or tribal government. Work is authorized by section 216, P.L. 81-516, (33 U.S.C. 701b1) and Sections 403-405, P.L. 95-334, (16 U.S.C. 2203-2205).

B. Relevant USACE Programs and Authorities

USACE Emergency Management Program

USACE is typically activated in an emergency under the NRF, which is led by FEMA. USACE has been designated as Coordinator for Emergency Support Function (ESF) 3: Public Works and Engineering. USACE also plays a support role in several other ESF's. In addition to work performed as part of the NRF, USACE can also provide emergency response and disaster assistance under P.L. 84-99 (33 U.S.C. §701n) and Sections 15, 19, 20 of the Rivers and Harbors Act of 1889 (obstructions to navigation). USACE expert personnel are trained to deal with a variety of disasters including hurricanes, floods, tornados, earthquakes, drought, snowstorms, terrorist attacks and industrial accidents.

Each year USACE responds to more than 30 presidential disaster declarations and numerous state and local emergencies involving ice storms, flooding, wildfires and hurricanes. USACE also manages a Deployable Tactical Operations System that features rapid response vehicles designed to deploy within 18 hours as mobile field offices. When disaster strikes, USACE personnel stand ready to respond, moving rapidly into the affected area to provide a wide range of vital services including:

- restoring critical public services or facilities
- participating in search and rescue operations

- clearing debris to reopen transportation routes, drainage channels, water supply intakes, sewer outfalls, etc.
- supplying drinkable water and emergency power
- repairing or rebuilding flood control and shore protection structures, such as levees
- creating temporary housing
- providing technical assistance, including structural evaluations of buildings and damage assessments.
- emergency dredging.

Some of these activities may be limited to actions to save lives and protect improved property (public facilities/services and residential or commercial developments).

C. Intersection between NRCS and USACE Natural Disaster Recovery Programs

As described in the beginning of this section, USACE and NRCS both have roles in the NRF. The NRF identifies the Coordinators (C) Primary (P) or Support (S) agencies for each of the 15 ESF's. Of these 15, NRCS and USACE jointly contribute in eight areas. Table 3 below lists these roles.

Table 3. USACE and NRCS Roles in the NRF

Emergency Support Function	DoD/USACE	USDA
#1: Transportation	S	
#2: Communications		
#3: Public Works and Engineering	C/P	S
#4: Firefighting		
#5: Emergency Management		
#6: Mass Care, Emergency Assistance, Housing and Human Services	S	S
#7: Logistics Management and Resource Support	S	S
#8: Public Health and Medical Services	S	S
#9: Search and Rescue	S	
#10: Oil and Hazardous Materials Response	S	S
#11: Agriculture and Natural Resources	S	C/P/S
#12: Energy	S	S
#13: Public Safety and Security	S	
#14: Long-term Community Recovery	S	P
#15: External Affairs		S

The largest intersection between NRCS and USACE in the natural disaster recovery area is a responsibility for removing debris from streams and waterways. In some cases, the USACE and NRCS can quickly clear debris from the waterways by using local resources and augmenting those resources with assistance from neighboring communities and local governments. In other cases, the debris is so extensive that a comprehensive management plan is necessary to deal with

the problem. USACE and NRCS have been working with the FEMA, U.S. Navy, U.S. Coast Guard, and EPA to delineate debris removal roles and responsibilities for these larger disasters.

After the 2005 hurricanes NRCS, utilizing their Emergency Watershed Protection authority, also worked closely with USACE regarding Regulatory issues relating to the restoration of scenic stream channels.

6. Working Together on Section 10/404 Permitting

The purpose of this section is to provide information about the USACE Section 10/404 permitting program as it may apply to implementation of NRCS programs and authorities as well as the potential overlap between the USACE Regulatory Program and the NRCS Wetland Conservation Compliance provisions of the Food Security Act (FSA) (Swampbuster). Many of the actions NRCS implements under its programs require some form of permitting from the USACE Regulatory Program. In addition, there is often overlap between the Swampbuster and Regulatory programs.

A. USACE Regulatory Program

The USACE Regulatory Program is one of the oldest in the Federal Government. Initially, it served a fairly simple, straightforward purpose: to protect and maintain the navigable capacity of the nation's waters. USACE has been involved in regulating activities by others in navigable waterways through the granting of permits since the passage of the Rivers & Harbors Act of 1899 (primarily under Section 10 of this Act, 33 U.S.C. 403). Time, public necessity, evolving policy, case law, and new statutory mandates have changed the complexion of the Regulatory Program, adding to its breadth, complexity, and authority. Passage of the Federal Water Pollution Control Amendments of 1972 (commonly known as the Clean Water Act (CWA)) (33 U.S.C. 1344) specifically Section 404 of this Act, greatly broadened the USACE's Regulatory Program by giving USACE permitting authority over the discharge of dredged and fill material in the "waters of the United States," including wetlands. The CWA also gives the U.S. Environmental Protection Agency (EPA) an oversight role requiring them in conjunction with USACE to promulgate guidelines in the implementation of Section 404 of the Act. For example, the Section 404(b)(1) Guidelines were developed by EPA in conjunction with the USACE as a safeguard to prevent environmental degradation of waters of the US.

The mission of today's Regulatory Program is to protect the Nation's aquatic resources, while allowing reasonable development through fair, flexible and balanced permit decisions. (For more information on the USACE Regulatory program and its history, go to the [Regulatory Headquarters Homepage](http://www.usace.army.mil/CECW/Pages/cecwo_reg.aspx) (http://www.usace.army.mil/CECW/Pages/cecwo_reg.aspx).

In general, when one proposes to undertake a regulated activity falling within USACE jurisdiction, they must apply to the USACE for a permit. The USACE will evaluate the proposal and make a decision to issue, modify, or deny the permit for the project. The decision is based on a full public interest review that involves balancing the proposed activity's benefits against the activity's detrimental impacts. In most cases, permits are issued with conditions that describe additional actions and/or mitigative measures that must be taken to protect the environment and

otherwise make the proposal acceptable. In addition, for a Section 404 permit to be valid, a Section 401 water quality certification is required. This certification is issued by the State or Tribe and often contains special conditions that automatically become part of the USACE Section 404 permit.

USACE Jurisdiction: Do I need a Permit?

Before the permit evaluation process begins, the USACE must determine if the work falls within its jurisdiction. Determining whether work requires a permit from the USACE can be very complex and should be made by the local USACE Regulatory Office. This would also be the case for jurisdictional determinations and discharges not requiring permits (unless an approved local NRCS-USACE Memorandum of Agreement establishes a different responsible party). Misinterpretation of the regulations that apply to the USACE Regulatory program can lead to unauthorized work becoming subject to enforcement action by either USACE or EPA.

There are two major aspects of USACE Regulatory Program jurisdiction. The first component is geographical jurisdiction, which refers to whether or not the work is occurring in and/or affecting a water of the U.S. The second component is the nature of the activity proposed, i.e. whether or not the work is a regulated activity.

Geographical Jurisdiction. What is a water of the US? What is a Wetland?

USACE regulations broadly define two important terms, “navigable waters of the US” for Section 10 of the Rivers and Harbors Act and “waters of the US” for Section 404 of the Clean Water Act.

Section 10 “**navigable waters of the US**” are defined as “those waters subject to the ebb and flow of the tide shoreward to the mean high water mark and/or are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. A determination of navigability, once made, applies laterally over the entire surface of the waterbody, and is not extinguished by later actions or events which impede or destroy navigable capacity.”

Section 404 of the Clean Water Act uses the term “**waters of the US**” which is more encompassing and includes the Section 10 “navigable waters”. As stated in USACE regulations, the term “waters of the US” refer to those areas which are subject to USACE Regulatory jurisdiction and currently include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie portholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate commerce.

- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified above
- Territorial seas, measured seaward a distance of three miles;
- Wetlands adjacent to waters noted above.

However, due to court decisions that have either expanded or restricted the application of the term, “waters of the US”, it is sometimes necessary for USACE and EPA to issue guidance or conduct rulemaking to clarify the terminology.

What is a Wetland?

USACE and EPA jointly define wetlands as those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas. However, some wetlands are not easily recognized, often because they are dry during part of the year. These wetland types include, but are not limited to, many bottomland forests, pocosins, pine savannahs, bogs, wet meadows, potholes, and wet tundra.

A major aspect of the Regulatory program is determining which areas qualify for protection as jurisdictional wetlands. In reaching these decisions, USACE uses its [1987 Wetland Delineation Manual in conjunction with the appropriate Regional Supplement](#) to identify wetlands. The USACE can perform the delineation upon request; however, this may take time due to often high workloads in USACE District Regulatory offices. Therefore, delineations are typically performed by a consultant hired by the property owner and verified by USACE personnel.

Activity Jurisdiction. What is a regulated activity?

Section 10 of the Rivers and Harbors Act requires USACE authorization for structures or work (dredging, disposal, excavation, filling) in, over or under navigable waters of the US which would affect the course, location, condition, or capacity of those waters

Section 404 of the Clean Water Act requires USACE authorization for the discharge of dredged or fill material into "waters of the US, ***including most wetlands.***" Activities requiring a Section 404 permit include, but are not limited to:

- Placement of fill material.
- Ditching activities when the excavated material is sidecast.
- Levee and dike construction.
- Mechanized land clearing.
- Land leveling.
- Most road construction.
- Dam construction.
- Types of activities involved in NRCS programs: erosion control and bank stabilization projects, removal of sediments from streams and or other water

bodies, construction of grade control or water control structures, construction, modification or replacement of dams, or conversion of wetlands for agricultural purposes.²

What is “dredged” and/or “fill material” and what does “discharging” mean?

“Dredged material”: Material that is excavated or dredged from waters of the United States.

“Fill material”: Material placed in waters of the United States where the material has the effect of (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of a water of the United States.

“Discharge of dredged material”: Any addition of dredged material into, including redeposit of dredged material other than incidental fallback within, the waters of the United States. Incidental fallback is the redeposit of small volumes of dredged material that is incidental to the excavation activity in waters of the United States when such material falls back to substantially the same place as the initial removal.

Note: “Permanently” placed and “temporarily” placed dredged and/or fill material are both subject to Section 404 Clean Water Act. (See Sec 33 CFR Section 323.2 for further information with regard to dredge and fill material, the two activities (the only two) regulated under the provisions of Section 404 Clean Water Act).

Exemptions

There are some activities that have been determined to be exempt from USACE regulation. For example, discharges resulting from normal farming, silviculture and ranching activities (plowing, seeding, cultivating, etc) are generally not subject to regulation under Section 404 of the Clean Water Act. To be considered exempt, these activities must occur in the context of established (on-going) farming operations. See [33 CFR Section 323.4](#) for further information on farming activities that may not be regulated.

Types of Permits

Once the USACE has determined that the activity and proposed project site fall within its jurisdiction, the USACE must next decide on the type of permit required. Many types of relatively minor activities in waters of the United States are authorized by General Permits (GP). GPs authorize activities that are similar in nature, cause no more than minimal adverse environmental effects, both individually and cumulatively, and are not contrary to the public interest. GPs may be authorized for no more than 5 years and must be reevaluated prior to reissuance. There are three types of GPs: Nationwide Permits (NWP), Regional General Permits (RGP), and Programmatic General Permits (PGP). The type of GP that NRCS will become involved with most frequently is the NWP.

The NWP program is administered by the USACE Regulatory Headquarters Office (HQ) where new NWP activities are proposed and existing NWPs are reauthorized through the Federal

² This list is not exhaustive, any activity discharging dredged or fill material into a waterway or wetland could require a permit.

Register with public input received nationwide. Activities authorized by a NWP normally will have nationwide application or at least will have utilization in various regions of the country. A list of general conditions will apply nationally to all NWPs; however, individual USACE Districts may also develop their own regional conditions that must be met as well. A NWP is valid for an individual project only if all conditions for the appropriate NWP are met. Some activities authorized by NWPs may require that a Pre-Construction Notification (PCN) be submitted to the appropriate USACE District office prior to the commencement of the activity. If USACE determines that the activity meets the terms and condition of the NWP, the project will be verified, via written authorization. Site specific special conditions may be added to the authorization as well by the District Engineer. The time period to construct a project verified by a NWP is two years, unless the NWP is scheduled to expire within this timeframe, in which case, the authorization will only be valid until the NWP expires.

For any NWP to be valid, a Section 401 water quality certification is also required. This certification is issued by the State or Tribe and often contain special conditions that automatically become part of the USACE Section 404 permit. When the NWPs are reissued every five years (per regulation), the States have 60 days to either issue, waive, condition or deny 401 certification for each specific NWP. When a 401 certification is issued or waived for a specific NWP, a separate 401 certification is not required on a project-by-project basis unless the proposed project does not meet the terms and conditions of the 401 certification. When a NWP is conditionally certified, an individual 401 certification is required unless certain conditions are met. If a 401 certification is denied for a specific NWP, an individual 401 certification is required.

Table 4 lists NWPs that may be applicable to NRCS Programs. Numbers with an asterisk are the most relevant to NRCS authorities and Programs. Be aware that some USACE Districts have revoked one or more of the NWPs³. As such, you should always contact the nearest USACE District Regulatory office for information on valid NWP's and applicable Regional Conditions in your state. For a complete copy of the regulations see the [Federal Register Notice](#) Vol. 72, No. 47 / Monday, March 12, 2007. Current NWPs will expire on March 18, 2012 and will be reissued on or before that date.

Table 4 List of NWPs that may be applicable to NRCS Programs

NWP #	Title	Potential uses ⁴
3*	Maintenance	Repair, replacement & rehab of authorized serviceable structures/fills; removal of sediments and debris in the vicinity of authorized bridges/culverts
5	Scientific Measurement Devices	Staff gauges, water recording devices
6	Survey Activities	Core sampling, exploratory trenching,

³ All NWPs have been revoked within the New England District and replaced with State Programmatic General Permits.

⁴ Please read the entire text of the specific NWP and all general/regional conditions and contact your local Regulatory office with any questions about a specific project.

NWP #	Title	Potential uses ⁴
13*	Bank Stabilization	soil surveys Eroding stream/river banks
18	Minor Discharges	Many uses (must not exceed 25 cubic yards and not allowed for stream diversions)
19	Minor Dredging	Many uses (25 cy limit, many restrictions)
27*	Aquatic Habitat Restoration, Establishment, and Enhancement Activities	Wetland Reserve Program (WRP)
30	Moist Soil Management for Wildlife	WRP
33*	Temporary Construction, Access and Dewatering	WRP, mitigation projects
34*	Cranberry Production Activities	Enhancement, expansion and modification activities at existing cranberry production operations (cumulative acreage limit)
37*	Emergency Watershed Protection and Rehabilitation	Emergency Watershed Protection Program Activities
40*	Agricultural Activities	Individual Agricultural Users
41*	Reshaping Existing Drainage Ditches	For water quality improvement
43	Stormwater Management Facilities	Large Agricultural users
45	Repair of Uplands Damaged by Discrete Events	Repair Damage from storm, floods and other discrete events

Activities that do not meet the requirements of the NWPs may still receive GP authorization via RGP or PGP. The RGPs are similar to NWPs; however, they are developed at the district level with agency and public input for use by a region or regions within a particular district and do not apply elsewhere in the country. PGPs are also developed at the district level for regional use only. PGPs are founded on an existing state, local or other Federal agency program and designed to avoid duplication with that program. The other regulatory agencies evaluate and provide the authorization that will satisfy the USACE statutory regulatory requirements.

For projects that do not meet the terms and conditions of a NWP, RGP or PGP, an individual permit (IP) is required. There are two types of IPs: A Letter of Permission (LOP) or a Standard Permit (SP). These are site and activity specific and normally requires an agency coordination letter for the LOP and a public notice for the SP. Just as in the development of a general permit, in the case of an IP, the USACE receives input from other Federal and State resource agencies and the general public and must thoroughly document its compliance with many related Federal laws and regulations prior to permit issuance.

B. NRCS Program - Wetland Conservation Provisions of the Food Security Act (Swampbuster)

Swampbuster is a provision of the [Food Security Act of 1985](#) (P.L. 99-198) (FSA) that discourages the conversion of wetlands to cropland use and relates only to eligibility to participate in the current farm bill programs. Unless an exception applies, producers who convert a wetland area to cropland lose eligibility for several federal farm program benefits. Exceptions include conversions that began before December 23, 1985 (prior converted croplands), conversions of wetlands that had been created artificially, crop production on wetlands that became dry through drought, and conversions that NRCS has determined have minimal effect on wetland values. Swampbuster provisions were amended in the [1996 Farm Bill](#) (P.L. 104-127) to provide greater flexibility for producers and landowners. The 1996 Farm Bill also allows for conversion of a wetland that had been agricultural land in 1985 (when the original swampbuster provision went into effect) and that reverted back to its wetland state. The [2002 Farm Bill](#) (P.L. 107-171, Sec. 2002) made only a single change prohibiting third party providers from making Swampbuster determinations.

Upon request, the NRCS will determine if a producer's land has areas subject to Swampbuster. NRCS is the lead agency responsible for certified wetland determinations on all agricultural lands pursuant to Swampbuster. The agency maintains a list of the plants and combinations of soils and plants found in wetlands, and uses these technical tools, along with the hydrology of the area, to conduct determinations. These determinations stay in effect as long as the land is used for agricultural purposes (unless a violation occurs) or until the producer requests a review due to natural events. NRCS also certifies previous wetland determinations upon request. To maintain eligibility, participants must certify that they have not produced crops on converted wetlands after December 23, 1985, and did not convert a wetland after November 28, 1990, to make agricultural production possible.

Agricultural croplands are lands intensively used and managed for the production of food or fiber to the extent that the natural vegetation has been removed and cannot be used to determine whether the area meets applicable hydrophytic vegetation criteria in making a wetland delineation. Areas that meet this definition may include intensively used and managed cropland, hayland, pasture land, orchards, vineyards, and areas which support wetland crops (eg., cranberries, taro, watercress, rice). Agricultural croplands do not include range lands, forest lands, wood lots, or tree farms.

Under Swampbuster, the NRCS has the responsibility to determine whether:

- Land meets wetland criteria, and identify the wetland by a specific label. The Food Security Act Manual defines wetlands based on the following characteristics:
 - i. A predominance of hydric soils.
 - ii. Are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in saturated soil conditions.
 - iii. Under normal circumstances support a prevalence of hydrophytic vegetation.

- Production of an agricultural commodity on a wetland is possible under natural conditions without action by the person that would destroy the natural wetland characteristics.
- Production of an agricultural commodity on certain converted wetlands would have a minimal effect on the hydrological and biological aspects of the wetland.
- Conversion of a wetland was for the purpose of or has the effect of making the production of an agricultural commodity possible.
- A prior converted cropland is abandoned.
- A farmed wetland is abandoned.
- Maintenance of existing drainage exceeds scope and effect of the original drainage.
- A site warrants a minimal effect determination.
- A plan and schedule for restoration, mitigation, or replacement of a converted wetland is adequate.
- Restoration under an approved plan is accomplished according to schedule.

Prior converted cropland (PC) is a converted wetland where the conversion occurred before December 23, 1985; an agricultural commodity had been produced at least once before December 23, 1985; and as of December 23, 1985, the area was capable of producing an agricultural commodity (i.e., did not support woody vegetation and was sufficiently drained to support production of an agricultural commodity). The conversion could include draining, dredging, filling, leveling, or otherwise manipulating (including the removal of woody vegetation or any activity that results in impairing or reducing the flow and circulation of water) the wetland area. In addition, PC meets the following hydrologic criteria:

- (i) If the area is not a pothole, playa, or pocosin, inundation is less than 15 consecutive days during the growing season or 10 percent of the growing season, whichever is less, in most years (50 percent chance or more).
- (ii) If the area is a pothole, playa, or pocosin, inundation is less than 7 consecutive days and saturation is less than 14 consecutive days during the growing season in most years (50 percent chance or more).

Agricultural activities in prior converted cropland are generally not regulated under Swampbuster or CWA Section 404. For more details, consult the appropriate local NRCS or USACE office.

Minimal Effect Determinations. The NRCS may determine that an action has a minimal effect on a wetland's functions and therefore not be considered a swampbuster. This, however, does not exempt the landowner from the CWA Section 404 permit requirements. All persons granted a minimal effect exemption will be provided with the appropriate USACE contact information to seek evaluation of an activity under Section 404 of the CWA.

Farmed wetlands (FWs) are wetlands that were drained, dredged, filled, leveled, or otherwise manipulated and used for producing an agricultural commodity before December 23, 1985, and that meet all of the following criteria:

- (i) If the area is not a pothole, playa or pocosin, it is inundated for at least 15 consecutive days during the growing season or 10 percent of the growing season, whichever is less, in most years (50 percent chance or more).
- (ii) If the area is a pothole, playa, or pocosin, it is inundated for at least 7 consecutive

days or saturated for at least 14 consecutive days during the growing season in most years (50percent chance or more).

- (iii) Production was made possible or enhanced by the manipulation.
- (iv) The area has not been abandoned.

Coordination with the USACE. Certified wetland determinations performed by NRCS are based on FSA definitions, and may not be valid for CWA Section 404 jurisdiction and permitting requirements. NRCS will include the following language in all wetland determinations provided to the USDA participant:

“This certified wetland determination/delineation has been conducted for the purpose of implementing the wetland conservation provisions of the Food Security Act of 1985. This determination/delineation may not be valid for identifying the extent of the USACE’s Clean Water Act jurisdiction for this site. If you intend to conduct any activity that constitutes a discharge of dredged or fill material into wetlands or other waters, you should request a jurisdictional determination from the local office of the USACE prior to starting the work.”

C. Partnering in Section 10/404 Permitting: Benefits, Challenges, and Potential Solutions

BENEFITS of Working Together on Section 10/404 Permitting

The Clean Water Act (CWA) and the FSA provide countless opportunities for NRCS and USACE staff to work together especially given what they have in common. For one, they interact with the public on a daily basis and as a result become the face of the agency. Despite administering different programs, these agency representatives often provide assistance and services to the same group of people. In some cases these services are provided in a vacuum without the benefit of shared knowledge and technical expertise with the other agency. In situations where USACE and NRCS have overlapping jurisdiction and responsibilities, cooperation between the agencies is essential to ensure that landowners are not unnecessarily burdened or confused while trying to comply with the various requirements. In times of reduced budgets and expectations to do more with less, it makes fiscal sense to cooperate to minimize repetitive efforts and redundant environmental reviews. The following hypothetical example is meant to illustrate the importance and benefits of collaboration.

Joe Smith contacted the local NRCS office for information on upgrading a culvert in a stream on his farm. The existing culvert was degraded and undersized which resulted in erosion during moderate rains. The erosion problems have worsened since he recently expanded his farm and constructed a farm market. Sandy Johnson from the local NRCS office was assigned to provide assistance with designing a structure to meet his needs. Sandy was not aware of the USACE regulatory program or requirement, specifically that the project could be designed to qualify for a nonreporting nationwide permit if the impacts did not exceed the threshold of the nationwide permit. While talking with his neighbor Frank, Joe learned that Frank had to get a permit from the USACE when he replaced a culvert a few years back. Joe decided to contact the nearest USACE Regulatory office who sent out Karen Roberts to meet with him onsite. Karen did not

know much about farming or the NRCS assistance program only that the work as proposed exceeded the nationwide threshold and would require an individual permit. She told Joe that if he changed the design slightly that it would likely meet the requirements of the nationwide permit and no further authorization would be required. Joe was then faced with the decision either to start the individual permit process for the structure as currently designed or contact Sandy about redesigning the structure to meet the conditions of the nationwide permit. Either way, Joe is concerned with the time and effort it will take to go back and forth between the USACE and NRCS to resolve this.

This example illustrates why awareness of the programs of both NRCS and USACE can help the staff of each agency not only achieve its mission but also more efficiently serve the needs of the public. In the example above, the USACE staff being unaware of the specific factors behind the NRCS proposed design, could be suggesting modifications which were not appropriate for the farmer's situation. On the other hand, by knowing some of the basic requirements of the USACE Regulatory Program, the NRCS staff from the start could have designed a solution for the farmer that not only resolved the problem but also qualified for nonreporting nationwide permit.

Mitigation Opportunities. Applicants are asked to seek alternatives that will avoid and minimize impacts to the aquatic environment. Being aware of the expertise and the programs offered by NRCS can provide the USACE viable alternatives to consider. For example, in the Rock Island District, USACE staff considers NRCS technical assistance programs and Conservation Reserve Enhancement Program (CREP), as well as other federal and state farm programs as viable alternatives to stream channelization and erosion control projects. Farmers are requested to consider utilizing these programs when they apply for permits because they often are less damaging when implemented with the assistance of NRCS.

Another potential benefit to the Section 10/404 Regulatory Program results from NRCS making available to the USACE its wetland reserve and floodplain easement data. Being aware of this information, USACE can direct applicants needing offsite mitigation to available parcels adjacent to these easements.

CHALLENGES to Partnering in Section 10/404 Permitting

Inconsistencies. One of the greatest challenges of the USACE Regulatory Program is the perceived inconsistent implementation of the program across USACE District boundaries. The USACE is often questioned why one District can authorize an activity under a NWP while another District requires an IP for the same activity. Reasons for different approaches in permit evaluation are often case-specific and may not always be evident to the permit applicant, the general public, or even other federal and state agencies, thus causing confusion and frustration. Much is factored into how and why a District implements the Section 10/404 permitting program such as variations in States' wetland and 401 quality certification programs, county/local requirements, level of controversy, public interest, threatened and endangered species, cultural resources and even legal precedent.

Regional differences in aquatic resource types and scarcity can be a factor as well especially in regard to what activities can be considered under the NWP program. The main requirement for an activity to be authorized by a NWP is that it cannot result in more than minimal impacts. In some regions of the country, however, historic or cumulative wetland losses may mean that even small impacts are significant. As a result, some USACE Regulatory offices either impose regional conditions that restrict the use of particular NWPs or revoke them altogether. For example, the New England District has revoked all NWPs in Maine, New Hampshire, Vermont, Massachusetts, Connecticut and Rhode Island. Instead, they have developed six State PGPs. For some of these PGPs there is one joint application reviewed by both the USACE and the state or local regulatory authority and one combined authorization. For some activities below a certain impact threshold, applications are reviewed only by the state or local regulatory authority and that authorization functions as a valid USACE permit.

Timing. Timing involved in securing a USACE permit can also pose a challenge to the permit applicant especially when time sensitive federal/state funding is involved. Time delays in the permit evaluation process can be due to staffing issues but often time delays are outside the USACE's control. For example, the formal consultation process with the USFWS to resolve a threatened or endangered species issue can add months of processing time to a project. Understanding the regulatory process can help to reduce time delays or at least to prepare accordingly in anticipation of unavoidable delays.

Jurisdictional Delineations. In 1994, the Departments of the Army, Agriculture, and the Interior, and the EPA were signatories to a Memorandum of Agreement (MOA) concerning the Delineation of Wetlands for Purposes of Section 404 of the CWA and Subtitle B of the FSA (Ag MOA). The purpose of this MOA was to specify the manner in which wetland delineations and certain other determinations of waters of the US made by the USDA under the FSA will be relied upon for purposes of CWA Section 404. As a result, when wetland delineations and determinations were performed in accordance with the terms of the Ag MOA, they would be accepted by the other signatory agencies. Recognizing the important contributions of agricultural producers, the Ag MOA illustrated a commitment to ensuring that Federal wetlands programs are administered in a manner that minimizes the impacts on affected landowners and duplications and inconsistencies between Swampbuster and the CWA Section 404 program to the fullest possible extent consistent with the important goal of protecting wetlands.

However, the following changes occurred which made adherence to the AgMOA problematic:

The 1996 amendments to the FSA eliminated the concept of "abandonment" for prior converted (PC) cropland. As a result, land may be considered non-wetland for Swampbuster purposes, and wetland for CWA purposes. Further, as a result of the Supreme Court's "SWANCC" decision, a wetland may be subject to Swampbuster, but no longer regulated by the USACE for CWA purposes. These inconsistencies in jurisdiction defeat a major purpose of the MOA, which was to ensure that wetland determinations performed by one agency would be relied upon by the other.

The 2002 amendments to the FSA prohibit NRCS from sharing confidential producer information to agencies outside USDA. This makes it illegal for NRCS to provide

wetland delineations and determinations to the USACE and EPA for CWA permitting and enforcement without the landowner's permission.

The Ag MOA states that NRCS wetland determinations shall not be revised without interagency coordination. However, NRCS is required to comply with the decisions of the USDA National Appeals Division, which may overturn a previous wetland determination without coordination among the agencies.

Per the Ag MOA, NRCS had agreed to conduct wetland determinations on agricultural land for the purpose of obtaining a CWA permit. However, Regulations at 7 CFR §12.30 state that NRCS's responsibilities regarding wetlands extend only to implementing the wetland conservation provisions of the FSA.

As a result of the above, in 2005, both USACE and NRCS withdrew from the Ag MOA. In addition, other factors continue to make partnering difficult.

Lack of Understanding of Each Other's Programs. The lack of knowledge about the other agencies' programs and policies is a continued barrier to collaboration. Unless one agency works frequently with another, it is very unlikely that the two will stay in tune with each other's programs and policies, especially as they change. This often results in scenarios that are very similar to the hypothetical example cited in the previous section. The easiest way to correct this problem is to find ways to ensure that the other agency has up to date information on the other's program on a regular basis. In one USACE District, for example, after investigating a Section 404 violation on an FSA program participant's property which occurred because of a lack of understanding what the USACE regulates, USACE staff was invited to give a presentation on the Regulatory Program at the local NRCS staff training courses.

Restriction on Information Sharing. A continued obstacle to collaboration is the restriction imposed on NRCS from sharing information with the USACE. This results in the need for each agency to deal separately with a program participant, unless the participant allows NRCS to share information with USACE.

POTENTIAL SOLUTIONS to Effective USACE/NRCS Collaboration in Section 10/404 Permitting

Preapplication meetings. Preapplication meetings can help streamline the permitting process when held before work begins or funds are committed. During a pre-application meeting, the USACE can inform the project proponent about the permit process and alert them to concerns or issues that may arise during the evaluation of the proposed work. Successful pre-application meetings result reducing unnecessary delays. NRCS can be invited to participate in a preapplication meeting especially when the project involves a NRCS program or funding.

Development of GPs. Another streamlining tool is the development of new RGPs and PGPs. While the USACE is normally the one to propose new activities, anyone can request the USACE to consider developing either a RGP or PGP for a category of work resulting in minimal impacts and currently requiring individual review.

Another possibility is for the NRCS to request authorization of certain activities under NWP 23. This NWP provides authorization for certain activities that meet the following:

- Activities fall within the USACE jurisdiction and require a permit;
- Activities proposed are undertaken, assisted, authorized, regulated, funded, or financed, in whole or in part, by another Federal agency or department.
- That agency or department must have determined, pursuant to the Council of Environmental Quality's implementing regulations for National Environmental Policy Act (NEPA), that the activities are categorically excluded from environmental documentation, because they are included within a category of actions which neither individually nor cumulatively have a significant effect on the human environment; and
- The Chief of Engineers has concurred with that agencies or department's determination that activity is categorically excluded and has approved the activity for authorization under NWP 23.

Currently, only three Federal agencies have approved Categorical Exclusions under NWP 23.

Improved Communication and Education. While USACE/NRCS partnering cannot change the permitting requirements of either agency, improved communication and training between the agencies can lead to finding more efficient ways to move through the regulatory process especially for certain types of activities.

Joint and even crossing training opportunities can provide a greater understanding of the other agency's program. For example, understanding what the threshold limits are for some of the nationwide permits, NRCS can work with the landowner in considering alternative construction methods. Often there is more than one construction method that could be used to obtain the desired result and if the amount of work in USACE jurisdictional areas can be reduced or eliminated by implementing a different construction method, the project could be redesigned to either qualify for a nationwide permit or result in a no permit required determination.

USACE has also agreed to participate in an interagency working group with NRCS to identify areas needing improvement and find solutions to shared challenges, while working within the legal framework of the Clean Water Act and other Federal environmental laws that are routinely addressed during the permit review process. One such effort to enhance the working relationship is linked to the New NRCS National Watershed Program Manual. It requires that agencies with expertise or authority related to a planned watershed action be requested in writing to be "Cooperating Agencies." Because 404 permits are generally involved with this type of project, the USACE will be asked to be a "Cooperating Agency" on most NRCS watershed projects.

Finally, working together, NRS and the USACE could develop Regional, State or District level MOUs which outline how wetland determinations, jurisdictional determinations and reports of unauthorized work will be handled in a particular area.

7. Working Together on Integrated Water Resources Management (Watershed Planning)

Integrated Water Resources Management (IWRM) is a comprehensive, participatory planning and implementation tool for managing and developing water resources in a way that balances social and economic needs, and that ensures the protection of ecosystems for future generations. Water's many different uses—for agriculture, healthy ecosystems, flood risk management, navigation, municipal and industrial supplies, and recreation—demand coordinated action.

By using a watershed approach USACE, NRCS and others are working to evaluate the impact changes in one area will have elsewhere in the watershed in order to achieve the best overall balance. One of the keys to this approach is to involve as many stakeholders as possible in the planning process. Managing resources through a watershed approach promotes collaboration, facilitates greater balance among competing water uses and ensures the restoration and protection of the environment.

A. NRCS Watershed Based Authorities and Initiatives

Watershed Program

Through the Watershed Programs NRCS provides technical and financial assistance to States, local governments and Tribes (project sponsors) to plan and implement authorized watershed project plans for the purpose of:

- watershed protection
- flood mitigation
- water quality improvements
- soil erosion reduction
- rural, municipal and industrial water supply
- irrigation
- water management
- sediment control
- fish and wildlife enhancement
- wetlands and wetland function creation and restoration
- groundwater recharge
- easements
- wetland and floodplain conservation easements
- hydropower
- watershed dam rehabilitation

Under the Watershed Program, NRCS cooperates with States and local agencies to carry out works of improvement for soil conservation and for other purposes including flood prevention; conservation, development, utilization and disposal of water; and conservation and proper utilization of land.

NRCS implements the Watershed Program through:

- Watershed Surveys and Planning
- Watershed Protection and Flood Prevention Operations

Mississippi River Basin Initiative

To improve the health of the Mississippi River Basin, including water quality and wildlife habitat, the NRCS is developing the Mississippi River Basin Healthy Watersheds Initiative (MRBI). Through this new Initiative, NRCS and its partners will help producers in [selected watersheds](#) in the Mississippi River Basin voluntarily implement conservation practices that avoid, control, and trap nutrient runoff; improve wildlife habitat; and maintain agricultural productivity.

These improvements will be accomplished through a conservation systems approach to manage and optimize nitrogen and phosphorous within fields to minimize runoff and reduce downstream nutrient loading. NRCS will provide producers assistance with a system of practices that will control soil erosion, improve soil quality, and provide wildlife habitat while managing runoff and drainage water for improved water quality.

The Initiative will build on the past efforts of producers, NRCS, partners, and other State and Federal agencies in the 12-State Initiative area to address nutrient loading in the Mississippi River Basin. Nutrient loading contributes to both local water quality problems and the hypoxic zone in the Gulf of Mexico. The 12 participating States are Arkansas, Kentucky, Illinois, Indiana, Iowa, Louisiana, Minnesota, Mississippi, Missouri, Ohio, Tennessee, and Wisconsin. MRBI will be implemented by NRCS through the NRCS programs and initiatives listed below.

Great Lakes Restoration Initiative

The Great Lakes Restoration Initiative will be a multiagency effort led by the Environmental Protection Agency (EPA). NRCS has signed an interagency agreement with EPA for approximately \$34 million to fund GLRI conservation work in priority watersheds within all Great Lakes states. The purpose of the agreement is to provide funding to NRCS to implement priority programs, projects, and activities to protect, restore and maintain the Great Lakes ecosystem, as identified in the [GLRI Action Plan](#).

The distribution of funds is based on the size of the priority watersheds within individual states and the conservation needs within those watersheds. A Great Lakes Coordinator from NRCS will ensure program consistency between the states.

GLRI funds will be distributed to priority watersheds Great Lakes states ([Illinois](#), [Indiana](#), [Michigan](#), [Minnesota](#), [New York](#), [Ohio](#), [Pennsylvania](#), and [Wisconsin](#)) using existing conservation programs described in earlier sections of this handbook and including:

Conservation Technical Assistance Program (CTAP)

Emergency Watershed Protection Program Floodplain Easement (EWPP-FPE)

Environmental Quality Incentives Program (EQIP)

Farm and Ranch Lands Protection Program (FRPP)

Wildlife Habitat Incentives Program (WHIP)

B. USACE Watershed Programs & Authorities

Building Strong Collaborative Relationships for a Sustainable Water Resources Future Initiative

Although USACE is generally a ‘project-based’ organization, it has adopted the watershed approach, and is moving towards integrated water resources management (IWRM). A recent USACE initiative aimed at fostering IWRM is ‘Building Strong Collaborative Relationships for a Sustainable Water Resources Future’. A report on this effort is available at <http://www.building-collaboration-for-water.org/> USACE acted as a facilitator and convener, bringing together a diverse range of Federal, state, interstate, tribal, and nongovernmental organizations to lay the groundwork for a sustainable water future.

Legislative Authorities for Watershed Studies

Watershed and River Basin Assessments [Section 729, WRDA 1986 (P.L. 99-662), as amended by Section 202, WRDA 2000 (P.L. 106-541)] provides the Secretary of the Army discretionary authority to assess the water resources needs of river basins and watersheds of the United States, including needs relating to ecosystem protection and restoration; flood risk management; navigation and ports; watershed protection; water supply; and drought preparedness. The assessments are carried out in cooperation and coordination with and the Secretary of the Interior; the Secretary of Agriculture; the Secretary of Commerce; the Administrator of the Environmental Protection Agency; and the heads of other appropriate agencies and consultation with Federal, tribal, State, interstate, and local governmental entities. They will also have a multi-purpose and multi-objective scope that can accommodate flexibility in the formulation and evaluation process.

The objective of the watershed assessments will be a watershed planning document that furthers integrated water resources management, evaluating a range of project options simultaneously to determine the best combination of projects to achieve multiple goals over the entire watershed rather than examining each potential project in isolation from others. These assessments may or may not recommend further USACE studies or projects. The non-Federal share of assessments carried out under this authority will be 25 percent. Work-in-kind credit may not exceed an amount equal to 25 percent of the costs of the assessments.

Planning Assistance to States Program

This is also known as the Section 22 Program. It permits USACE to use its technical planning expertise to supplement and support state and tribal efforts to undertake broad, statewide, comprehensive water resources planning. Upon request, USACE will cooperate with a state or tribe in the preparation of plans for the development, use and conservation of water and related land resources located within the state or tribal boundaries. Assistance is given within the limits of available appropriations. This program is cost shared on a 50 percent Federal and 50 percent non-Federal basis. Typical problems and opportunities studied under this program are related to: flood risk management, water supply, water conservation, water quality, hydropower, erosion, navigation, and related environmental resources.

How to Increase Collaboration at the Watershed Level

NRCS and USACE complement each other better in watershed planning than in any other area. USACE has skills and experience in managing the levels and flows of large rivers and interconnected reservoir systems. NRCS has expert knowledge of soils, best management practices, and relationships with land owners. Watershed planning is also a prominent theme in the strategic plans of both agencies.

One of the greatest strengths of the NRCS is their focus on locally led conservation and planning. NRCS has a presence in most counties in the U.S. The USACE could utilize this presence by keeping NRCS staff fully informed and seeking their input during planning activities. Utilizing these close NRCS ties to county conservation districts can benefit the nation by increasing citizen involvement and communication.

Many USACE watershed-based projects have identified the need for NRCS work to improve practices on the land in the watershed, but generally, these have not been funded through USACE and have not received priority from NRCS. Ideally, NRCS could concentrate its resources and programs to address concerns within the watershed of a USACE project. For instance, a USACE ecosystem restoration project that will improve aquatic habitat through sedimentation reduction could be enhanced by accelerated NRCS application of upland erosion control practices. Conversely, an NRCS project or targeted area may benefit from USACE authorities or technical skills.

More communication, a higher level of awareness of each agency's projects and priorities, even some joint watershed planning, might lead to better collaboration in this area. For example, a practice could be established whereby the State Conservationists and corresponding District Engineers meet on a yearly basis to discuss priorities, projects, and funding for the next fiscal year.

8. Role of Non-Federal Partners

NRCS works directly with landowners through conservation planning and assistance designed to benefit the soil, water, air, plants, and animals that result in productive lands and healthy ecosystems. Most NRCS programs are cost-shared with private landowners. Science and technology are critical to good conservation. NRCS experts from many disciplines come together to help landowners conserve natural resources in efficient, smart and sustainable ways. Whether developed in a laboratory or on the land, NRCS science and technology helps landowners make the right decisions for every natural resource. NRCS succeeds through partnerships, working closely with individual farmers and ranchers, landowners, local conservation districts, government agencies, Tribes, Earth Team volunteers, and many other people and groups that care about the quality of America's natural resources.

Similarly, Sponsors play a very important role in the USACE civil works program since USACE requires a non-federal cost-sharing sponsor for most of its projects. Sponsors are state, tribal or local governments or nongovernmental agencies interested in joining with USACE to solve a water resources problem or participate in a civil works project. It is the non-federal sponsor that must perceive a problem and submit a request for federal action or assistance. Regardless of

whether a project meets the requirements of a continuing or standing authority or requires individual authorization, USACE cannot become involved until this request is made. Sponsors also play a key role throughout the entire project development process, including participating on the Project Delivery team, sharing financial costs, providing input on sponsor requirements for budget, scope, quality and schedule.

Section 211 of the Water Resources Development Act of 1996 gives authority to authorized non-federal agencies to take the lead on planning studies and major flood risk management projects. The USACE District is eligible for the same amount of federal dollars but will manage the projects with a higher degree of local control. The study process and requirements for obtaining project approval and funding are the same as those that USACE must follow. All environmental regulations that apply to USACE (like the National Environmental Policy Act [NEPA]) would also apply to the sponsor. The non-federal sponsor must pay all costs up front; however, reimbursement for the federal share of cost is possible after approved projects are completed.

An example of a Section 211 project is the [Brays Bayou Flood Damage Reduction Project](#) (Project Brays). This is a joint effort of USACE Galveston District and the Harris County Flood Control District (HCFCD). Project Brays consists of over 70 individual projects over 31 miles of bayou. The majority of these efforts are aimed at reducing flood risk and are associated with the federal project. However, there are also several local initiatives to enhance environmental and recreational elements along Brays Bayou which are not included in the federal project. HCFCD is the lead on this Section 211 project. Galveston District is involved in oversight and monitoring of planning, design and construction in accordance with federal rules, regulations and guidelines. USACE also shares in the cost of the project. A Project Cooperation Agreement (PCA) allows HCFCD to receive reimbursement for completed construction projects.

9. Case Studies, Examples, Other Resources

The purpose of this section is to highlight projects that illustrate how the programs and authorities of NRCS and USACE can be leveraged towards shared goals in real, on-the-ground projects. Difficulties and challenges that can arise in these collaborative projects will be discussed, as well as measures to overcome these and to find ways to work together.

A. Emiquon Ecosystem Restoration and Floodplain Reconnection

Emiquon is located on the Illinois River. From the beginning, the Emiquon project was conceived as a three-way collaboration. The Nature Conservancy, owner of the property, noted the shared goal of ecosystem restoration and floodplain reconnection among their Sustainable Rivers program, the NRCS Wetland Reserve Program (WRP), and the USACE Ecosystem Restoration program, and believed that they could accomplish more by working with the two agencies and tapping into their programs than by working alone. Each organization brought specific and complementary capabilities to the project as follows:

- TNC had the resources to purchase the land (7,000 acres) and ecologists well-versed in ecosystem restoration.

- NRCS had funds under the WRP to purchase easements and provide technical assistance with upland restoration.
- USACE had an aquatic ecosystem restoration program under Section 206 along with engineers who could design and construct movable gates, pumps, and other infrastructure to manage and control water levels and flows on the site.

The USACE part of this project will provide a managed connection with the Illinois River. Navigation improvements along the Illinois River have altered the level of the river upstream of the locks to create pools of sufficient depth for navigation. The Emiquon preserve is located upstream of one of the navigation locks, and therefore the level of the river is held higher than it naturally would be. So just breaching the levees and letting river water flow to Emiquon would result in a lake, not a productive wetland. Since a completely natural water regime is not possible, a managed connection is needed. This is where the expertise of USACE comes in. With a managed connection, the area can be drained and dried out occasionally, thus mimicking natural fluctuations, and maintaining the type of plant communities needed for a productive wetland.

However, despite good intentions on the part of all partners, problems were encountered. For example, it soon became obvious that the three organizations moved at different speeds.

TNC bought the land in 2002, and the donors who made this possible were expecting to see restoration follow soon afterward. They formed a Science Advisory Council and with the help of these experts developed a restoration plan for Emiquon.

Enrolling the property in the NRCS Wetland Reserve Program proved to be more difficult and took much longer than anticipated. Many real estate questions and issues caused delays. The delays cost TNC money because they had to carry the full cost of the land during this time. However, once the WRP easement was completed, the pumps were stopped and restoration began to happen.

Meanwhile, the USACE Emiquon Ecosystem Restoration Project, which is needed to enable reconnection to the Illinois River, and management of that connection, has been slow to get off the ground. Snags were encountered. Funding was sporadic and insufficient. As of early 2011, a Feasibility Report is not yet completed.

Related to the differing organizational paces, there are different concepts regarding when a project begins. What is a reasonable baseline starting point for a collaborative project like Emiquon? TNC began the project back in 2002, and the three-way partnership was part of the original plan at that time. So the 'collaboration' began then, enrollment of the parcel in the NRCS Wetland Reserve Program happened several years after that.

However, according to the USACE planning process, the 'project' has not begun yet. This is significant and problematic because the area has blossomed into a productive wetland since the pumping was stopped, thus making it more difficult to justify the USACE Section 206 project. Rather than using a corn field (the 2002 situation) as the 'without project' condition (i.e. the baseline condition against which the benefits of the project will be measured), USACE staff now

must use the partially restored wetland that exists at Emiquon today. Even though TNC scientists believe that the site will deteriorate in several years without any capability to manipulate water levels, USACE planners must use the current condition as the starting point for their project evaluation. Yet, does it make sense to use this initial and ephemeral flush of productivity as the ‘without project condition’? Emiquon will not stay as it is without a managed connection to the river; that is why TNC needed USACE as a partner in the first place.

Similarly, the process of enrolling Emiquon in the NRCS Wetland Reserve Program took much longer than The Nature Conservancy had imagined. TNC’s donors want to see results much sooner than 10 years. Furthermore, recent changes to the WRP as a result of the new Farm Bill require that the whole WRP process be completed in a single year. Under these conditions, it would not be possible to enroll a large complex site such as Emiquon in WRP. Another new requirement is a 7 year prior ownership. This has the potential to preclude organizations like TNC from purchasing land with the intent of restoring it with help from the WRP program.

Another issue related to the WRP easement is Compatible Use agreements. These agreements are issued by NRCS for activities occurring on WRP easements. According to NRCS, work that USACE would need to do as part of its project must be covered by a compatible use agreement and would be reviewed by NRCS every 5 years. The USACE is considering options with NRCS to insure a guarantee of its project’s continued operation on the Emiquon site through the entire 30 year WRP easement life.

How to measure the value of land credits where easements are involved is another issue which has arisen in the Emiquon project. The Nature Conservancy wants to use the value of the land as their cost share contribution to the USACE Section 206 project. At issue is how much has the WRP easement reduced the value of the land? By the dollar amount of the easement? What is the market value of the land with the easement? The agricultural value has certainly been lost, but the value of the property for fishing, hunting, other water-based forms of recreation may be significant.

B. Whitebreast Creek Watershed Ecosystem Restoration Project

The Whitebreast Creek Watershed is located in south central Iowa. USACE is collaborating with NRCS and the Iowa Department of Agriculture and Land Stewardship (IDALS) on a Section 206 Ecosystem Restoration project. The non -Federal sponsor is the Whitebreast Watershed Authority which consists of the Soil and Water Conservation Districts and Boards of Supervisors for the four counties which are located in the watershed.

The pre-settlement woodland and grassland that was prevalent in the watershed has been converted to row crops. These agricultural activities along with drainage and channelization activities have resulted in the loss of 98.9% of the wetlands within the watershed. Consequent increased runoff and erosion has contributed to high sediment loads being carried downstream to the Lake Red Rock Flood Storage Reservoir.

The Whitebreast 206 project goal is to restore wetlands and improve aquatic habitat with an ancillary benefit of reducing erosion and sediment loading to Whitebreast Creek and the Lake Red Rock Flood Storage Reservoir. To achieve this, the project will focus on features that improve wetland and in-stream habitats and enhance resource values. Specific proposed features

include construction of both upland and floodplain wetland ponds as well as in-stream pool-riffle complexes. Part of this collaborative effort included NRCS with its relationship with agricultural producers in the area and its available programs, to construct some of those upland and floodplain wetland ponds on farm property.

This project was initiated over a decade ago. Although the Feasibility study was drafted and circulated for comments in 2004, due to budgetary constraints, funding was not available to resolve the comments and complete the report. Recently, funding of this effort has resumed and USACE along with its partners are reviewing the project to assess any changes that may have affected the design and implementation of the project.

Once the project was reinitiated, some of the farmers were contacted who had expressed interest in having project features located on their land. Given the passage of time, some of those contacted no longer owned the land. Others decided to move forward on their own with pond construction. To move forward, the USACE would need to assess those constructed ponds and to determine what additional ponds and riffles, if any, were still warranted.

Once willing landowners are located, NRCS WRP easements, or some other form of protection, may be necessary to ensure that project features are protected. The WRP easements can be permanent or for 30 years. It is the preference of USACE to own the land in fee simple or possess an easement in perpetuity. This has resulted in concerns that the NRCS WRP easements may not be in effect long enough to realize all project objectives and may not satisfy USACE requirements. The NRCS does have programs that require permanent easements so these programs are being further explored to see how they fit in with the USACE Real Estate requirements.

There is also a financial issue regarding the best way to transfer funds. It may be possible to utilize the Economy Act to transfer funds to the NRCS for the design and construction oversight of the upland and floodplain ponds. USACE also has a 2-way MOU with USDA which provides for the transfer of funds between the two agencies (see Section 10 for a discussion of this agreement).

C. Bosque River Watershed Ecosystem Restoration Initiative

With a drainage area of more than 1,600 square miles, the Bosque River Watershed in Texas serves as the primary drinking water supply for more than 200,000 people. Water quality monitoring in the watershed has shown high levels of nutrients and bacteria that have contributed to excessive growth of algae and other aquatic plants in the river. Total Maximum Daily Load analyses for the river suggest that dairy waste application fields, municipal discharges and other lesser sources contribute to these high nutrient and bacteria loads.

USACE has been working with NRCS on this ecosystem restoration demonstration project. NRCS developed an Ecosystem Restoration Plan for the Bosque River Watershed. Due to the fact that many of the restoration activities would be occurring on privately owned land, it was very important to collaborate with NRCS to leverage the relationships that NRCS has built with agricultural landowners. Funding for the Bosque Initiative was individually authorized for \$10 million by the Water Resources Development Act (WRDA) of 2007, with a local match of 25% required by the legislation. Funding for the Bosque River Watershed is subject to annual

appropriations. USACE is working on a Comprehensive Plan for the Bosque. Other agencies involved include Texas A&M University, Texas Water Resources Institute, Spatial Sciences Lab, Texas Institute of Applied Environmental Research, Texas State Soil and Water Conservation Board, local Soil and Water Conservation Districts, and Brazos River Authority. There are also more than 8,000 individual landowners involved in the effort.

The project can be broken into four individual components or phases. Phase I consisted of establishing and convening a scientific advisory committee that provided guidance on the types of management practices that may be considered in the future and assisted in the development of a GIS representation of the watershed. Phase II built upon earlier work and used the Soil and Water Assessment Tool (SWAT) model to evaluate the impacts of implementing recommended management practices in the watershed. This phase also included the development of a report that described the recommended management practices in detail and provided general information on site selection, installation, operation, maintenance and expected effectiveness of each of these practices. Phase III tasks will be an on-the-ground planning effort and practice verification using models to estimate load reductions prior to implementation. Phase IV would begin the implementation process and will be focused on two initial sub-watersheds within the Bosque River watershed. Phase I and II have been completed and Phase III is in progress. Some of the management practices that may be implemented in Phase IV include:

- Terracing
- Revised grazing practices
- Alternative fertilizers
- Construction of swales
- Construction of instream riffle pool complexes; and
- Buffer strips

The project has faced its share of challenges. The first hurdle related to the need to implement solutions on private property. USACE typically needs to own the land or an easement on the land in order to construct a project. This need in the Bosque watershed to implement solutions on a very large number of privately-owned properties led USACE to involve NRCS given both their conservation expertise and their ability to work with private landowners.

D. Mississippi Coastal Improvements Program (MsCIP)

This USACE program has identified several opportunities for partnering with NRCS and other federal, state, and local agencies. The program was individually authorized by the Department of Defense Authorization Act of 2006 (P.L. 109-148) which directed the Secretary of the Army to conduct an analysis and design for comprehensive improvements or modifications to existing improvements in the coastal areas of Mississippi in the interest of hurricane and storm damage reduction, prevention of saltwater intrusion, preservation of fish and wildlife, prevention of erosion, and other water resources purposes, at full federal expense. The authorization required that interim recommendations for near term improvements be provided within six months and final recommendations be provided within 24 months of the enactment of the legislation.

As part of this effort, regular meetings with other agencies have been held to discuss project elements and learn more about projects that these other agencies are planning or implementing.

This allows for sharing of information and exchange of ideas on projects that are similar in nature, within the same watershed or even with identical purposes. Two such projects are discussed further in this section.

The [interim report](#) identified 15 one-time federal assistance projects to aid recovery of Mississippi coastal water resources infrastructure that was severely damaged during the hurricanes of 2005. These projects included hurricane and storm damage reduction, flood damage reduction and ecosystem restoration and involve both structural and non-structural measures. One of the authorized interim projects is the Long Beach Canals 2&3 in Harrison County Mississippi.

Long Beach Canals 2&3 Flood Damage Reduction (Harrison County MS). This project involves moving a bridge, changing the geometry of the canals and constructing an earthen berm and diversion channel at the upper limit of canal 2. It is expected that this plan will provide a significant reduction in water surface elevation, aesthetic improvement, increased circulation for water quality and aquatic resources habitat. As a result of interagency meetings on the project, it was discovered that NRCS had a smaller scale project with exactly the same purpose and project features. Discussions between the USACE Mobile District and NRCS led to the conclusion that the larger scale USACE project met the need of the NRCS project. NRCS had already proceeded with the design of their project feature and provided it to USACE. USACE incorporated this design into the project described above which is now 75% complete. This allowed NRCS to redirect remaining project funds to another needed project.

The [MsCIP final report](#) identified 12 elements consistent with the direction provided by P.L 109-148. These elements include two non-structural hurricane storm damage reduction elements, one structural hurricane storm damage reduction effort, seven ecosystem restoration elements, and 2 coastal ecosystem restoration elements. These efforts require additional congressional authorization to move forward. One of the elements identified in the final report is the Forrest Heights Ring Levy

Forrest Heights Levy (Gulfport MS). This City of Gulfport owned levy was damaged during Hurricane Katrina. Forrest Heights NRCS became involved in a project to repair the levy and had existing authority and funding. USACE Mobile District had separately identified a need to raise the levy due to flood zone elevations that were changed by FEMA. Unless the levy was raised, those properties inside the ring levy would be ineligible for flood insurance. Regular coordination with NRCS in this area led to an exchange of knowledge about each other's projects. Awareness of the NRCS project provided USACE with information that was useful in preparing the initial study. For example, NRCS did not raise a section of railroad tracks on a berm that was part of the current levy. NRCS provided the repair project design drawings to the District to be used in the USACE project to raise the levy. Having this information will result in cost and time savings for the Mobile District.

The NRCS levee repair project has been completed and USACE Mobile District is currently awaiting authorization and funding. If USACE had authorization and funding in place when NRCS was initiating the levy repair project, even more time and cost saving could have been

realized as there would have been the potential merge the two projects into a joint effort and save time and money on construction.

E. Western Lake Erie Basin Partnership (WLEB)

The [Western Lake Erie Basin \(WLEB\) Partnership](#) began as a USACE multi-purpose study individually authorized by Section 441 of the Water Resources Development Act (WRDA) of 1999. The goal was to develop measures to improve flood control, navigation, water quality, recreation, and fish and wildlife habitat in a comprehensive manner in the Western Lake Erie Basin. It directed USACE to cooperate with interested Federal, State, and local agencies and nongovernmental organizations and consider all relevant programs of the agencies. It has become a cooperative effort between USACE, NRCS and 14 other federal state & local agencies. It is a tri-state partnership dedicated to enhancing multi-purpose projects that improve land and water resource management in the basin and promote a healthy productive watershed.

Once formed, the WLEB Partnership developed a charter which documented their commitment to collaboration and consensus building - sharing resources and knowledge to link land use to water quality, support ongoing efforts and identify new opportunities to enhance and improve the watershed. Elements of the charter include:

- Applying watershed-based solutions to local problems and applying local solutions to watershed problems - inclusively empowering and building the capacity of local watershed groups and supporting ongoing efforts.
- Being results oriented - it will define the baseline status of the basin, identify and prioritize science based solutions, responsibly support the implementation of innovative and cooperative projects, monitor and evaluate its actions and support an adaptive management approach.
- Speak with one voice, promoting transparency, encouraging participation, being responsive, creating awareness, educating and informing.
- Provide the structure necessary to coordinate public and private resources across political boundaries to accelerate achievement of environmental goals and support for local conservation initiatives.

This process has since resulted in the identification of over 100 projects to improve flood control, navigation, water quality, recreation, and fish and wildlife habitat. Of these, USACE has several projects that are either in progress or completed. NRCS through its Great Lakes Restoration Initiative (GLRI) will be focusing its efforts on addressing non-point source pollution, farmland preservation, and critical wildlife habitats within Ohio. The \$6.4 million in GLRI funding will be available to Ohio landowners and agricultural producers through existing NRCS conservation programs, including the EQIP, WHIP, FRPP, and EWP-FPE.

F. Grand Prairie Irrigation Project

The Grand Prairie Irrigation Project (GPIP) is an Agricultural Water Supply/Groundwater Protection Project located in SE Arkansas. The project will serve approximately 240,000 acres of irrigated cropland. Currently most of the cropland is irrigated utilizing wells. Groundwater levels are declining at an average rate of approximately 1 foot per year and in some areas groundwater levels are less than 20 feet from the bottom of the aquifer.

Previous studies by USACE indicated that surface water available from the White River could supply part of the need for irrigation water. Other studies by the NRCS indicated that improvements in on-farm irrigation efficiency, irrigation water management, rainfall and runoff capture and the installation of conservation practices could reduce overall demand. Neither approach could provide an adequate solution alone.

It became apparent that the most logical approach to solving this problem was a combination of these options. Neither agency had the expertise or authorities needed to develop such a project alone. It was also apparent that planning, coordinating and funding such a large, long-term project through two different agencies would be a challenge.

At the request of the local sponsor, Congress provided funding through USACE for the development of a joint project plan with NRCS as a full partner. Costs of goods and services provided by the NRCS to USACE in the development of the joint project plan were reimbursed by USACE in accordance with the authorities of the Economy Act.

As a result of the close working relationships developed, a true joint project plan was completed. The plan consists of a canal and pipeline delivery system which will provide water to the edge of individual landowner's property, and on-farm conservation practices to move, manage and store irrigation water throughout the farm. USACE has primary responsibility for design and construction of the canal and pipeline delivery system. The NRCS has primary responsibility for design and construction oversight for on-farm conservation practices. On-farm conservation practices are installed on private property utilizing the NRCS Long-Term Contracting Procedure with funding passing from USACE. Conservation practices installed on private land as part of the project are owned and operated by the individual landowners. The NRCS Long-Term Contracts require landowners to operate and maintain these conservation practices for the life of the project.

G. Flood Risk Management Collaborative Project – Levee Setback in the Vandalia Drainage and Levee District, Illinois

The Illinois Interagency Levee Work Group (ILWG) has been focusing their efforts on several non-structural alternatives (NSAs) that will reduce future flood risks to the state. One of these involves a cooperative effort between USACE and NRCS. A potential NSA currently being examined by the group is a levee setback in the Vandalia Drainage & Levee District. The Vandalia Drainage & Levee District is located in Fayette County in south-central Illinois along the Kaskaskia River. The levee system was designed to protect 12,000 acres of highly productive agricultural lands. The 16.5 miles of clay levee that make up the district protects the internal area from up to a five-year flood event.

The Vandalia levee system was damaged by a large flood event that occurred in the spring of 2008. Two areas along the levee experienced severe erosion with the toe of the levee being scoured away. This is an ongoing issue with the levee system due the fact that it closely follows the meandering channel of the Kaskaskia River.

The USACE is currently working with the Vandalia Drainage and Levee District to develop plans for repair of these damages. The ILWG has been involved with this process through

reviewing and offering input on the potential repair alternatives. The recommended alternative now being moved forward with sponsor support is levee setbacks that would allow repair of the levee and gain needed standoff between the levee and the river to better protect it from future damages.

This setback levee will be constructed with material from the old levee and would allow for a portion of the floodplain (75-100 acres) to be reconnected with the river. The setback levee NSA offers several benefits including:

- reduced likelihood of damage to the levee in the future,
- increased flood retention in the floodplain which results in lowering the flood levels and risks in other areas,
- environmental restoration of floodplain forest and wetland habitat, and
- the setback allows the levee district to continue farming a large portion of the protected area.

Most of the costs (80 percent) for this project will be covered by the USACE' PL 84-99 program. Entry of the reconnected floodplain lands into the NRCS Wetland Reserve Program is also being explored to help offset costs to the sponsor associated with the levee repair and taking land out of agricultural production.

This type of collaborative effort has the potential to reconnect large areas of floodplain to the Kaskaskia and other rivers. The larger reconnected floodplain would have a more significant effect on reducing flood risk, restoring the environment, and also result in reduced repair cost over time because of the fewer instances of mobilizing and demobilizing repair crews.

H. USACE's Proposed RGP for water quality improvement projects on ranchlands located within the Northern Everglades Region of Florida and its contributing estuaries

The ecological communities within the Northern Everglades Regions predominantly consist of agricultural lands, wet prairies, improved pasture lands, adjacent sloughs, rivers, herbaceous and forested wetlands, and estuaries. The proposed activities will be implemented on lands that have active agricultural practices occurring. Historically, agricultural practices caused an increase in surface water drainage systems and flood control infrastructures resulting in an accelerated drainage of water and nutrients off agricultural lands and ultimately into Lake Okeechobee. The Jacksonville District, USACE is working with NRCS to address the high levels of nutrients that are being discharged into Lake Okeechobee, causing unwanted growth of nuisance vegetation and contributing to downstream degradation of the Everglades and estuaries on both east and west coasts of the state.

The Florida Ranchlands Environmental Services Project (FRESP) was a pilot program developed to design and field-test the Northern Everglades and Estuaries Payment for Environmental Service (NE-PES) Program. This program demonstrated the effectiveness of retaining water on these sites to reduce the amount of phosphates being discharged into the Lake Okeechobee. The program is managed and funded by the South Florida Water Management District (SFWMD) and implemented in collaboration with the USDA NRCS Conservation Innovation Grant, the

Florida Department of Agriculture and Consumer Services (FDACS), the EPA-319 Grant, and the W.K. Kellogg Foundation.

The NE-PES program is intended to provide a source for the needed water retention north of Lake Okeechobee and to contribute to the attainment of the water quality goals for Lake Okeechobee and its tributaries by capturing and holding phosphorus on agricultural lands. The program provides incentives for ranchers within the Northern Everglades Region to utilize existing water management infrastructure and strategies to increase the provision of water retention and nutrient load reduction into Lake Okeechobee. In the NE-PES program envisioned by FRESP, ranchers will submit proposals to State agencies (SFWMD and Florida Department of Agriculture and Consumer Services) for activities which will improve water retention and nutrient load reduction into Lake Okeechobee. If the rancher qualifies for the PES Program, they will be required to enter into contract with the State agreeing to retain water and phosphorus on their land. The ranchers will be required to provide a description of the baseline onsite condition which the rancher will have to maintain once the term of the contract has ended. To be eligible to submit a proposal to PES the applicant must meet the following four criteria: (1) Proposed lands must be located within the SFWMD's Northern Everglades region; (2) Proposed lands must have an existing drainage system in place that contributes to the maintenance of improved or semi-improved pastures; (3) The landowner must have received from the Florida Department of Agriculture and Consumer Services a "Presumption of Compliance" with state water quality laws resulting from submission of a Notice of Intent to implement agreed upon best management practices (BMP's) and conservation practices; and (4) Proposed lands must consist predominantly of soils characterized as Very Poorly or Poorly Drained by the (USDA-NRCS), and shall not encompass highly drained soils that support existing scrub or sandhill vegetation.

The work required by the ranchers would also require Section 404 authorization from the USACE. With the anticipated number of applications for this type of activity, the Jacksonville District Regulatory Division is considering the issuance of a proposed Regional General Permit (RGP) to more efficiently handle the number of request in a timely manner. The proposed RGP SAJ-106 would authorize the discharge of dredged or fill material for implementation of water management practices (diversion; water management drainage system; pumping plant; spoil spreading; streambank and shoreline protection measures; and water control structures) that will provide water management services of water retention and nutrient removal under contract with the NE-PES Program within the Northern Everglades and Estuaries Region of Florida. The proposed RGP is limited to waters of the United States (i.e., wetlands, tributaries, agricultural canals, and ditches) within the Kissimmee Chain of Lakes, Lake Kissimmee, Kissimmee River, Caloosahatchee River, Lake Okeechobee, and St. Lucie River watershed basins in the following counties: Charlotte, Collier, Glades, Hendry, Highland, Lee, Martin, Okeechobee, Orange, Osceola, Polk, and St. Lucie.

10. Common and Recurring Problems with NRCS/USACE Collaborative Efforts

A. Timing: Agencies Moving at Different Speeds

"Timing is everything", however in the world of federal projects it can be very difficult to synchronize timing amongst federal, state & local agencies. For USACE, years often pass while

Districts await authorization and funding for collaborative efforts. Meanwhile, the partner in the effort must move forward or risk losing their share of the funding altogether.

Although authorization and funding are to a large extent beyond the control of an agency, and especially field level staff, there are a few coping mechanisms. One is to maintain lines of communication between NRCS and USACE at the field level. Regular meetings to discuss projects, explore possible synergies, and in general work together can help to minimize the difficulties and disruptions of different timing. To the extent that nonfederal partners can gain the support of Congressional interests, this may help to assure adequate and timely authorization and appropriations. Another possibility is to seek funding jointly, through joint budget submissions for collaborative projects.

B. Different Forms of Land Ownership/Rights – From Easements to Fee Simple

Most of the projects which USACE builds are designed to last at least 50 years; many are still functioning for decades beyond that design life. Because of this, projects are generally constructed on land which is either owned in fee simple by USACE, or owned in fee simple by the nonfederal sponsor.

NRCS, on the other hand, utilizes easements in many of its programs. Some of these easements are in perpetuity, but most are for specified lengths of time, such as 30 years. Compatible use agreements issued on easements, which are generally required for the types of activities that USACE might do in a collaborative project, are typically in effect for five years.

These differing forms of land ownership and land rights can make it difficult for USACE and NRCS to work together, as discussed above in several of the case studies. If an impasse is reached, staff can elevate the problem to the NRCS/USACE Partnership Team by contacting their liaison.

C. Issues Related to Funding and Transfer of Funds Between Agencies

In several of the case studies, problems were encountered in the transfer of funds between the two agencies. The Economy Act has been used in this context, and its relevant provisions are discussed below. There is also a MOA between USACE and USDA which provides for transfer of funds both ways between the two agencies.

The Economy Act provides authority for federal agencies to order goods and services from other federal agencies (including other Military Departments and Defense Agencies) and to pay the actual costs of those goods and services. Congress passed the Act in 1932 to obtain economies of scale and eliminate overlapping activities of the federal government. The head of an agency or major organizational unit within an agency may place an order with a major organizational unit within the same agency or another agency for goods or services if: (1) funds are available; (2) the head of the requesting agency or unit decides the order is in the best interest of the US Government; (3) the agency or unit to be asked to fill the order is able to provide the ordered goods or services; and (4) the head of the agency decides that ordered goods or services cannot be provided as conveniently or economically by a commercial enterprise.

USACE and the USDA have entered into a [Memorandum of Agreement](#) (MOA) which establishes a framework for the use of the Economy Act to provide goods and or services to the

respective agencies. The MOA allows for each agency to provide a wide variety of services to the other agency through the development of support agreements. For example, NRCS has entered into several support agreements with the Institute for Water Resources (IWR), Hydrologic Engineering Center (HEC) to provide technical support to NRCS on various HEC products.

Other types of goods and services USACE can provide to USDA include planning, design, construction, flood damage reduction, environmental restoration, research and development, emergency management to name a few. In addition, USDA is able to provide goods and services relating to fish and wildlife, ecosystem restoration, emergency management, recreation and training and development. The MOA lists additional areas as well and allows for additional goods and services to be included upon the agreement of both agencies.

Use of Other Federal Funds for the non-federal share of a USACE project

WRDA 2007 (Section 2007) may allow for the use of other federal funds for the non-federal share. WRDA 2007 states “The non-Federal interest for a water resources study or project may use, and the Secretary shall accept, funds provided by a Federal agency under any other Federal program, to satisfy, in whole or in part, the non-Federal share of the cost of the study or project if the Federal agency that provides the funds determines that the funds are authorized to be used to carry out the study or project.” The USACE implementation guidance on this legislation can be found at http://www.usace.army.mil/CECW/Documents/cecwp/leg_manage/wrda2007/sec_2007.pdf.

Any use of NRCS funds for the non-federal share of a USACE project would be on a case-by-case basis, would be subject to NRCS policy, and would be subject to the provisions of the current Farm Bill. Any such use of NRCS funds would require prior approval in writing.

D. Elevation of Problems

When issues such as those discussed above arise and threaten to stall or block a collaborative project, field level staff may need to elevate the problems to the NRCS/USACE Partnership Team. In fact, field staff are encouraged to contact their respective liaison at the first sign of difficulties, so that momentum is not lost and partners do not become discouraged. The team can assist by suggesting options, and if necessary setting up a group of key personnel from both agencies to consider the issue and find a mutually-acceptable solution.

Appendix A – Existing USACE Watershed Models



You've Got Watersheds... We've Got Tools!

NUTRIENT MANAGEMENT

- Trophic Assessment Screening Tool for Reservoirs (TASTR)

RESTORATION

- Ecological Dynamics Simulation Model (EDYS)
- Ecosystem Management and Restoration Information System (EMRIS)
- EnviroFish
- Multi-Scale Assessment of Watershed Integrity (MAWI)
- Hydrologic Engineering Center- Ecosystems Functions Model (HEC-EFM)

HABITAT MANAGEMENT

- EnviroFish
- Reservoir Simulation Model with 2D Water Quality Model (ResSim-W2)
- Habitat Evaluation Assessment Tool (HEAT)
- Hydrologic Engineering Center- Ecosystems Functions Model (HEC-EFM)

ENVIRONMENTAL FLOWS (water supply)

- Reservoir Simulation Model with 2D Water Quality Model (ResSim-W2)
- Hydrologic Engineering Center- Reservoir Evaluation System (HEC-RES)
- Hydrologic Engineering Center- River Analysis System (HEC-RAS)
- Hydrologic Engineering Center- Ecosystems Functions Model (HEC-EFM)

WATERSHED ASSESSMENT

- Ecological Dynamics Simulation Model (EDYS)
- Hydrologic Engineering Center- Hydrologic Modeling System (HEC-HMS)
- Multi-Scale Assessment of Watershed Integrity (MAWI)
- Gridded Surface Subsurface Hydrologic Analysis (GSSHA)

SEDIMENT MANAGEMENT

- Hydrologic Engineering Center- River Analysis System (HEC-RAS)
- Sediment Impact Assessment Model (SIAM)

INVASIVE SPECIES

- Aquatic Plant Information System (APIS)
- Noxious and Nuisance Plant Management Information System (PMIS)

DATA MANAGEMENT

- Google Earth Applications Research (GEAR)



www.erd.c.usace.army.mil



www.hec.usace.army.mil



www.iwr.usace.army.mil



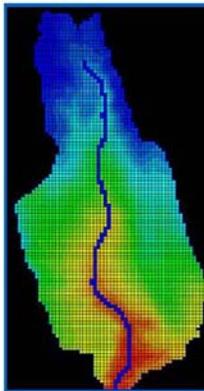
US Army Corps
of Engineers.

Watershed Management Tools

From the US Army Engineer Research & Development Center
August 2009



Habitat and Evaluation Assessment Tools (HEAT), Version 1. Capabilities include integration of temporal hydrologic simulations and outputs from land use conversion simulations with outputs from habitat models into a geospatial visualization framework with decision analysis using SWWRP data tools. HEAT is anticipated to be a CE certified model by the end of FY09. Demonstrations include riparian habitat assessments in the Rio Grande and Missouri Rivers.



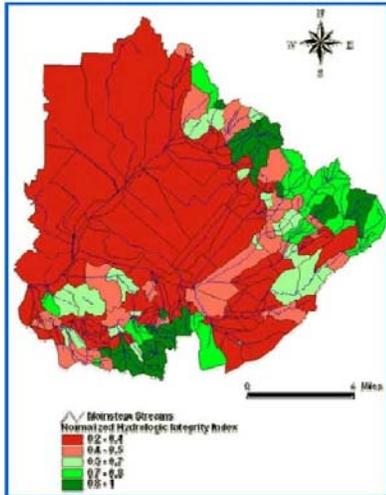
Gridded Surface Subsurface Hydrologic Analysis (GSSHA) has the ability to simulate the movement of water, sediment, and associated constituents across watershed-scale areas. In addition to surface-water analysis, GSSHA has the ability to simulate saturated and unsaturated groundwater, allowing use of the model in a variety of climates and watersheds. Coupling surface and groundwater simulations into the same model makes GSSHA capable of simulating streamflow generated by infiltration excess, saturated source areas, exfiltration, and groundwater discharge to streams. GSSHA is also capable of simulating soil moistures and groundwater levels at the grid scale and can simulate special features such as wetlands, hydraulic structures, reservoirs, storm drainage networks in urban areas, and tile drainage networks in agricultural areas.

Google Earth Applications Research (GEAR) includes a decision support framework in a geospatial context by developing, promoting, and deploying a common geospatial environment that provides consistent interface. View terrain and high-resolution imagery in 3-D for area of interest, simplify data acquisition process by viewing multiple data sets simultaneously from the original source on a 3-D map to download and graph raw data, and provide a backbone infrastructure to visualize model outputs.



Trophic Assessment Screening Tool for Reservoirs (TASTR) gives resource managers and decision makers a rapid "first cut" estimate of water quality conditions that can be expected in existing or planned reservoir projects in response to continuing or changed land use or climate in the surrounding watershed and changes in reservoir operations (e.g. water levels). As a result, TASTR can provide a quick screen of alternative management approaches (i.e. TMDL measures). TASTR presents a starting point for more precise and expensive approaches, if needed, along with contact information and other hints to obtain more advanced assistance.

Multi-Scale Assessment of Watershed Integrity (MAWI) is a planning level tool that employs a variety of field and remote indicators at multiple scales to assess ecosystem integrity under existing as well as future development or restoration scenarios. MAWI (1) identifies set-aside areas, (2) compares project alternatives through a simulation of the potential impact on specific indicators, and (3) develops restoration plans for riparian ecosystems in a watershed. Although developed for ecosystems in southern California watersheds, current efforts are focused on adapting the approach to other ecosystems and regions, i.e. northern California and the Onondaga Lake watershed in New York.



HEC- Ecosystem Functions Model (HEC-EFM) is a planning tool that aids in analyzing ecosystem response to changes in flow regime. EFM enables project teams to visualize existing ecologic conditions, highlight promising restoration sites, and assess and rank alternatives according to the relative change in ecosystem aspects. "Functional relationships" link characteristics of hydrologic and hydraulic time series (flow and stage) to elements of the ecosystem. Then, a statistic computations package analyzes flow and

stage time series for the specified criteria and produces a single flow value for each relationship. This process is repeated to get resulting values to determine direction of ecosystem health with- and without-project conditions.

HEC- River Analysis System (HEC-RAS) is an integrated system of software designed for interactive use in a multitasking environment. It allows simulation of one-dimensional (1-D) steady and unsteady flow, water surface profile calculations and inundation mapping. The system comprises a graphical user interface (GUI), separate hydraulic analysis components, data storage and management capabilities, graphics and reporting facilities.



Ecological Dynamic Simulation Model (EDYS Lite), Version 1. Capabilities include a user-friendly interface, planning level applications with vegetation libraries representative of major plant types, and visualization with Google Earth technologies. Demonstrations include the Honey Creek and Cibolo Creek watersheds in Texas. This capability allows planners to conduct screening level applications that often suffice for small studies, yet provide critical information when the more robust EDYS model is required.

EnviroFish is a hydraulic model that estimates acres of functional reproductive habitat of fishes in riverine floodplains by quantifying impacts of flood control on fish habitat. Ultimately, EnviroFish provides ability to determine the appropriate amount of mitigation to offset adverse environmental impacts of large-scale flood-control projects on fish habitat.

HEC- Reservoir Evaluation System (HEC-RES) combines three reservoir analysis tools into one package, 1) Reservoir Simulation, 2) Multi-Objective Reservoir Optimization (Prescriptive Reservoir Model), and 3) Reservoir Flood Control Optimization. HEC-RES allows users to easily alternate between simulation and optimization analysis, providing more robust analysis for reservoir investigations than by using one model alone. Additionally, output from the synchronized product will be more readily exported to other models for further computation.



Reservoir Simulation Model with 2D Water Quality Model (ResSim-W2), Version 1. Capabilities include the use of real-time reservoir operations (ResSim) with long-term water quality simulation (W2) for system-wide operations to meet basin level targets of water quantity and quality. Demonstrations include a sub-basin of the Willamette River where target temperatures have been established

throughout the basin for fisheries management. Forecasting water availability with acceptable temperatures can be accomplished with this tool. This tool provides the Corps and its partners decision support for environmentally acceptable water management.

HEC- Hydrologic Modeling System (HEC-HMS) simulates the precipitation-runoff processes of dendritic watershed systems. Its design allows applicability in a wide range of geographic areas for solving diverse problems including large river basin water supply and runoff. The Federal Energy Regulatory Commission (FERM) has approved it for use in flood hazard mapping. The Federal Energy Regulatory Commission (FERC) accepts it for hydropower licensing submittals.



Sediment Impact Assessment Model (SIAM) is a one-dimensional (1-D) sediment continuity model that will provide rapid assessments and design of water resources projects. SIAM has the ability to track sediment through the system by grain size and to account for the spatial variations in the wash load/bed-material load thresholds. Therefore, it quantifies not only the bed material-driven morphologic impacts, but also the route of the wash load through the system. As a result, SIAM has the ability to integrate watershed-scale sediment continuity concepts into stream rehabilitation and management.



For more information or to download these tools visit SWWRP at:

<https://SWWRP.usace.army.mil>