

Conserving America's Wetlands 2006:
Two Years of Progress
Implementing the President's Goal

Council on Environmental Quality
April 2006

Acknowledgements

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This report to Congress shows how Federal agencies are implementing President George W. Bush's 2004 Earth Day goal to "work to restore and to improve and to protect at least three million acres of wetlands over the next five years." The report includes the accomplishments of the first two years and the requested budget and planned accomplishments for FY 2007, with descriptions of contributing Federal programs.

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**Department of Agriculture
Department of Commerce
Department of Transportation**

**Department of the Army
Department of the Interior
Environmental Protection Agency**

Council on Environmental Quality
April 2006



EXECUTIVE OFFICE OF THE PRESIDENT
COUNCIL ON ENVIRONMENTAL QUALITY
WASHINGTON, D.C. 20503

Members of Congress:

This second annual progress report on President George W. Bush's Wetlands Initiative brings you good news. The numbers are encouraging, teamwork among federal agencies is strong, and we are steering our efforts according to what we learn as we go.

Since the President set the goal on Earth Day 2004 to move beyond "no net loss" of wetlands and attain an overall increase in the amount and quality of wetlands in America, we have restored, created, protected, or improved 1,797,000 acres of wetlands. We now have 588,000 acres of wetlands that did not exist in 2004, we have improved the quality of 563,000 acres that already existed in 2004, and we have protected the high quality of another 646,000 acres of existing wetlands. These accomplishments were achieved through conservation programs separate from the mitigation programs that increase and improve wetlands as replacements for wetlands developed for other uses.

Our success is a direct result of the benefits of the Cooperative Conservation Executive Order 13352. The executive order directs the Departments of Interior, Agriculture, Commerce, and Defense, and the Environmental Protection Agency to coordinate with each other and with state, local, and tribal governments, private institutions, and other nongovernmental entities and individuals. The departments have done so with collaboration, respect for all interests, and local participation.

We have accomplished so much, and I look forward to working with you to build on this success. We have a particularly difficult task restoring the coastal wetlands that were already compromised by erosion and then overrun by Hurricanes Katrina and Rita. We must also uphold the effectiveness of the "no net loss policy," which is currently under review by the U.S. Supreme Court. Acknowledging these and other wetland conservation tasks, the President's 2007 Budget proposes \$403 million to enroll 250,000 acres into USDA's Wetlands Reserve Program (WRP). The WRP is a crucial contributor to the President's Wetlands Initiative, and, if enacted, the Budget request would enroll an additional 100,000 acres in the WRP.

We are working smarter as we continue to work harder. We know from the regular report of the Department of Agriculture that wetlands on farms are increasing. We also know from the recently issued report from the Department of Interior that, overall in the Nation, the conservation of shallow-water wetlands such as ponds is outpacing marshes and forested wetlands. Furthermore, our decades-old system of counting wetland acres does not account for the quality, function, and condition of wetlands. To ensure appropriate attention to all categories of wetlands, and to update our successful monitoring approach, the agencies contributing to the President's Wetlands Initiative will take up these issues as they continue pushing toward the President's goal.

Congress has been an essential partner in the President's conservation agenda, and I look forward to collaborating with you toward reaching our wetlands goals. Just as we have worked together to pass bipartisan legislation improving forest health, revitalizing brownfields, cleaning up the Great Lakes, and conserving America's natural resources, I hope to work with you on restoring, creating, and protecting America's wetlands.

Sincerely,

A handwritten signature in blue ink, appearing to read "James L. Connaughton".

James L. Connaughton
Chairman

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Executive Summary

On Earth Day 2004, President George W. Bush embarked upon a new Federal policy to go beyond “no net loss” of wetlands and attain an overall increase in the quality and quantity of wetlands in America.

As President Bush said in April 2004, “**The old policy of wetlands was to limit the loss of wetlands. Today I’m going to announce a new policy and a new goal for our country: Instead of just limiting our losses, we will expand the wetlands of America.**”

President Bush described his goal for expanding wetland acreage as both creating new wetlands and improving the quality of existing wetlands. The President also required that we protect existing, high-quality wetlands. His goal is that we achieve at least one million acres in each of these separate categories between Earth Day 2004 and 2009.

After two years of progress toward the President’s five-year goal, the team of six Federal departments and multiple states, communities, tribes, and private landowners is on track to meet or exceed this goal.

Since this goal was set, 1,797,000 acres of wetlands have been restored, created, protected, or improved.

This report also highlights anticipated progress between Earth Day 2006 and 2007, during which time **the Bush Administration expects an additional 1.5 million wetland acres to be restored, created, improved, or protected.**



Coastal wetland within Paul J. Rainey Wildlife Sanctuary, Vermillion Parish, Louisiana. (NOAA)

	2005 Report*	This Report
Acres Restored or Created	301,000	287,000
Acres Improved	199,000	364,000
Acres Protected	294,000	352,000
Total Acres	794,000	1,003,000

**As adjusted by actual results*

The President’s focus on wetlands has prompted these accomplishments as well as improvements in organization and understanding among the many Federal departments, states, communities, tribes, and landowners that care for and manage wetlands. The Federal Government team includes the Environmental Protection Agency and the Departments of the Interior, Agriculture, Commerce, Transportation, and the Army.

Many agencies of government contribute to the continuing goal of “no net loss” by ensuring mitigation for wetlands that are developed for other uses. Even though mitigation for wetlands replaces more wetland acres than are lost, none of these numbers are included in the three categories reported here.

Existing routine wetlands reports from Interior and Agriculture provide detailed information about wetlands nationwide and on farmlands, and these data help direct our efforts. For example, the most recent report by the U.S. Fish and Wildlife Service (FWS) on nationwide status and trends revealed that restoration and creation of freshwater ponds is outpacing conservation of swamp and bog-type wetlands. Informed by these findings, our future work can be directed accordingly.

This report chronicles the major contributions of Federal agencies, working together and in partnership with others, to achieve the President’s wetland goal of three million acres by 2009.

Introduction

Wetlands have long been recognized as critical to a clean, properly functioning environment and to ecosystem health. They provide a protective buffer for our towns and cities against floods and storm surges; and they provide important ecological benefits, contributing to water quality, supplying life-sustaining habitat to hundreds of species, and connecting aquatic and terrestrial ecosystems. The Nation's wetlands provide an array of benefits to society, and their continued ability to function and thrive affects the economic, ecological, and cultural heritage of all Americans. The importance of wetland stewardship is reflected in the array of public-private partnerships that have formed, enhanced through efforts at the Federal level. Recognizing the need for more effective use and coordination of Federal wetland activities, on April 22, 2004, President George W. Bush announced a new national policy on wetlands to achieve an overall increase of U.S. wetlands each year, with a goal to restore or create, improve, and protect at least three million wetland acres between Earth Day 2004 and 2009.

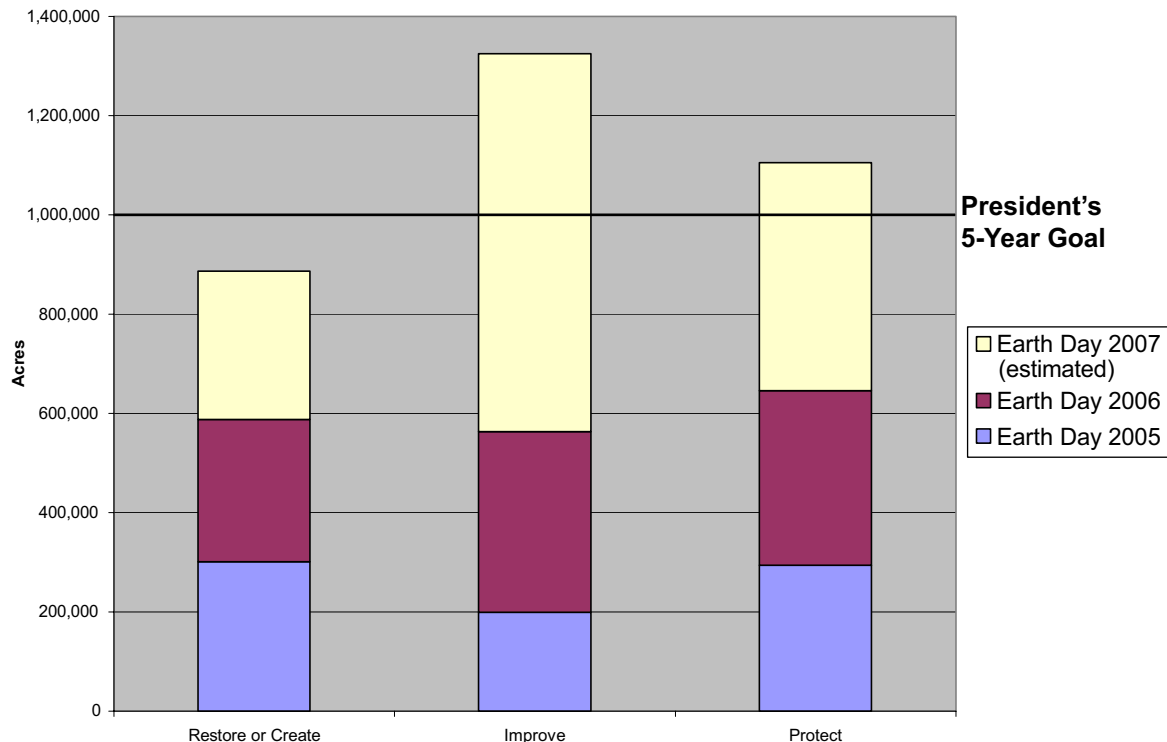
Two years after the President underscored the importance of wetlands, significant progress has been made toward

achieving his goal to increase overall wetland acreage and its quality—588,000 acres have been restored or created, 563,000 acres have been improved, and 646,000 acres have been protected. Between Earth Day 2004 and 2007, it is expected that a total of 887,000 acres will be restored or created, 1,325,000 acres will be improved, and 1,105,000 acres will be protected (Figure 1).

The primary programs making contributions to restoration or creation are the Wetlands Reserve Program (WRP), North American Wetlands Conservation Act (NAWCA), National Wildlife Refuge System (NWRS), Partners for Fish and Wildlife Program (Partners), and the Conservation Reserve Program (CRP). The primary contributors to the improvement goal are the Aquatic Ecosystem Restoration Program, NAWCA, NWRS, and Conservation Technical Assistance. Protection accomplishments through acquisitions or long-term easements are being contributed by NAWCA, WRP, NWRS, and Coastal Program.

Because more than 85 percent of our Nation's wetlands are on non-Federal lands, the effectiveness of Federal efforts to improve the health, quality, and use of the Nation's wetlands will

Figure 1. Estimated Progress Toward the President's Wetlands Goal



Note: Values have been adjusted for double-counted acres.

be greatly enhanced by expanding public–private partnerships. Through cooperative conservation, the Federal government can facilitate these partnerships by providing matching grants, technical assistance, and opportunities for recreation and other activities. Federal agencies must encourage and partner with non-Federal parties (state and local governments, tribes, and nongovernmental organizations). Well-coordinated public–private partnership efforts focused on wetland opportunities will yield significant ecological benefits.

About This Report

Conserving America's Wetlands 2006: Two Years of Progress Implementing the President's Goal presents a snapshot of Federal efforts to achieve the President's goals for wetland acreage. In providing information, the participating agencies used terminology similar to that developed by the White House Wetlands Working Group and the same terminology used in the 2005 version of this report. Agencies reported all notable accomplishments toward the President's goal in the year the project was completed, or projected to be completed, rather than the year the project was funded. Adjustments were made to account for projects reported by multiple agencies ("double-counting"). Projected estimates in the 2005 report were adjusted in this year's report as actual results became available. Appendix A provides a thorough discussion of terminology and methodology, and Appendices B through I present program-level information and descriptions.

Accomplishments

The President's goal for wetlands has led the responsible Federal agencies to focus their resources—by managing programs more strategically, leveraging resources, and partnering with others whenever possible. The following sections summarize accomplishments planned for each of the three goal areas included in the President's Fiscal Year (FY) 2007 budget, with major contributing programs highlighted.

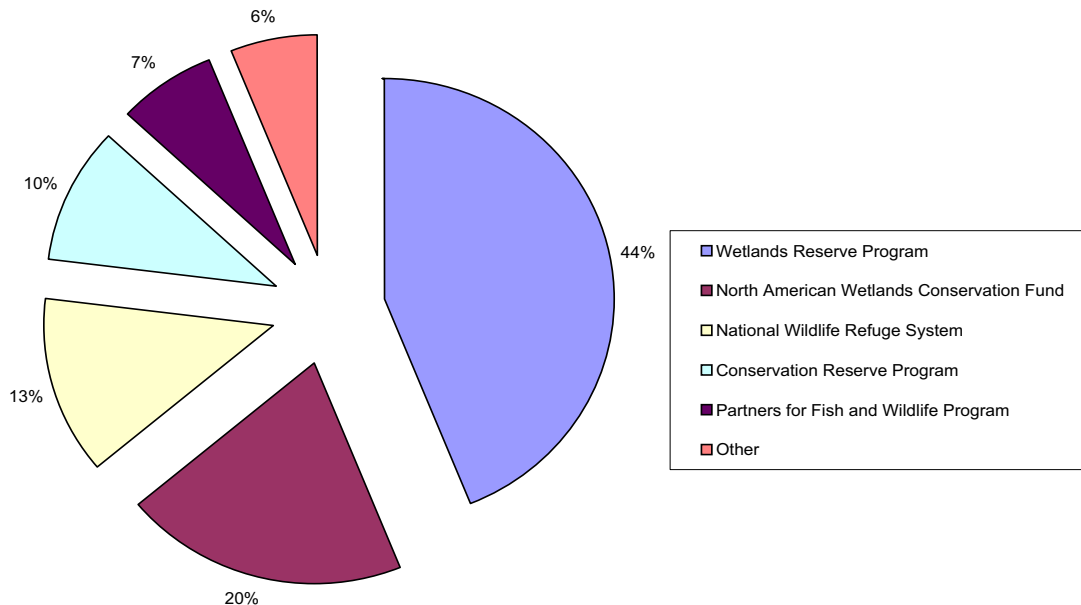
Restoring or Creating Wetlands

First Two Years of Accomplishment: 588,000 acres
Estimated Accomplishment Earth Day 2007: 299,000 acres

Wetlands can be added by creating new wetlands or by restoring former wetlands lost to drainage. New wetlands are created in upland areas or deepwater sites. A gain in wetland acres may also be achieved by re-establishing former wetlands to restore functions and values approximating natural/historic conditions. Because of difficulties in establishing wetlands in upland areas, agencies have preferred to re-establish former wetlands when possible. In many cases the necessary soils and seed stock still exist, and wetlands flourish once more as soon as the hydrology is restored.

During the first year, Federal agencies reported restoring or creating 301,000 acres of new wetlands. In the second year, Federal agencies plan to create or restore an additional 287,000 acres. By Earth Day 2007, Federal agencies plan to

Figure 2. Proportion of Wetland Acres Anticipated to be Created or Restored by Major Programs in FY 2007



restore or create an additional 299,000 acres of wetlands. Of the second-year gains, 96 percent will result from re-establishing former wetlands and only four percent from establishing wetlands (primarily on upland sites).

The Federal Government will restore wetlands in FY 2007 primarily through the Wetlands Reserve Program, North American Wetlands Conservation Fund, National Wildlife Refuge System, Conservation Reserve Program, and Partners for Fish and Wildlife Program (Figure 2).

Wetlands Reserve Program

Floodplain forests, prairie potholes, and coastal marshes are among the wetlands restored through the USDA Natural Resources Conservation Service (NRCS) Wetlands Reserve Program (WRP). The WRP is a voluntary program providing technical and financial assistance to eligible landowners to address wetland, wildlife habitat, soil, water, and related natural resource concerns on private lands. In FY 2005, NRCS made \$4,045,000 in financial assistance available for Wetland Reserve Enhancement Program (WREP) partnership proposals (1) that address wetland creation and enhancement efforts on easements enrolled in prior years; (2) where partners will contribute significantly to WRP technical assistance costs; and (3) that provide assistance with managing easement projects. Of the total funding, \$500,000 was available for partnership proposals addressing bog turtle habitat in the East, and \$500,000 was



Wetland restoration project utilizing WRP in Iowa. (NRCS)

available for partnership proposals addressing ivory-billed woodpecker habitat in Arkansas.

In FY 2006, USDA anticipates restoring or creating 158,000 acres of wetlands through this program. The President's proposed enrollment authorization for FY 2007 will allow NRCS to restore, create, or enhance an additional 173,000 acres.

North American Wetlands Conservation Act

This FWS program promotes long-term conservation of North American wetland ecosystems for the benefit of waterfowl and other migratory birds, fish, and wildlife. Funds are provided by appropriations and by nonappropriated sources such as the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA), interest earned on Pittman-Robertson Funds, and fines collected under the Migratory Bird Treaty Act. In FY 2005, 35 completed North American Wetlands Conservation Act (NAWCA) projects contributed to the President's wetlands goal.

One such initiative was the San Pablo Bay Tidal Wetlands Habitat Restoration Project. In an effort to re-establish historic wetland functions lost to agricultural conversion and habitat degradation, the project restored 9,224 wetland acres in San Pablo Bay (part of the San Francisco Bay Estuary). Activities included levee construction, creation of drainage swales and shallow water ponds, and restoration of a mosaic of estuarine and palustrine emergent wetlands on the Napa Sonoma



Weir at Glacial Ridge Wetland Restoration Project in northwest Minnesota. (NRCS)

The Importance of Coastal Wetland Protection and Restoration

Healthy coastal and marine ecosystems are essential to the nation's economy. Because 95 percent of commercial fish and 85 percent of sport fish spend a portion of their life cycles in coastal wetlands and estuaries, the commercial and recreational fishing industries rely on productive coastal habitat. The value added to the national economy by the commercial fishing industry is over \$28 billion per year, and each year nearly 18 million Americans engage in marine recreational fishing. In addition, coastal and marine waters support over 28 million jobs.



Development pressure on Florida's coastal wetland ecosystem in St. Petersburg. (NOAA)

Coastal wetlands include all wetlands in a coastal watershed—tidal and non-tidal, saline and fresh. More than 30 percent of all wetlands in the United States are coastal. In addition to supporting a diverse array of wetlands, coastal areas also support the majority of this country's population—coastal counties contain 53 percent of the Nation's population on only 17 percent of the nation's land area.¹ With this population density comes intense development pressure and increased wetland loss. From 1992 to 1997, coastal counties experienced a net loss of approximately 24,400 acres of wetlands per year. And even though coastal wetland restoration has received increased emphasis in recent years, the area of coastal wetlands lost was 4.3 times the area of wetlands gained.²

Overall the wetland loss in coastal counties was nearly three times that of inland counties. Not surprisingly, wetland loss to development is disproportionately high in coastal areas: coastal counties (excluding Alaska, Hawaii, and the Great Lakes states) occupy seven percent of the land area, have 20 percent of the wetlands, and have experienced 31 percent of the gross wetland loss and 42 percent of the gross loss to development.²

The majority of coastal wetland loss has occurred in Louisiana, where approximately 40 percent of the coastal wetlands of the lower 48 states are located. The wetlands of coastal Louisiana support many plant and animal species, but are subject to continuing pressures as a result of natural causes and human intervention. The coastal wetlands of

Louisiana also provide a natural buffer that can lessen the impacts of some storms, and are in fact an important part of the overall storm reduction system for New Orleans.

Natural deltaic processes formed much of the Louisiana coast; natural subsidence and erosion have shaped these lands ever since. Over the past century, the rate at which the coastal plain is submerging into the Gulf of Mexico has accelerated greatly as a result of our efforts to maintain a commercial navigation channel from the Gulf of Mexico to New Orleans and farther up the Mississippi River, provide flood and storm damage reduction to communities in the Louisiana coastal plain, and support oil and gas exploration and development and navigation in and through these wetlands.

Several Federal agencies are working with the State to protect and restore Louisiana's coastal wetlands under the 1990 Coastal Wetlands Planning, Protection and Restoration Act, which now provides \$55 to \$60 million annually for this purpose. Since 1992, these Federal dollars, together with contributions from state, nonprofit, and private partners, have helped to protect and restore more than 50,000 acres of wetlands in Louisiana. The Administration seeks to build upon the 1990 Act by supporting authorizing legislation to address the most critical ecological needs over the next ten years by harnessing the same natural deltaic forces that once formed this landscape, with the understanding that significant additional work will be needed in subsequent years.

Marshes State Wildlife Area. The grantee—the California Wildlife Conservation Board—was joined on this project by the following partners: Ducks Unlimited, Sonoma Land Trust, Save the Bay, CALFED, California Department of Fish and Game, United Heckathorn Trustee Council, Marin/Sonoma Mosquito Abatement District, Pacific Gas and Electric, Sonoma Community Foundation, Sonoma County Fish and Wildlife Board, Shell Oil Spill Litigation Settlement Trust, NRCS, U.S. Bureau of Reclamation, and the U.S. Fish and Wildlife Service (FWS).

This program expects to restore or create approximately 107,000 acres of wetlands in FY 2006 and 78,000 acres in FY 2007.

National Wildlife Refuge System

Many national wildlife refuges are restoring former wetlands. Working with its partners, in FY 2006 the refuge system will address conservation priorities, including activities to restore the lower Salmon Creek in California in joint efforts with nine partners, including the State and the Wiyot Tribe. The creek's delta on Humboldt Bay National Wildlife Refuge is at the bottom of a watershed, with Bureau of Land Management ownership at the top. The delta provides habitat for endangered Chinook, coho, and steelhead salmon, as well as tidewater goby.

A second effort will take place at Horseshoe Lake, an old oxbow of the Missouri River on Boyer Chute National Wildlife Refuge in Nebraska. This collaborative effort with Ducks Unlimited, Cargill Sweeteners NA, and Omaha Public Power District will create a complex of basins that will provide critical hydrological and biological functions. This project will benefit a host of wetland-dependent plants and wildlife, particularly migratory birds.

The National Wildlife Refuge System expects to restore or create approximately 48,000 acres of wetlands in FY 2006 and, given a slight funding increase, create or restore 49,000 acres in FY 2007, mostly associated with the Don Edwards San Francisco Bay National Wildlife Refuge.

Conservation Reserve Program

Wetlands restored through this USDA program range from prairie potholes to floodplains to bottomland hardwood forest. Currently, 846,000 acres of wetlands and 1.46 million acres of associated buffers are under contract. Conservation Reserve Program (CRP) wetland successes include partnerships with states through the Conservation Reserve Enhancement Program (CREP), which has enrolled over 88,000 acres of wetlands and associated buffers. In addition, in August 2004 President Bush announced the Non-Floodplain Wetland Restoration Initiative to encourage landowners to enroll 250,000 acres of large wetland prairie pothole complexes and playa lakes located outside the 100-year floodplain. These wetlands provide important environmental benefits, including critical breeding habitat for ducks and grassland birds. Wildlife biologists at the Department of the Interior estimate that CRP efforts have resulted in a 30 percent increase in duck populations and significant increases in grassland bird populations on CRP lands compared to cropland.

CRP anticipates restoring and creating 19,000 acres of wetlands in 2006 and 40,000 acres in 2007.

Partners for Fish and Wildlife Program

At the forefront of the FWS wetland restoration efforts on private lands is the Partners for Fish and Wildlife Program. Because more than 70 percent of our Nation's fish and wildlife resources are located on private lands, Federal and state agencies and other conservation groups cannot completely



2,100 volunteers have committed over 20,500 hours of service to restore wetland and riparian areas essential to Idaho's migrating salmon. (Mountain Visions, Idaho)

provide for them. The Partners program was established in 1987 to fill this gap. It provides technical and financial assistance directly to private landowners and tribes who volunteer to help meet the habitat needs of fish and wildlife on their lands. The program has garnered support over the years, expanding into a much larger and more diversified habitat restoration program. The Partners program supports more than 37,000 landowner partnership agreements and has restored or enhanced more than 750,000 acres of privately owned wetlands nationwide.

The Partners program anticipates restoring or creating approximately 28,000 acres of wetlands in FY 2006 and 27,000 acres in FY 2007.

Improving Wetlands

First Two Years of Accomplishment: 563,000 acres
Estimated Accomplishment Earth Day 2007: 762,000 acres

Some degraded wetlands do not function properly because of past or present stressors. Agencies can improve wetlands by modifying the physical, chemical, or biological characteristics of a degraded wetland site with the goal of repairing its natural/historic functions and associated values (referred to as rehabilitation). They also can modify the physical, chemical, or biological site characteristics to heighten, intensify, or improve specific functions or to change the growth stage or composition of vegetation. These actions are taken with a specific goal in mind, such as improving water quality, floodwater retention, or wildlife habitat. This type of improve-

ment, called enhancement, results in a change in wetland functions and associated values, may lead to a decline in other wetland functions and values, and does not result in a gain in wetland acres.

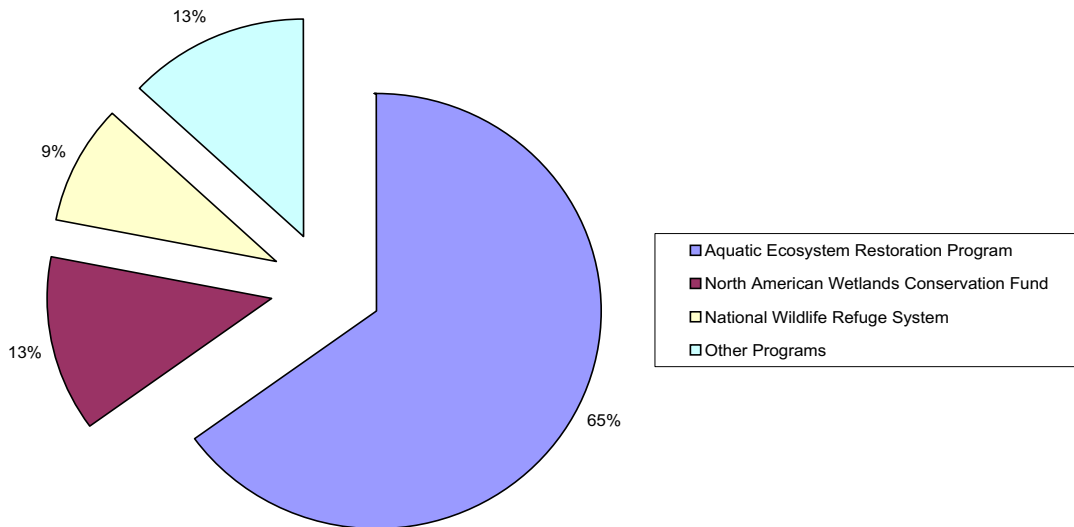
Between Earth Day 2005 and 2006, Federal agencies reported improving the quality of 364,000 acres of existing wetlands. By Earth Day 2007, Federal agencies plan to improve the quality and associated values of an additional 762,000 acres of existing wetlands. Of the second-year improvements, 21 percent of the gains in wetland quality will come from rehabilitating the natural/historic functions and associated values of degraded wetlands, and the remaining 79 percent will come from enhancing specific functions and values.

The major programs that are planning FY 2007 wetland improvements include the Aquatic Ecosystem Restoration Program, North American Wetlands Conservation Fund, and National Wildlife Refuge System (Figure 3).

Aquatic Ecosystem Restoration Program

The U.S. Army Corps of Engineers (USACE) has numerous study, project-specific, and programmatic authorities for implementing aquatic ecosystem restoration projects. Activities contributing to the President's goal also occur on the 12 million acres of water and land managed by USACE for other purposes, such as flood damage reduction, navigation, and recreation. For example, dredged material is used to create, restore, or improve wetland habitat as part of routine maintenance dredging of Federal channels. Most USACE restoration projects take several years to complete. Projects are included in the budget based on

Figure 3. Proportion of Wetland Acres Anticipated to be Improved by Major Programs in FY 2007



the extent to which the project cost effectively contributes to the restoration of a nationally or regionally significant ecosystem that has become degraded as a result of an Army Corps civil works project or to an aquatic ecosystem restoration effort for which the Corps is otherwise uniquely well-suited (e.g., because the solution requires complex alterations to the hydrology and hydraulics of a river system).

Corps aquatic ecosystem restoration projects are expected to improve approximately 13,000 acres of wetlands in FY 2006 and 813,000 acres in FY 2007.

North American Wetlands Conservation Act Program

NAWCA funds improvement projects that modify a functioning wetland ecosystem to provide additional long-term wetland conservation benefits (e.g., installation of nest boxes, creation of habitat islands, and land management activities such as erecting fences and signs). In 2005, Ducks Unlimited, working with the Illinois Department of Natural Resources, enhanced approximately 3,000 acres of palustrine emergent wetlands in Sanganois State Fish and Wildlife Area as part of the Illinois River Basin project. NAWCA



Replacement of an undersized culvert to increase tidal flow to a salt marsh in Rockport, Massachusetts. (NOAA)

grant funds were matched 2.1-to-1 on this project, which provided water management capabilities for both public and private lands. Partnering with Ducks Unlimited on this project were private landowners, the Daniel F. and Ada L. Rice Foundation, Illinois Department of Conservation, Kankakee River

USGS Reports Latest Land–Water Changes for Southeastern Louisiana After Hurricanes Katrina and Rita

The USGS National Wetlands Research Center reports that after Hurricanes Katrina and Rita in late 2005, 118 square miles of marshland has been transformed to new water areas in a 9,742-square mile area from the Chandeleur Islands to the Atchafalaya River. This area encompasses the basins of Breton Sound, Mississippi River, Pearl River, Pontchartrain, Barataria, and Terrebonne, as well as the western quarter of the Atchafalaya basin.

These landscape changes created new water bodies and expanded water bodies throughout southeast Louisiana, with major impacts concentrated east of the Mississippi River. Many of the new water areas consist of shallow ponds, where the marsh surface has been sheared or ripped by storm surge to the root mat or to the underlying firm substrate of clay. These changes will also have the effect of further lessening the flood and surge protection that wetlands can so effectively provide,

thus allowing the next hurricane of Katrina size to be even more devastating than the last. In looking at the past, studies suggest that it takes as little as one mile or as many as four miles of functioning wetlands to reduce storm surge by one foot. USGS will continue to monitor how these changes may affect future hydrodynamic and flooding conditions.

Over 90 percent of the new open-water area in the Breton Sound basin occurred within the freshwater and brackish marsh communities. USGS scientists and partners are continuing to monitor and project future transformation of coastal landscapes, and will expand their efforts to include southwestern Louisiana, which was affected by Hurricane Rita.

The latest hurricane land change maps for southeastern Louisiana, and the information sheet from which this text is condensed, are available at: http://www.nwrc.usgs.gov/hurricane/hurricane_land_change.htm

Conservancy District, U.S. Environmental Protection Agency (EPA), and FWS.

NAWCA expects to improve approximately 150,000 acres of wetlands in FY 2006 and 154,000 acres in FY 2007.

National Wildlife Refuge System

National wildlife refuges focus on management purposes and wildlife goals that depend on healthy wetland habitats. Many refuge habitats are managed areas requiring a great deal of manipulation; for example, forested wetlands, moist soil units, and managed impoundments require seasonal flooding regimes to mimic the original natural conditions. In FY 2005, NWRS improved 15,024 acres of forested wetlands and similar habitats throughout the refuge system, and performed enhancement and rehabilitation activities on 94,424 acres.

In FY 2006, NWRS expects to improve approximately 107,000 acres of wetlands and an additional 107,000 acres in FY 2007.

Protecting Wetlands

First Two Years of Accomplishment: 646,000 acres
Estimated Accomplishment Earth Day 2007: 459,000 acres

Priority wetlands can be protected from activities that may imperil their existence or condition. In this report, protection refers to acquisition of land or easements of at least 30 years. Because protection maintains the base of existing wetlands, it does not result in a gain of wetland acres or function.

During the first year of the President's Wetlands Initiative, Federal actions protected 294,000 acres of existing wetlands. In the second year, Federal agencies protected an additional 352,000 acres. By Earth Day 2007, Federal agencies plan to protect an additional 457,000 acres of wetlands. The major programs planning FY 2007 wetland protection in FY 2007 are the North American Wetlands Conservation Fund, Wetlands Reserve Program, and National Wildlife Refuge System (Figure 4).

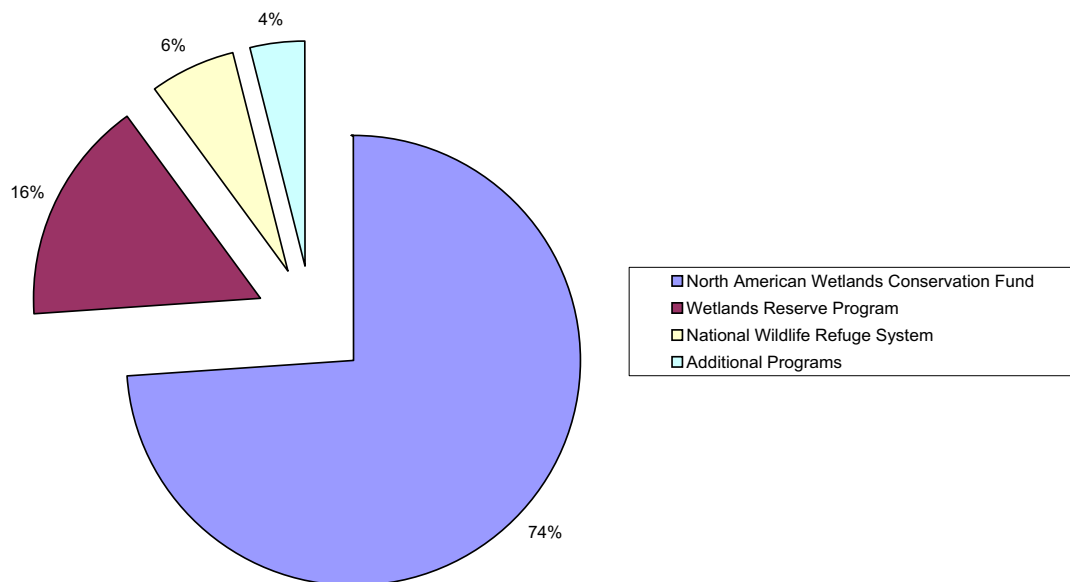
North American Wetlands Conservation Act

NAWCA projects often involve partnerships of state and local governments and nongovernmental and private organizations seeking to acquire wetland habitat. These acquisitions may be incorporated into the FWS National Wildlife Refuge System or into a state's protected area system, or they may be included in holdings protected by a nonprofit conservation organization (e.g., The Nature Conservancy).

For example, in 2005 the Conservation Fund transferred its 13,069-acre Canoe Bay property in Alaska to the FWS. The fund had acquired this property using a NAWCA grant and matching funds provided by the Richard and Rhoda Goldman Fund and the Richard King Mellon Foundation. Canoe Bay will be included in the Izembek National Wildlife Refuge Complex, which is internationally recognized for its importance to migratory birds.

NAWCA expects to protect approximately 297,000 acres of wetlands in FY 2006 and 579,000 acres in FY 2007.

Figure 4. Proportion of Wetland Acres Anticipated to be Protected by Programs in FY 2007



Wetlands Reserve Program (WRP)

WRP is a voluntary program providing technical and financial assistance to eligible landowners to address wetland, wildlife habitat, soil, water, and related natural resource concerns on private lands. The program provides financial incentives for landowners to restore, protect, and enhance wetlands in exchange for retiring marginal land from agriculture. Enrollment options include permanent easements, 30-year easements, and restoration cost-share agreements.

The WRP was reauthorized in the Farm Security and Rural Investment Act of 2002 (Farm Bill). The program is administered by NRCS and funded by the Commodity Credit Corporation. In FY 2005, NRCS state offices secured 751 easements on approximately 134,200 acres.

In 2006, the WRP expects to protect approximately 116,000 acres of wetlands, and expects to protect an additional 128,000 acres in 2007.

National Wildlife Refuge System

The Migratory Bird Conservation Fund finances land acquisition programs that protect large tracts of wetlands. Financed by the sale of Duck Stamps, import duties, and refuge fees, the fund purchases major areas for migratory birds under the authority of the Migratory Bird Conservation Act. The fund also acquires small natural wetlands, located mainly in the Prairie Pothole region of the Upper Midwest.

Migratory Bird Conservation Funds will be used to protect approximately 33,000 acres of wetlands in FY 2006 and 33,000 acres in FY 2007.

Perspective

This report documents the individual and collective accomplishments of Federal agencies toward the President's



Wetland habitat in Lower Drift Creek, Oregon. (NOAA)

wetlands goal. Agencies used available programmatic tools, with particular emphasis on public–private partnerships and cooperative conservation. The President’s FY 2007 budget provides for continuation of these efforts to make important gains in the breadth and health of the Nation’s wetlands.

Federal agencies will continue to leverage personnel, budgets, and authorities to ensure the best possible results. When the jurisdiction or expertise of more than one Federal agency is involved, interagency coordination at the national and regional levels can help implement cooperative wetland restoration projects. Because the vast majority of wetlands are in non-Federal ownership, the Federal agencies will continue to foster and support collaborative strategies, innovative public–private partnerships, and cooperative conservation.

For example, the Corporate Wetlands Restoration Partnership provides matching funds for Federal wetland efforts. Another example of successful private–public partnerships is the Fish and Wildlife Service Joint Ventures (JVs) formed to implement the North American Waterfowl Management Plan (NAWMP). These self-directed partnerships— involving Federal, state, and local governments; corporations;

and a wide range of nongovernmental conservation organizations—are successful tools for developing cooperative conservation efforts to protect waterfowl and other bird habitat. The 17 current JVs address multiple local, regional, and continental goals for sustaining migratory bird populations by developing scientifically based habitat projects.

To accomplish the President’s Earth Day goal, the FY 2007 budget requests over \$930 million specifically for wetlands (Figure 5). This budget proposal reflects a continued commitment to the goal of achieving an overall increase in the quality and quantity of wetlands in America, and represents a prudent and necessary course to ensure the Nation’s wetlands will continue to meet the needs of current and future generations.

The FY 2007 budget continues to focus on cooperative conservation partnerships and large-scale ecosystem restoration efforts. The budget emphasizes voluntary programs through which agencies work closely with individual landowners, such as the FWS Partners for Fish and Wildlife and the USDA Wetlands Reserve and Conservation Reserve programs. Cooperative conservation efforts with states, tribes, localities, and nongovernmental organizations also are a priority, including the North American Wetlands Conservation Act. The budget calls for large-scale ecosystem



Geese at sunrise on the Virginia portion of the Chincoteague National Wildlife Refuge. (FWS)

restorations in areas such as South Florida and Louisiana, where a holistic approach is critical to restoring ecosystems. More detailed information on how the requested funds will be used appears in the appendices to this report and in congressional justifications submitted by the participating agencies.

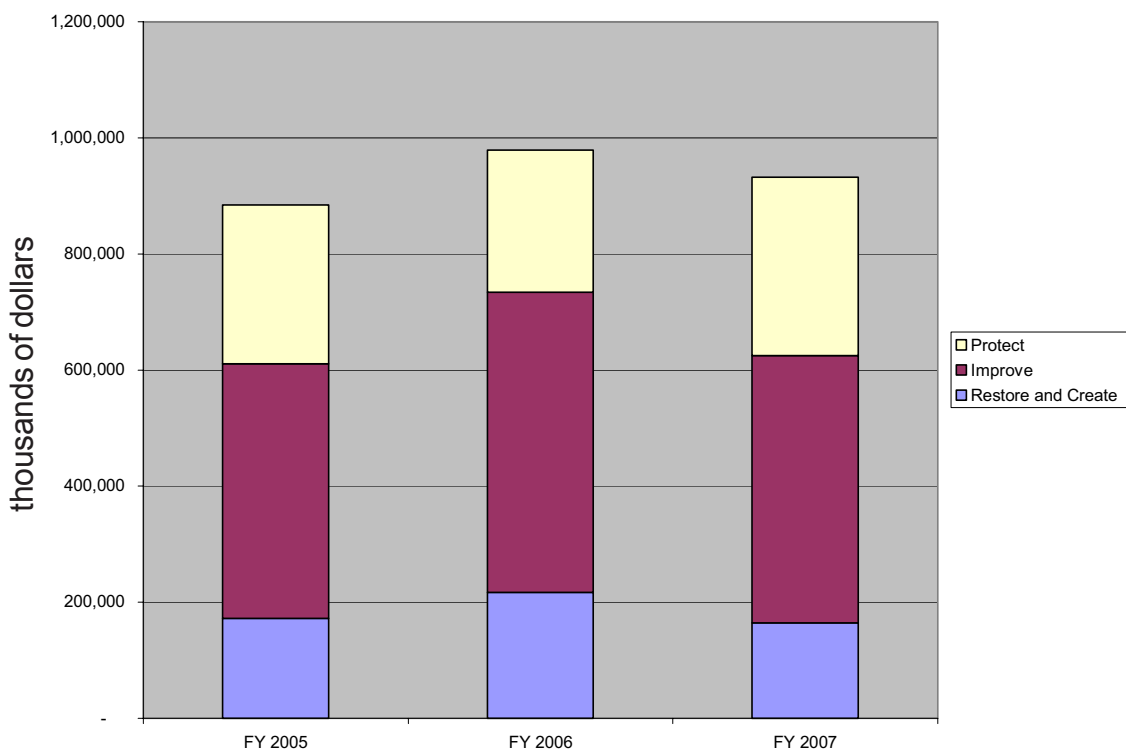
Increased Federal attention to wetland efforts highlights the importance of wetlands and heightens public awareness. Because active citizen involvement is a central component of efforts to restore, improve, and protect wetlands, this Administration remains committed to fostering volunteer efforts that advance and promote individual stewardship. An informed public working in partnership with Federal, state, tribal, and local agencies will ensure wetlands are conserved for future generations.

These collaborative conservation and stewardship efforts depend on accurate, timely, and reliable data. Although the National Wetlands Inventory and National Resources Inventory

provide a base of information for this purpose, an integrated national, regional, and local information system would allow for a real-time base of information. In the future, when state and Federal agencies are able to share geographic information systems (GIS) for wetlands, policy officials and managers at all levels will have the real-time information they need to make decisions in support of the President's wetlands conservation goal.

The lessons learned during development of these first two reports will be invaluable for future efforts. Clearly, Federal agencies have improved how they track progress toward the President's wetlands goal. Knowledge gained through this year's effort will be applied to future efforts.

Figure 5. Budget for Wetlands Goal in FY 2005, 2006, and 2007



Appendix A.

Methodology and Definitions

Data Call to the Agencies

The data call for wetland performance and budget data went to the Departments of Agriculture, Army, Commerce, the Interior, and Transportation and to the Environmental Protection Agency. A Working Group developed interagency guidance based on lessons learned last year. The guidance increased the consistency and accuracy of the estimates developed, and projected estimates in the first report were adjusted using actual results as they became available.

Reporting Period

Performance and funding data for programs covered the following time periods:

- FY 2005 enacted budget and performance results
- FY 2006 enacted budget and estimated performance results
- FY 2007 President's requested budget and estimated performance results based on the President's requested funding levels.

To assess progress for the second year since the President's April 2004 announcement, half of the reported achievements for FY 2005 were combined with half of the planned accomplishments for FY 2006.

Year Performance and Budget Data Reported

Performance data is reported in the year the project is completed, land acquired, or easement purchased. However, funding is reported in the year it is appropriated. For example, funding for a multi-year wetland improvement project would be reported in FY 2006 and FY 2007 when funding is appropriated, but the number of acres improved would appear on the performance data worksheet in FY 2008 and FY 2009 as the accomplishments are realized.

Scope of Funding Included in the Report

Wetland activities funded by both discretionary and mandatory funds are included. Discretionary funds are controlled by appropriation acts, and mandatory funds are controlled by

laws other than appropriations acts (e.g., Coastal Wetlands Planning, Protection, and Restoration Act funds and funds collected from the sale of Duck Stamps). All annually appropriated funds are considered to be discretionary funds.

Wetlands only

Programs that perform both wetland activities and non-wetland activities reported funding and performance related only to the wetland component, not their entire program. For example, when land is purchased for waterfowl management it may include both wetlands and associated upland nesting cover. These upland acres were deducted from the acres reported as contributing to the President's wetland goal, and the cost of these acres was generally deducted from the funds expended for the project. The number of acres of wetlands contributed by a program to the President's wetland goal will be smaller than the number of habitat acres reported in other budget documents because the habitat acres typically include upland buffer strips, associated upland cover, and nesting islands.

Eradication and abatement activities in wetlands

The first year an invasive plant or animal is eradicated or its population abated, the acreage will be reported as a gain under improve. Additional eradication or abatement work on the same area is considered to be maintenance and not counted in the improve category.



Mon Luis Island Marsh Restoration Project, Mobile Bay, Alabama. (NOAA Restoration Center)

Winter flooding of agricultural lands

Whether this acreage is counted depends on (1) whether the land is wetland or upland before the flooding and (2) whether the land is being newly flooded or the land is within a footprint that has been flooded in past winters. If the field is upland before being artificially flooded during the winter and upland after the water is removed in the spring, the acres are not counted. If the field is a farmed wetland before the flooding and this is the first year the field has been flooded, the acres are counted. Subsequent years of winter flooding are considered management and are not counted. The acreage will be reported as an improvement in quality through enhancement, because adding winter water results in the heightening, intensification, or improvement of one or more selected functions and associated values. Enhancement is undertaken for a purpose such as water quality improvement, floodwater retention, or wildlife habitat. Farmed wetlands are defined as areas where the soil surface has been mechanically or physically altered for production of crops, but hydrophytes will become established if farming is discontinued.

Definitions of Goal Areas

In 2000, the White House Wetlands Working Group (WHWWG)—composed of representatives from all major Federal agencies involved in wetland work—agreed to use wetland terminology and definitions that had been developed during the mid-1990s. Information for this report was provided by the participating agencies using terminology similar to that previously developed by the White House Wetlands Working Group and the same terminology used in the first report in 2005.³

To “restore or create” wetlands results in a gain of wetland acres and includes:

- Creation of wetlands that did not previously exist on an upland or deepwater site. These actions are referred to as “establishment” by the WHWWG.
- Restoration of a former wetland to its natural/historic function and resulting value. Typically, such a former wetland had been drained for some purpose. These actions are known as “re-establishment” by the WHWWG.

To “improve” wetlands results in a gain of wetland functions or quality, rather than additional acreage, and includes:

- Repair of the natural/historic functions and associated



Mangrove restoration at Pelican Island National Wildlife Refuge, Vero Beach, Florida. (FWS)

values of a degraded wetland. The WHWWG refers to these actions as “rehabilitation” of wetlands. Rehabilitation results in a gain in wetland quality.

- Heightening, intensification, or improvement of one or more selected functions and associated values. The WHWWG called these types of actions “enhancement.” Enhancement is undertaken for a purpose such as water quality improvement, flood water retention, or wildlife habitat. Enhancement results in the gain of selected wetland functions and associated values but may also lead to a decline in other wetland functions and values.

To “protect” wetlands includes:

- Acquisition of land or easements of at least 30 years duration.

Activities Excluded from Acreage Counted Toward the President's Goal

Only United States accomplishments

Due to the migratory nature of birds, some programs work to restore, improve, and protect wetlands in Canada, Mexico, and the Caribbean. International portions of programs were not included in the data reported.

Cyclical work

Work carried out to sustain wetlands (*e.g.*, habitat maintenance on a National Wildlife Refuge to maximize wetland habitat values) are not counted toward the President's goal. Cyclic water-level management and other cyclic wetland activities are used to mimic naturally occurring flood regimes for the benefit of wildlife. In FY 2006, those management activity accomplishments are expected to be 27,780 acres of forested wetlands and similar habitats, as well as 148,297 moist soil acres managed, with water-level manipulation being achieved on 841,820 acres of water impoundments. Only new activities on a footprint of wetlands not previously manipulated for increased value were counted in the "improved" category as rehabilitation or enhancement.

Uplands work

Many programs carry out activities in upland areas that are crucial to the health and sustainability of wetlands. These upland acres were not counted toward the President's wetland goal.



The Maynard Reece Waterfowl Production Area, Iowa (above) was named after the five-time winner of the Federal Duck Stamp Contest. (FWS)

Maintenance activities

Periodic additional work involves the manipulation of the physical, chemical, or biological characteristics critical to maintaining the existing quality. Cessation of maintenance activities triggers a loss in wetland quality. Maintenance includes activities to mimic a natural regime and repair of water control structures, fences, or structural protection. Maintenance activities do not result in an increase in wetland acreage or quality.

Management activities

Effective wetland management is critical to maintaining wildlife and plant populations. An example of a management activity is the control of water levels in a restored wetland. Annual winter flooding of agricultural lands is also considered a management activity and not counted toward the President's wetland goal.

Mitigation

Wetlands created or improved as mitigation for the loss or degradation of other wetland values are not counted. The rehabilitation of wetlands at former hazardous waste sites are considered to be compensatory mitigation.

Wetland Activities that Maintain the Nation's Wetland Base

Many important wetland activities are not counted toward meeting the President's goal because they are focused on maintaining or managing the Nation's wetland base and do not add acres, increase wetland quality, or fall within the definition of "protect." Many agencies spend more funds maintaining and managing the existing wetland base than on making additions to the base. The base is critically important, because wetland gains can only be built on a stable foundation. Maintenance and management activities are essential to maintain healthy wetlands and existing wildlife and plant populations. Also, programs that mitigate for wetland losses are not counted as contributing to the new wetland goal because they maintain the Nation's wetland base. Examples of these types of programs are



Canada geese at the Turnbull National Wildlife Refuge, Cheney, Washington. (FWS)

Federal Highway Administration programs that mitigate the impacts of highways on wetlands, Clean Water Act provisions that require the mitigation of permitted wetland losses, and the Natural Resources Damage Assessment and Restoration Program, which restores and improves wetlands at former hazardous waste sites. Agencies were asked to report separately on programs that support the President's goals through wetland conservation, research, and assessment. The programs that help maintain the wetland base included in the following appendices are not exhaustive, but do represent the major activities that support the President's wetlands goal. See Appendix B for further discussion.

Correcting for Over-Reporting of Acreage

More and more programs are participating in cooperative conservation partnerships. They have proven to be effective and efficient mechanisms to leverage resources and expertise. Many programs work cooperatively with both internal and external Federal partners as well as non-Federal partners. One partner may provide materials and equipment, another labor, another technical assistance, and yet another land. For example, a 100-acre project with four

partners could be reported by each of the partners, and could appear to be 400 acres when combined. In some cases, one partner may not be aware that a landowner is working with multiple partners. These partnerships result in over-reporting of performance. To correct for this "double-counting," Partnership Worksheets were used. Programs were asked to identify partnership groups separately on the worksheets. Approximately half of the reported acreage was accounted for on the Partnership Worksheets. Some agencies do not collect partnership data, and of those that do, most do not collect this data to the level of detail necessary to make refined adjustments for double-counting. Although more of the performance data was accounted for this year on the Partnership

Worksheets, the quantity and quality was not sufficient to make adjustments to individual program accomplishments. Therefore, an overarching correction was necessary to avoid over-reporting the acres created or restored, improved, and protected. To calculate this double-counting adjustment, all the acreage reported as accomplished through partnerships, including non-Federal partnerships, was summed by category. The calculation assumed two Federal partners were involved in situations where double-counting took place. Half of the total acreage accom-



FWS and BLM Wetland Restoration Project, Wood River, Oregon. (FWS)

plished through partnerships by category was subtracted from the raw total, by category.

Moving Toward a Performance Measurement and Tracking System

This document reflects the lessons learned in developing the 2005 report. The estimates reported last year were adjusted as actual results became available. Over-reporting due to partnerships remains a significant concern. The agencies will work on the double-counting problem during the next year, particularly to determine whether the problem can be solved by refining existing numeric databases or instead will require the use of geographic information system (GIS) technology.

The use of GIS technology to track wetland programs and their contribution toward the national goal would simplify the problem of adjusting for double-counting. This approach would have the additional advantage of allowing the information to be overlaid on a digital map of the United States. The map would facilitate the development of monitoring programs to ensure wetlands are restored, improved, and protected and that they provide the intended functions and values.



Commercial fishing on Humboldt Bay, California. (FWS)

Tracking systems require agreement on common performance measures and definitions. They assess whether the restoration and enhancement projects quantitatively and qualitatively meet national goals. The President noted this need in his 2004 Earth Day announcement by committing the Federal government to “gain further experience and develop useful protocols for measuring wetland outcomes.” The Federal agencies have made good progress in developing a procedure to track wetland accomplishments.

Appendix B.

Maintaining the Wetland Base

Federal agencies engage in various actions that help maintain the existing base of wetlands. The President's goal helps sharpen focus on these activities. A policy of having an "overall increase" of wetlands must be built on a strong foundation of "no net loss." Key programs that contribute to that base, but outside the President's initiative, fall into the following categories:

- Managing wetlands;
- Cooperative conservation;
- Regulation and mitigation; and
- Support activities.

Managing Wetlands

Approximately 13 percent of the Nation's current base of wetlands is managed by Federal agencies. Many units of the National Wildlife Refuge System were established for their wetland values, and FWS spends approximately \$25 million annually to actively manage over 1.1 million acres of wetlands. Wetland management activities include creating desired conditions through the use of canals, levees, water control structures, and pumps. Cyclical water level and management activities—including mechanical disturbance, prescribed burning, or chemical treatment—also are used to produce native wildlife foods in wetlands. Other Federal agencies managing wetlands include the National Park Service, USDA Forest Service, Bureau of Land Management, National Oceanic and Atmospheric Administration (NOAA), Bureau of Reclamation, Bureau of Indian Affairs, and Department of Defense. All of these wetlands are being conserved for sustainable benefits.

Cooperative Conservation

Seventy-four percent of the land in the United States is privately owned. To better conserve privately owned wetlands, the Federal government relies on voluntary, incentive-based conservation programs. For example, technical and financial assistance provided by the NRCS and the FWS help private landowners apply needed conservation techniques on their land. When private landowners use these programs to restore, protect, and improve wetlands on their property, they serve as stewards of our environment. Other cooperative conservation efforts include:

Public-private partnerships

The success of Federal actions to encourage and partner with non-Federal parties—state and local governments, Indian tribes, and nongovernmental entities—increases opportunities to make progress through cooperative endeavors. Recent trends are encouraging. For example, through the Corporate Wetlands Restoration Partnership, some 200 private firms and 100 nongovernmental organizations are working with Federal agencies to implement wetland projects (see <http://www.coastalamerica.gov/text/cwrp.html>). The number of partnerships is projected to increase in the future. The coordinated use of public-private efforts focusing on priority wetlands opportunities should yield major ecological benefits. Another example of successful public-private partnerships are the FWS Joint Ventures. Joint Ventures partnerships (JVs) were formed to implement the North American Waterfowl Management Plan (NAWMP). They are self-directed partnerships involving Federal, state, and local governments; corporations; and a wide range of nongovernmental conservation organizations. JVs have proven to be successful tools for developing cooperative conservation efforts to protect waterfowl and other bird habitat. The 17 current JVs address multiple local, regional, and continental goals for sustaining migratory bird populations by developing scientifically based habitat projects that benefit waterfowl and other migratory bird populations.

Technical assistance

Most Federal agencies involved with wetland activities provide Federal, state, and local partners with technical



Cypress wetland, Cypress Creek National Wildlife Refuge, Ullin, Illinois. (FWS)

(biological, engineering, hydrological, etc.) expertise to support various development, conservation, and restoration projects across the country. These programs offer technical assistance to help conserve, restore, and protect a variety of fish and wildlife and their habitats. Among the laws providing a foundation for technical assistance and conservation partnerships are the Fish and Wildlife Coordination Act, National Environmental Policy Act, Clean Water Act, Federal Power Act, Estuary Restoration Act, and Environmental Restoration Act.

Regulation and Mitigation

Water quality

An important aspect of the President's Wetlands Initiative is its continued emphasis on the goal of "no net loss" of wetlands by existing programs that regulate certain activities in wetlands and other waters. Section 404 of the Clean Water Act regulates the discharge of dredged or fill material into waters of the United States, including wetlands, and is jointly administered by the USACE and EPA. The USACE has primary responsibility for day-to-day permitting of activities in jurisdictional "waters of the United States," a broad category of aquatic resources that includes wetlands. A comprehensive permit review requires applicants to first avoid and then minimize impacts, and finally replace wetland functions lost through compensatory mitigation. Regulated activities under this

program include fills for development, water resource projects (such as dams and levees), and infrastructure development (such as highways and airports). During the past two years, more than 170,000 permit applications were processed requiring applicants to avoid impacts to more than 18,000 acres of wetlands, and maintaining a ratio of more than two acres of mitigation for every acre of permitted impacts to wetlands. In addition, the USACE has developed new performance standards that increase the emphasis on field evaluations of mitigation sites. The USACE also is providing field guidance to improve mitigation success through interagency efforts associated with the National Wetlands Mitigation Action Plan, and promulgating a joint rule with EPA that proposes integrating the watershed approach in mitigation planning.

Farmland

The Wetland Conservation ("Swampbuster") provision established in the 1985 Farm Bill, and amended in the 1990 Farm Bill, requires all agricultural producers to protect the wetlands on the farms they own or operate if they wish to be eligible for certain USDA farm program benefits. Producers are not eligible if they have planted an agricultural commodity on a wetland that was converted by drainage, leveling, or any other means after December 23, 1985, or if they have converted a wetland for the purpose of agricultural commodity production, or for making such production possible, after November 28, 1990. Through the Conservation Technical Assistance (CTA) of NRCS, the agency makes wetland determinations, develops wetland mitigation and restoration plans, and administers other Swampbuster-related provisions.

Transportation

Under Federal Aid Highway legislation, state transportation agencies may use National Highway System and Surface Transportation Program funds to finance wetland and natural habitat conservation planning and implementation, as well as compensatory mitigation and restoration projects that offset unavoidable losses from transportation projects. The Department of Transportation (DOT) has a goal of 1½-to-1 wetland acre mitigation; under the Federal Aid Highway Program it has achieved



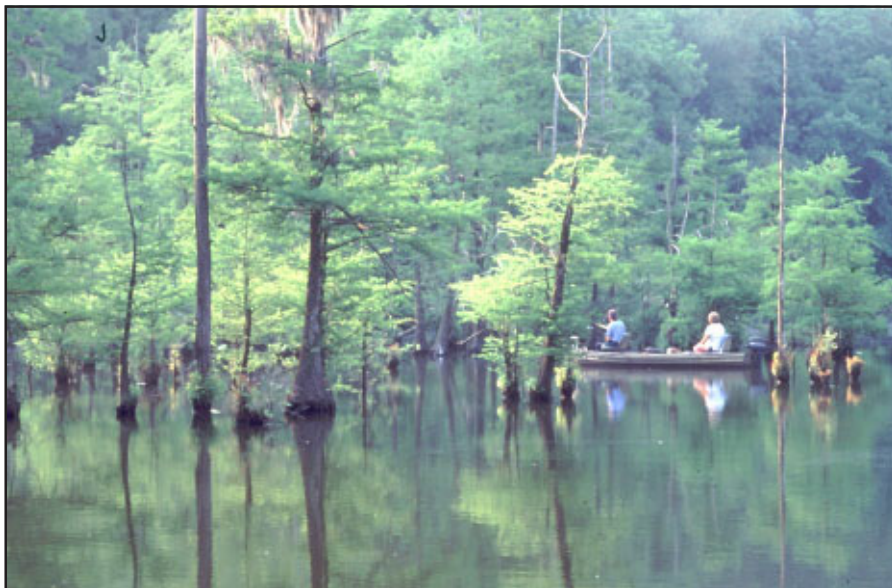
The John Heinz National Wildlife Refuge at Tinicum is located in Philadelphia and Delaware Counties, Pennsylvania, about one mile from Philadelphia International Airport. The refuge was established by an act of Congress in 1972 to protect the largest remaining freshwater tidal marsh in Pennsylvania. (FWS)

nearly 42,000 acres of wetland mitigation since 1996, with mitigation exceeding acres impacted by nearly 26,000 acres. The 2005 Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users requires that metropolitan and statewide plans reflect environmental mitigation and coordination with resource agencies. The Federal Highway Administration also funds research on wetlands mitigation in connection with highways, and wetland mitigation is an eligible project cost for Federal transit and airport assistance.

Support Activities Inventory

The FWS strategically maps the Nation's wetlands and deepwater habitats to gather information on their characteristics, extent, and status and trends through the National Wetlands Inventory (NWI). As part of the President's Wetlands Initiative, the FWS completed an updated national wetlands status and trends report in 2005.⁴ The study found that there are about 107.7 million acres of wetlands in the conterminous United States. Between 1998 and 2004, there was an estimated gain in wetlands acreage of 191,750 acres, or about 32,000 acres per year. The net gain in wetlands acreage was attributed to an increase in freshwater ponds, conversion of agricultural lands or former agricultural lands that had been idled, in combination with wetland restorations. Freshwater wetland losses to silviculture and to urban and rural development offset some acreage gains. The report did not document or address changes in wetlands quality. There is additional work to be done to ensure that the Nation's wetlands base is sustained and provides the necessary functions, diversity, and structure to improve the quality of our wetland resources as outlined in the President's 2004 message.

The NRCS conducts the National Resources Inventory (NRI), also a scientifically based statistical survey of the Nation's natural resources that provides updated information on the status, condition, and trends of land, soil, water, and related resources on the Nation's non-Federal land. The NRI is unique in that it is a nationally consistent database constructed specifically to estimate five-, ten-, and 15-year trends for natural resources. The NRI process has reported a gain of 263,000 acres of wetlands from 1997 to 2003, an average annual increase of 44,000 acres.



Choctaw National Wildlife Refuge, Jackson, Alabama. (FWS)

The NWI Status and Trends study was designed specifically to sample wetlands and wetland change, whereas the NRI is a landscape characterization of all natural resources, of which wetlands make up one component. The FWS designed its study to develop wetlands trend information for all lands in the conterminous United States, whereas the NRI collects data on non-Federal rural lands.

Monitoring and Evaluation

When actions are taken to restore or enhance natural resources or ecosystems, a considerable amount of time may pass before the full effects are evident. For this reason, the responsible Federal agencies monitor the targeted wetlands to measure and track progress. Results from monitoring are useful for evaluating the effectiveness of the actions taken; in some cases, management goals or actions to meet them may be modified. In addition, the Federal Government provides both financial and technical assistance to states and tribes to help them monitor their wetland conservation work.

Research and Education

Federal agencies also are engaged in research to better understand wetlands, wetland plants, and their responses to targeted actions. Among the most prominent programs are the National Wetlands Research Center (U.S. Geological Survey), Engineer Research and Development Center (USACE), Plant Materials Centers (NRCS), and the Center for Forested Wetlands Research (U.S. Forest Service).

Appendix C.

Department of Agriculture

Table C-1. USDA Programs Supporting the President's Wetlands Goal in FY 2007. Funding (millions of dollars)

Agency	Program	Restore or create	Improve	Protect	Total wetlands funding for goal FY 2007	Difference from FY 2006
FSA	Conservation Reserve Program	13.000	2.600	0.000	15.600	2.400
NRCS	Conservation Technical Assistance Program	2.200	37.100	0.000	39.300	0.000
NRCS	Environmental Quality Incentives Program	0.010	0.110	0.000	0.120	0.000
NRCS	Farm and Ranchlands Protection Program	0.000	0.000	7.000	7.000	0.000
NRCS	Grasslands Reserve Program	0.000	0.000	0.000	0.100	0.000
NRCS	Wetlands Reserve Program	105.000	9.000	206.000	320.000	111.500
NRCS	Wildlife Habitat Incentives Program	0.400	1.000	0.000	1.400	0.000
Totals		120.610	49.810	213.100	383.520	113.900

Table C-2. USDA Programs Supporting the President's Wetlands Goal in FY 2007. Planned Accomplishments (in acres)

Agency	Program	Restore or create	Improve	Protect	Total wetlands FY 2007	Difference from FY 2006
FSA	Conservation Reserve Program	40,000	10,000	0	50,000	23,000
NRCS	Conservation Technical Assistance Program	2,200	49,100	0	51,300	0
NRCS	Environmental Quality Incentives Program	1,000	0	0	1,000	0
NRCS	Farm and Ranchlands Protection Program	0	0	7,000	7,000	0
NRCS	Grasslands Reserve Program	0	0	1,500	1,500	0
NRCS	Wetlands Reserve Program	173,400	14,000	128,000	315,400	28,400
NRCS	Wildlife Habitat Incentives Program	3,000	685	0	3,685	0
Total		219,600	73,785	136,500	429,885	51,400

USDA Programs Supporting the President's Wetlands Goal

Farm Service Agency (FSA)

Conservation Reserve Program (CRP): Originally authorized in 1985 and re-authorized through 2007. Establishes a permanent cover on eligible acreage of environmentally sensitive lands (including cropped and prior converted wetlands) through long-term rental agreements. Currently, 2.3 million wetland acres, including upland buffers, have been restored and are being maintained under 10- and 15-year contracts with annual rental payments of \$126 million. The 2002 Farm Bill authorized that, at any one time, up to 39.2 million acres may be enrolled in CRP during 2002 through 2007, an increase from 36.4 million acres

authorized to be enrolled through 2002.
<http://www.fsa.usda.gov/dafp/cepd/crp.htm>

Natural Resources Conservation Service (NRCS)

Conservation Technical Assistance Program: Technical assistance program that has helped landowners protect and conserve 477,000 acres to protect water quality and improve habitat, including the restoration and enhancement of wetlands.
<http://www.nrcs.usda.gov/programs/cta>

Environmental Quality Incentives Program (EQIP): Voluntary conservation program that promotes agricultural production and environmental quality as compatible national goals. Through EQIP, farmers and ranchers may receive financial and technical help to install and maintain conservation

practices that enhance soil, water, and related natural resources, including wetlands. The program has restored 29,369 acres of wetlands and an additional 146,769 acres have been enhanced or improved since the program was established in 1996. The 2002 Farm Bill authorized \$400 million for FY 2002, \$700 million for FY 2003, \$1 billion for FY 2004, \$1.2 billion in both FY 2005 and FY 2006, and \$1.3 billion in FY 2007.

<http://www.nrcs.usda.gov/programs/eqip>

The Farm and Ranchlands Protection Program:

Provides matching funds to help purchase development rights to keep productive farm and rangeland in agricultural uses for the purpose of protecting topsoil by limiting conversion to nonagricultural uses of land.

<http://www.nrcs.usda.gov/programs/frpp>

Grassland Reserve Program: A voluntary program offering landowners the opportunity to protect, restore, and enhance grasslands on their property. The program will conserve vulnerable grasslands from conversion to cropland or other uses and conserve valuable grasslands by helping maintain viable ranching operations. The program is jointly administered by NRCS and FSA. NRCS has lead responsibility on technical issues and easement administration. FSA has lead responsibility for rental agreement administration and financial activities. In fiscal year 2005, the agencies accepted 7,412 GRP applications encompassing 4,970,628 acres. Of these totals, 1,500 acres of wetlands were protected by farmers and ranchers using common management practices to maintain the viability of the grassland acreage.

<http://www.nrcs.usda.gov/programs/grp>

Wetlands Reserve Program: Voluntary program that assists landowners with restoring and protecting wetlands through conservation easements and cost-share agreements. Since 1992, 1,074,245 wetland and associated upland acres have been enrolled in the program. The 2002 Farm Bill authorizes up to an additional 250,000 acres to be enrolled in the program each year, for a total program enrollment of 2,275,000 acres by the end of 2007. Total program enrollment at the end of FY 2005 was over 1.8 million wetland acres and associated upland acres.

<http://www.nrcs.usda.gov/programs/wrp>

Wildlife Habitat Incentives Program (WHIP): WHIP is a voluntary program that provides technical and financial assistance to enable eligible participants to develop habitat for upland wildlife, wetland wildlife, threatened and endangered species, fish, and other types of wildlife in an environmentally beneficial and cost-effective manner. The purpose of the program is to create high-quality wildlife habitats that support wildlife populations of local, state, and national significance. In FY 2005 through 2007, approximately 11,100 acres of wetlands will have been protected, restored, developed, or enhanced under WHIP.

<http://www.nrcs.usda.gov/Programs/wbip/>

Programs that Maintain the Wetland Base

Plant Materials Program: Focuses on development of plants and technology to help conserve natural resources, including wetland plants. There are currently 26 Plant Materials Centers (PMC) located across the country. Each PMC develops vegetative solutions to natural resource problems and issues. In the wetlands arena, PMCs have selected plants for restoration work as well as for nutrient filtering in constructed wetlands. The PMCs also develop the technology to successfully propagate, establish, and manage plant materials in wetland settings. In FY 2005, PMCs were working on over 250 studies to further the technology of vegetation in wetlands. This included technology to protect and restore coastal marshes, restore or enhance wetlands, protect shorelines of wetlands, and enhance wetlands for wildlife uses.

<http://plant-materials.nrcs.usda.gov>

National Resources Inventory (NRI): The NRI serves as the Federal Government's principal source of information on the status, condition, and trends of soil, water, and related resources on private lands in the United States. The NRI provides trends and analysis about the distribution and loss of wetlands and other resource categories on non-Federal lands. The NRI provides not only overall estimates of change in resource conditions but also the dynamics of the changes. Between 1977 and 1997, the NRI was conducted every five years, but began a transition to an annual inventory process in 1999.

<http://www.nrcs.usda.gov/technical/nri>

Appendix D.

Department of Commerce

National Oceanic & Atmospheric Administration

Table D-1. NOAA Programs Supporting the President's Wetlands Goal in FY 2007. Funding (millions of dollars)

Agency	Program	Restore or Create	Improve	Protect	Total wetlands funding for goal FY 2007	Difference from FY 2006
NOAA	Fisheries Habitat Restoration	0.842	12.794	0.000	13.636	-11.945
NOAA	Great Lakes Restoration Program	0.000	1.500	0.000	1.500	1.500
Total		0.842	14.294	0.000	15.136	-10.445

Table D-2. NOAA Programs Supporting the President's Wetlands Goal in FY 2007. Planned Accomplishments (in acres)

Agency	Program	Restore or create	Improve	Protect	Total wetlands FY 2007	Difference from FY 2006
NOAA	Fisheries Habitat Restoration	1,000	3,500	0	4,500	0
NOAA	Great Lakes Restoration Program	0	75	0	75	75
Total		1,000	3,575	0	4,575	75

NOAA Programs Supporting the President's Wetlands Goal

Community-based Restoration Program (CRP): The CRP applies a grassroots approach to restoration by actively engaging community members in on-the-ground restoration of coastal fishery habitats around the Nation. The CRP embraces cooperative conservation by establishing partnerships that collaboratively restore NOAA trust resources, improving environmental quality and strengthening stewardship within local communities. FY 2007 funding request is \$12.8 million. http://www.nmfs.noaa.gov/habitat/restoration/projects_programs/crp/index.html

Great Lakes Habitat Restoration Program (GLHRP): Although the President's FY 2006 request included \$1.5 million to initiate the GLHRP, action by Congress did not include this funding. In FY 2007, NOAA will establish a cross-NOAA Great Lakes Habitat Restoration Program to coordinate habitat restoration and protection efforts. Taking into account the priority needs identified by the Great Lakes Interagency Task Force, NOAA will focus its restoration and protection to support ongoing efforts at watersheds within Great Lakes Areas of Concern (AOC). FY 2007 funding request is \$1.5 million. http://www.corporateservices.noaa.gov/%7enbo/07bluebook_highlights.html

Chesapeake Bay Oyster Restoration: The ongoing program provides planning, implementation, and science-based monitoring for large-scale on-the-ground native oyster restoration activities. The funding works in concert with other federal and state programs to support site characterization, shell substrate placement, hatchery production of seed oysters, and in-depth project monitoring to document progress toward Chesapeake Bay oyster restoration goals.

FY 2007 funding request is \$842,000.

<http://noaa.chesapeakebay.net/NativeOysters.aspx>



Volunteers haul trash at the March 2006 Anacostia Watershed Trash Cleanup on the Watts Branch of the Anacostia River, co-sponsored by NOAA. The Watts Branch is one of the most environmentally degraded subwatersheds in the Washington, D.C., region.

Programs that Maintain the Wetland Base

National Estuarine Research Reserve System (NERRS):

NERRS is a network of protected areas established for long-term research, education, and stewardship. This partnership program between NOAA and the coastal states protects more than one million acres of estuarine land and water, which provides essential habitat for wildlife; offers educational opportunities for students, teachers, and the public; and serves as living laboratories for scientists. FY 2007 funding request is \$16.8 million.

<http://nerrs.noaa.gov>

Coastal Zone Management Program (CZM):

The Coastal Zone Management (CZM) program is a voluntary Federal–state partnership dedicated to comprehensive management of the Nation’s coastal resources. State CZM programs contain provisions for the protection of estuaries, coastal wetlands, and other natural resources. Funding supports implementation of state CZM programs, including numerous state and local coastal habitat protection and restoration projects. FY 2007 funding request is \$66.1 million.

<http://www.ocrm.nos.noaa.gov/czm>

Coastal and Estuarine Land Conservation Program

(CELCP): The CELCP was established to protect coastal and estuarine lands considered important for their ecological, conservation, recreational, historical, or aesthetic values, giving priority to lands that have significant ecological values and that can be effectively managed and protected. The program provides funding to state and local governments to acquire such lands to ensure they are permanently conserved for the benefit of future generations.

<http://www.ocrm.nos.noaa.gov/landconservation.html>

Pacific Coastal Salmon Recovery Fund (PCSRF):

Congress established the PCSRF to contribute to the restoration and conservation of Pacific salmon and steelhead populations and their habitats. The states of Washington, Oregon, California, Idaho, and Alaska and the Pacific Coastal and Columbia River tribes receive congressional PCSRF appropriations from NOAA’s National Marine Fisheries Service each year. The fund supplements existing state, tribal, and local programs to foster development of Federal/state/tribal/local partnerships in salmon and steelhead recovery and conservation. The President’s FY 2007 request for the fund is \$66.8 million.

<http://nwr.nmfs.noaa.gov/salmon-recovery-planning/pcsr/>

National Estuaries Restoration Inventory (NERI):

NERI was created to track estuary habitat restoration projects across the Nation. The purpose of the inventory is to provide

information on restoration projects in order to improve restoration methods, as well as to track acreage restored toward the million-acre goal of the Estuary Restoration Act.

<http://neri.noaa.gov>

Damage Assessment, Remediation, and Restoration

Program (DARRP): As a natural resource trustee, NOAA acts on behalf of the public to restore resources injured by oil spills,

releases of other hazardous substances, and vessel groundings. DARRP collaborates with other Federal, state, and tribal natural resource trustees in assessing and quantifying injuries to natural resources, seeking damages for those injuries, implementing restoration actions, and monitoring progress to ensure restoration goals are met. FY 2007 funding request is \$9.0 million.

<http://response.restoration.noaa.gov>

Appendix E.

Department of the Army

U.S. Army Corps of Engineers, Civil Works

Table E-1. USACE Programs Supporting the President's Wetland Goal in FY 2007. Funding (millions of dollars)

Includes all non-regulatory programs directed at restoration, improvement, or protection of aquatic resources. Includes final Total wetlands funding for goal FY 2007.

Agency	Program	Restore or create	Improve	Protect	Total wetlands funding for goal FY 2007	Difference from FY 2006
USACE Civil Works	Aquatic Ecosystem Restoration Program	59.600	238.400	0.000	298.000	-155.000

funding for completions in 2007 and funds for projects completing in subsequent years. Excludes funds for mitigation, regulatory, and CWPPRA. Funding distributed in proportion to FY 2005 and 2006 acreage.

Table E-2. USACE Programs Supporting the President's Wetland Goal in FY 2007. Planned Accomplishments (in acres)

Includes all non-regulatory programs directed at restoration, improvement, or protection of aquatic resources. Construction completion

Agency	Program	Restore or create	Improve	Protect	Total wetlands FY 2007	Difference from FY 2006
USACE Civil Works	Aquatic Ecosystem Restoration Program	500	813,167	0	813,667	797,659

expected in FY 2007. The large increase in acreage is due to the completion of Davis Pond Diversion Structure, Louisiana. Funds provided in previous years as well as FY 2007.

USACE Projects Supporting the President's Wetland Goal

Aquatic Ecosystem Restoration: The USACE has numerous study, project-specific, and programmatic authorities for implementing aquatic ecosystem restoration projects. In addition, activities contributing to the President's goal may occur on the 12 million acres of water and land managed by the USACE for other purposes, such as flood damage reduction, navigation, and recreation. For example, dredged material is used to create, restore, or improve wetland habitat as part of routine maintenance dredging of Federal channels.

The data in the tables above represent a subset of the total USACE commitment to achieving the President's goals. Because most USACE restoration projects take several years to complete, the funds appropriated in any one fiscal year have a minimal correlation to the number of acres that count toward the President's goal in that fiscal year. Projects are included in the

budget based on their effectiveness in addressing significant regional or national aquatic ecological problems. The aquatic ecosystem studies and projects proposed by the USACE for funding in FY 2007 include the following examples (the large number of projects preclude a comprehensive list within this document):

Comprehensive Everglades Restoration Plan (CERP):

The primary and overarching purpose of CERP is to restore the South Florida ecosystem, which includes the Everglades. The plan provides the framework and guidance to restore, protect, and preserve the water resources of the greater Everglades ecosystem. CERP has been described as the world's largest ecosystem restoration effort, and includes providing more natural flows of water, improved water quality, and more natural hydro-periods within the remaining natural areas. The plan is intended to help restore the ecosystem while ensuring clean and reliable water supplies, and providing flood protection in urban areas.

<http://www.evergladesplan.org>

Louisiana Coastal Area, LA Ecosystem Restoration: In 1998, the State of Louisiana and the Federal agencies charged with restoring and protecting Louisiana's valuable coastal wetlands adopted a new coastal restoration plan, *Coast 2050: Toward a Sustainable Coastal Louisiana*.⁵ The *Coast 2050* report became the basis of the LCA, which was completed in 2004 and recommended a \$1.9 billion Near-Term Plan to restore Louisiana's coast.

<http://www.mvn.usace.army.mil/prj/lca/>

Upper Mississippi River Restoration: Originally authorized in 1986 but significantly modified in 1999, this program provides for planning, construction, and evaluation of measures for fish and wildlife habitat rehabilitation. Multiple habitat projects are helping to revitalize the side channels and to restore island, aquatic, and riparian habitat in the Upper Mississippi River. The program also includes funds for the collection of project and systemic baseline data and monitoring.

<http://www.mvr.usace.army.mil/EMP/default.htm>

Programs that Maintain the Wetland Base

U.S. Army Engineer Research and Development Center (ERDC): Within the Environmental Laboratory, the Wetlands and Coastal Ecology group conducts field and laboratory investigations on biotic and abiotic resources in wetlands and coastal systems and develops products/systems supporting assessment, restoration, and management of wetlands and coastal ecosystems. Examples of wetlands

research for FY 2007 include the development of improved standards, techniques, and guidelines for the planning, design, and construction of USACE wetland restoration and creation projects; completion of a GIS-based decision support system for prioritizing candidate wetlands restoration sites with the greatest potential for success; and exploration of innovative plant harvesting/installation methods for the large-scale restoration of submerged aquatic vegetation (SAV) ecosystems in the Chesapeake Bay. In addition, state-of-the-art tools and methods for wetlands restoration will be integrated to forecast physical, chemical, and biological responses to water resource management activities and to manage these resources within a watershed-scale perspective. Approximately \$3 million is included in the FY 2007 budget for wetlands research.

<http://el.erc.usace.army.mil/org.cfm?Code=EE-W>

Regulatory Clean Water Act 404 Program: The USACE manages the Nation's wetlands through a regulatory program requiring permits for the discharge of dredged and fill material into jurisdictional waters of the United States. In a typical year the USACE receives permit requests to fill about 25,000 acres of jurisdictional waters. Of these, about 5,000 acres are not permitted and, with respect to the 20,000 acres that are permitted, the USACE requires mitigation on average of more than two acres for each permitted acre lost. FY 2007 funding request is \$173 million.

<http://www.usace.army.mil/inet/functions/cw/cecwo/reg>

Appendix F.

Department of the Interior

Table F-1. DOI Programs Supporting the President's Wetlands Goal in FY 2007. (Funding in millions)

**Includes BLM's work with the National Fish and Wildlife Foundation and Yuma East Wetlands Riparian Restoration Project, Arizona.*

Agency	Program	Restore or create	Improve	Protect	Total wetlands funding for goal FY 2007	Difference from FY 2006
BLM	Land Acquisition	0.000	0.000	8.373	8.373	0.000
BLM	Oregon & California Grant Lands	3.749	2.885	0.031	6.664	2.920
BOR	Wildlife Habitat Augmentation Program (SUM)	0.000	0.420	0.000	0.420	-3.440
NPS	NPS exotic plant management teams	0.000	1.225	0.000	1.225	0.000
FWS	Coastal Program	0.791	0.000	7.789	8.580	-0.060
FWS	Fish and Wildlife Management Assistance	0.000	0.500	0.000	0.500	0.200
FWS	Landowner Incentive Program	0.000	0.000	0.100	0.100	0.000
FWS	National Coastal Wetlands Grant Program (mandatory CWPPRA funds)	0.642	0.000	5.000	5.642	0.000
FWS	National Wildlife Refuge System	3.795	4.357	28.479	36.631	0.190
FWS	National Wildlife Refuge System (mandatory Migatory Bird Fund)	0.000	0.000	14.080	14.080	0.240
FWS	North American Wetlands Conservation Fund appropriated	2.065	0.998	16.832	19.894	1.170
FWS	North American Wetlands Conservation Fund (non-appropriated)	2.403	1.162	19.591	23.156	1.210
FWS	North American Waterfowl Management Plan - Joint Ventures	0.214	0.400	0.000	0.614	-0.090
FWS	Partners for Fish and Wildlife Program	17.910	3.447	0.029	21.385	-3.940
Other DOI Programs*		0.000	0.130	0.000	0.130	-0.040
Total		31.569	15.524	100.304	147.394	-1.640

Table F-2. DOI Programs Supporting the President's Wetlands Goal in FY 2007. Planned

Accomplishments (in acres)

*Includes BLM's work with the National Fish and Wildlife Foundation and Yuma East Wetlands Riparian Restoration Project, Arizona.

Agency	Program	Restore or create	Improve	Protect	Total wetlands FY 2007	Difference from FY 2006
BLM	Land Acquisition	0	0	3131	3131	-895
BLM	Oregon and California Grant Lands	0	22531	1915	24446	-7468
BOR	Wildlife Habitat Augmentation Program (SUM)	0	475	0	475	-2204
NPS	NPS exotic plant management teams	0	2793	0	2793	0
FWS	Coastal Program	3500	0	6500	10000	-358
FWS	Fish and Wildlife Management Assistance	0	15000	0	15000	12900
FWS	Landowner Incentive Program	0	0	0	0	-88
FWS	National Coastal Wetlands Grant Program (mandatory CWPPRA funds)	158	0	4528	4686	0
FWS	National Wildlife Refuge System	48282	106355	12639	167276	-310
FWS	National Wildlife Refuge System (mandatory Duck Stamp funds)	0	0	33200	33200	400
FWS	North American Wetlands Conservation Fund appropriated	34760	68897	258952	362609	114696
FWS	North American Wetlands Conservation Fund (mandatory CWPPRA funds)	43011	85252	320423	448686	141922
FWS	North American Waterfowl Management Plan - Joint Ventures	5134	16000	0	21134	-5064
FWS	Partners for Fish and Wildlife Program	27000	0	0	27000	-759
	Other DOI Programs*	0	340	0	340	296
Total		161,845	317,643	641,288	1,120,776	253,068

DOI Programs Supporting the President's Wetlands Goal

BLM Land Acquisition Program: The program is focused on consolidating land ownership and conserving resource values within 2,300 units, which compose the Bureau's Special Management Areas. Acquisition—through exchange, purchase, and donation—is an important component of the BLM's land management strategy. BLM acquires land and easements in land when in the public interest and consistent with publicly approved land use plans. Wetlands, in concert with other important resource values in these Special Recreation Management Areas, are an important factor in developing purchase, donation, and exchange initiatives.

<http://www.blm.gov/nbp/what/lands/realty/exchange.htm>

BLM Management of Lands and Resources/Oregon and California Grant Lands: The BLM uses these appropriations to address a wide variety of natural resource management needs. These activities frequently include on-the-ground projects that conserve, protect, and restore wetlands. Funding to protect, manage, and reforest the revested Oregon and California Railroad grant lands is also used for projects that directly restore and protect wetlands. Funding made available for wetlands-related conservation activities depend on annual funding levels and competing resource priorities within BLM.

<http://www.blm.gov/nbp/what/>

USBR Wildlife Habitat Augmentation Program: The program's purpose is to implement projects that protect, enhance, and restore riparian, wetlands, and associated habitats within the watersheds of Reclamation's California Central Valley Project. The CVP consists of a system of 18 dams and reservoirs, canals, power plants, and other facilities located mainly in the Sacramento and San Joaquin valleys. The CVP manages about nine million acre-feet of water for urban, industrial, agricultural, and environmental uses; produces electrical power; and provides flood protection, navigation, fish and wildlife, recreation, and water quality benefits.

<http://www.usbr.gov/mp/cvp.html>

NPS Exotic Plant Management Team: A new weapon to combat exotic plant species was launched by the National Park Service in 2000. Called the Exotic Plant Management Team (EPMT), the new capability was modeled after the coordinated rapid response approach used in wildland firefighting. The first test of the EPMT concept was conducted in 1997 at Lake Mead National Recreation Area (Nevada and Arizona) and served park units throughout the Southwest. Its success led to a request to fund the establishment of four EPMTs in other parts of the country.

http://www2.nature.nps.gov/YearInReview/yir2000/pages/01_confluence/01_01_drees.html

FWS Coastal Program: The Coastal Program works in 18 specific coastal communities to improve the health of watersheds for fish, wildlife, and people by building partnerships; identifying, evaluating, and mapping important habitats; restoring habitats; and providing technical assistance and financial support to help protect important coastal habitats. Since 1994, the program has restored 112,000 acres of coastal wetlands, 26,000 acres of coastal uplands, and over 1,100 miles of coastal streamside habitat. It has also helped protect 1.33 million acres of coastal habitat.

<http://www.fws.gov/coastal/CoastalProgram>

Fish and Wildlife Management Assistance: Delivers scientific information and on-the-ground projects that support cooperative efforts to conserve America's fisheries and wildlife resources. FWMA conducts on-the-ground conservation activities, including assessing the condition of habitats; restoring stream and wetland habitats; restoring fish passage; and controlling aquatic nuisance species through physical, chemical, and biological means.

<http://fisheries.fws.gov/FWSMA/mamain.htm>

Landowner Incentive Program: This program provides grants to state and tribal conservation agencies to help landowners restore habitats of listed, proposed, candidate, or other species determined to be at risk on private and tribal lands. Many of these species occur in wetlands environments, and states and tribes focus some of their efforts accordingly on wetlands habitats as appropriate. These efforts may range from providing technical assistance and developing wildlife management plans for these species and their habitats, to performing actual habitat manipulation as appropriate, to acquiring conservation easements or other forms of protection on wetlands.

<http://federalaid.fws.gov/lip/lip.html>

National Coastal Wetlands Grant Program (CWWPRA Funds): Since 1992 the program has protected 130,000 acres of wetlands and associated uplands along the coasts and Great Lakes through Federal cost-share grants.

<http://www.fws.gov/coastal/CoastalGrants>

National Wildlife Refuge System: About one-third of the 96-million-acre National Wildlife Refuge System consists of wetlands, not including the tundra of Alaska or open, marine environments. The FWS has programs to protect, restore, rehabilitate, enhance, and conduct research on these wetlands. The Refuge System manages wetlands to enhance their value for

migratory waterfowl and shorebirds; threatened and endangered species; and a myriad of native fish, wildlife, and plants. The wetland restoration and conservation programs of the Refuge System protect the biodiversity and environmental health of these habitats across diverse landscapes, while providing wildlife-dependent recreational opportunities for the American public.
<http://www.fws.gov/refuges/>

FWS North American Wetlands Conservation Act Program: Supports voluntary public-private partnerships to conserve North American wetlands ecosystems. This program provides matching grants to public and private groups and agencies for wetlands restoration and protection in the United States, Canada, and Mexico. Over 14.6 million acres of wetlands and associated uplands have been affected by protection, restoration, or enhancement activities since 1991.
<http://birdhabitat.fws.gov/NAWCA/grants.htm>

FWS North American Waterfowl Management Plan—Joint Ventures: This tri-national strategic plan fosters the creation of partnerships between state and Federal governments, tribes, corporations, private organizations, and individuals to cooperate in the planning, funding, and implementation of projects to conserve and enhance wetland habitat in high-priority “joint venture” regions. The plan calls for 16.1 million acres of wetlands and associated uplands to be protected and 12.1 million acres to be restored or enhanced.



Waterfowl on the Arctic National Wildlife Refuge, Fairbanks, Alaska. (FWS)

<http://www.fws.gov/birdhabitat/NAWMP/index.shtm>

FWS Partners for Fish and Wildlife Program: This voluntary program, begun in 1987, works with landowners to restore wetlands on private lands using cooperative agreements. The FWS has entered into over 37,000 agreements with partners. The program has restored 750,000 acres of wetlands, over 1.57 million acres of uplands, and over 5,900 miles of riparian and in-stream habitat. The FWS also provides technical assistance to other Federal agencies under this program.
<http://partners.fws.gov>

Programs that Maintain the Wetland Base

FWS National Wildlife Refuge System: Cyclic water-level management and other wetland activities, used in most cases to mimic naturally occurring flood regimes for the benefit of wildlife, were accomplished in FY 2005 on 55,236 acres of forested wetlands and similar habitats, with 131,452 acres managed for moist soils and 812,785 acres receiving other water-level manipulation. In FY 2006, those management activity accomplishments are expected to be 27,780 acres of forested wetlands and similar habitats, as well as 148,297 moist soil acres managed, with water-level manipulation being achieved on 841,820 acres of water impoundments.
<http://www.fws.gov/refuges/>

FWS National Wetlands Inventory: The goal of the National Wetlands Inventory is to produce information on the characteristics, extent, and status of the Nation's wetlands and deepwater habitats in order to promote the understanding and conservation of these resources. Federal, state, and local agencies; tribes; academic institutions; Congress; and the private sector use this information and digital maps to guide natural resource planning, management, and project development. The wetland data are available over the internet. Wetlands status and trend data and reports provide contemporary information for decision-making and for wetlands policy formulation and assessment. FY 2007 funding request is \$4.7 million.
<http://wetlands.fws.gov>

FWS Natural Resource Damage Assessment and Restoration Program:

The Division of Environmental Quality provides approximately \$1.5 million in toxicology, ecology, and habitat restoration expertise to EPA and other Federal and state partners to minimize impacts to wetlands during the cleanup of contaminated areas. The division makes substantial contributions to maintaining the base of wetland acres as well as restoring and improving wetlands at former hazardous waste sites and areas impacted by oil and chemical spills.

<http://contaminants.fws.gov/Issues/Restoration.cfm>

U.S. Geological Survey (USGS)

The USGS conducts research and provides scientific information to support wetlands restoration and creation, and to provide wetland resource managers the tools to effectively improve and protect coastal, forested, and freshwater wetlands. USGS wetlands science addresses priorities in understanding wetland structure, dynamics, functions, and interactions with the surrounding landscape; responses to natural and anthropogenic stressors; role of wetland functions from a socioeconomic perspective; and the support tools to help managers identify and achieve desired wetland conditions in restoration, creation, and rehabilitation activities. USGS wetlands research is primarily focused in the following regions:

Prairie Pothole Region/Great Plains: Research in this region expands the ecological understanding of processes that influence wetland functions and values in agriculture landscapes. Research on global climate change, sediment and nutrient dynamics, the effectiveness of wetland restoration and enhancement for flood storage and wildlife habitat, and the potential of prairie pothole wetlands to sequester carbon are also being addressed. FY 2006 funding: \$0.377 million.
<http://www.npwrc.usgs.gov/info/factsheet/wetlands.htm>

Great Lakes: In this region, the effects of Great Lakes water-level fluctuations on wetlands are being researched, in addition to global climate change studies of wetlands that focus on interactions between climate change, lake levels, ground-water hydrology, and wetland response. This research provides



Parker Creek Restoration Project: The water control structure splits the flow of Packer Creek, Washington, between the creek and the rehabilitated wetlands complex. (BLM)

scientific information to support the restoration, conservation, and management of wetlands. FY 2006 funding: \$0.841 million.
<http://www.glsc.usgs.gov>

Gulf Coast: Hurricanes Katrina and Rita have placed a high priority on research, spatial analyses, predictive modeling, technology development, and information synthesis and outreach related to the impacts to the Nation's critical Gulf Coast coastal and freshwater wetlands and habitats. USGS wetlands science in this region provides scientific information that resource managers and planners need to stabilize, restore, rehabilitate, and manage wetlands, including seagrass beds, inland grass beds, coastal saltwater and freshwater marshes, and forested wetlands. In addition, global climate change studies in the Lower Mississippi River Valley focus on riverine and coastal wetland response to CO₂ levels and sea level rise. FY 2006 funding: \$6.638 million.
<http://www.nwrc.usgs.gov>

Atlantic Coast: USGS conducts research and provides scientific information on restoration, enhancement, and creation of coastal and estuarine wetlands. Global climate change studies of wetlands focus on wetland response to sea level rise and wetland management. FY 2006 funding: \$2.376 million.
<http://www.pwrc.usgs.gov/wetlands/>

Appendix G.

Department of Transportation

Federal Highway Administration Programs

Summary

Under the Federal-aid highway legislation (Title 23, United States Code, Highways), state transportation agencies may use National Highway System and Surface Transportation Program funds to finance wetland and natural habitat conservation planning and implementation, as well as compensatory mitigation and restoration projects that offset unavoidable losses from transportation projects. The Department of Transportation/Federal Highway Administration (FHWA) has a goal of 1.5-to-1 wetland acre mitigation. Under the Federal-aid Highway Program, FHWA has achieved nearly 42,000 acres of wetland mitigation since 1996, with the mitigation amount exceeding the amount impacted by nearly 24,000 acres. Through the Federal Highway Administration, DOT also funds research on wetlands mitigation in connection with highways.

Eligibility

In 1980, FHWA issued 23 CFR Part 777, Mitigation of Impacts to Privately Owned Wetlands, which gave sponsors of Federally assisted highway projects the flexibility to use Federal-aid funds to mitigate impacts to wetlands. The regulation was updated in 2000 to include more recent legislative, regulatory, and policy developments. The regulation specifies that funds eligible for mitigation and enhancement apply to all projects carried out under the Federal-Aid Highway program.

limit. But the Federal government does not direct program expenditures under the annual limit; instead, the states determine how and where the funds are spent based on levels allocated to them by formula each year. Therefore, the states determine what portion of their total allocated funding authority will go to finance wetland mitigation and enhancement. The Federal government provides projections that estimate and provide recommendations only on the total annual program obligation limits, not on specific authorizations for wetland mitigation and enhancement.

Performance

As a measure of performance under the FHWA's net gain policy and commitments made under the Clean Water Action Plan, the agency monitors annual wetland loss and gain under the Federal-aid highway programs nationwide. Monitoring began in FY 1996. On a program-wide basis, the FY 2005 figures indicate that Federal-aid highway projects provided 3.3 acres of compensatory wetland mitigation for each acre of impact. Data collected by FHWA over the past 10 years indicate that, nationwide, Federal-aid highway programs have achieved a 160 percent gain in wetland acreage (2.6:1 gain/loss ratio). In terms of acres, Federal-aid highway programs produced a total net gain of 25,888 acres of wetlands nationwide between 1996 and 2005.

Costs of wetland mitigation have increased several-fold during the past 25 years. Costs of mitigation were estimated in 1995 as approximately \$16,000 per acre of mitigation nationwide, based on available data obtained from 1992 to 1994. This results in an estimated total cost from 1996 to 1999 for all

Fiscal Years 1996-2005	Acres of Compensatory Wetland Mitigation	Acres of Wetland Impacts	Mitigation Ratio / Percent Increase	Acreage Gain
Totals	41,825	15,937	2.6:1 / 160 percent	25,888

Funding

Since Federal-aid highway programs operate under contract authority implemented through the states, total annual expenditures of Federal assistance occur at the discretion of the states within obligation limits established by Congress for each program. The total of all expenditures each year for a given program must be at or below the congressional obligation

Federally assisted highway programs of approximately \$50 million to \$80 million per year for replacement of wetlands (in pre-1995 dollars). A GAO report to the Transportation Subcommittee on Highway Planning (August 1994) quotes data from 1992 for wetlands costs from 37 states. Average annual costs reported for 1988 to 1992 were \$79 million.

Research and Other Cooperative Efforts to Support the Wetlands Goal

The FHWA coordinates wetland programs and research initiatives with other Federal agencies, including the EPA and DOI. FHWA wetlands research is not identified separately. The FHWA, EPA, and the USACE implemented guidance on how the TEA-21 preference on the use of mitigation banks can be exercised under the Section 404, Clean Water Act permitting process, one of the first actions completed under the National Wetlands Mitigation Action Plan.

Planning

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), enacted in 2005, requires metropolitan and statewide transportation (highway and transit) plans to include a discussion of potential environmental mitigation activities and potential areas to carry out these activities, developed in consultation with Federal, state, and tribal wildlife, land management, and regulatory agencies. In implementing this provision, states and metropolitan planning organizations are expected to plan for wetland mitigation and consult with resource agencies and the USACE.

Federal Aviation and Transit Programs

The programs of the Federal Transit Administration (FTA) provide Federal funding for wetland mitigation related to assisted transit projects as part of project costs. As noted above, under SAFETEA-LU, transportation plans must address environmental mitigation.

Wetland mitigation related to airport projects receiving Federal assistance under Federal Aviation Administration (FAA) programs is an eligible project expense. In 1996, FAA issued a Wetlands Banking Mitigation Strategy to provide guidance to ensure that Federally assisted airport projects and FAA projects effectively and efficiently meet Section 404 permit requirements and environmental responsibilities. This document provides a framework for the FAA to mitigate unavoidable impacts before they occur by purchasing credits from a wetlands bank. The use of wetlands mitigation banking is voluntary, and is considered on a project-by-project basis. If chosen as an option for an airport project, the airport sponsor may recover the cost of purchasing wetland bank credits from Federal Airport Improvement Program funding. In July 2003, FAA signed an inter-agency memorandum of agreement that addresses wetland mitigation and restoration projects near airports and ways to reduce aircraft-wildlife strikes and maintain aviation safety.



Sandhill cranes at the DeSoto National Wildlife Refuge, Missouri Valley, Iowa. (FWS)

Appendix H.

Environmental Protection Agency

Table H-1. EPA Programs Supporting the President's Wetland Goal in FY 2007. Funding (millions of dollars)

Agency	Program	Restore or create	Improve	Protect	Total wetlands funding for goal FY 2007	Difference from FY 2006
EPA	Five Star Program	0.010	0.240	0.000	0.250	0.000
EPA	National Estuary Program	0.959	4.764	2.677	8.400	-5.600
EPA	Nonpoint Source Management Program	2.225	1.832	0.000	4.057	0.000
Totals		3.194	6.836	2.677	12.707	-5.600

Table H-2. EPA Programs Supporting the President's Wetland Goal in FY 2007. Planned Accomplishments (in acres)

Agency	Program	Restore or create	Improve	Protect	Total wetlands FY 2007	Difference from FY 2006
EPA	Five Star Program	350	8,855	0	9,205	0
EPA	National Estuary Program	2,886	14,358	8,070	25,314	-16,880
EPA	Nonpoint Source Management Program	210	175	0	385	0
Totals		3,446	23,388	8,070	34,904	-16,880

EPA Programs Supporting the President's Wetland Goal

National Estuary Program (NEP): This program works to restore and protect these sensitive and vital ecosystems. The NEP provides funding and technical assistance to citizens, governments, businesses, researchers, and organizations in local communities to create and implement plans they develop collectively. These plans address problems facing their estuaries, such as excess nutrients, pathogens, toxic chemicals, introduced species, overfishing, and habitat loss and degrada-

tion. With its partners, the NEP works to safeguard the health of some of our Nation's most productive natural resources and transfer the lessons learned to other watersheds.
<http://www.epa.gov/owow/estuaries>

Clean Water Act Section 319 Program: Under section 319, states, territories, and Indian tribes receive grant money that supports a wide variety of activities, including technical assistance, financial assistance, education, training, technology transfer, demonstration projects, and monitoring to assess the success of specific nonpoint source implementation projects,

some of which include wetland restoration projects.

<http://www.epa.gov/owow/nps/cwact.html>

Five Star Challenge Grants Program: The EPA and its partners—National Fish and Wildlife Federation, National Association of Counties (NACo), and Wildlife Habitat Council—have helped catalyze over 350 projects in 49 states, the District of Columbia, and U.S. Virgin Islands. Each year, 50 to 60 grants of \$5,000 to \$20,000 are awarded. The purpose of the Five Star Restoration Program is to support community-based efforts to restore wetlands, river streams/corridors, and coastal habitat; build diverse partnerships within the community; and foster local stewardship of resources through outreach.

<http://www.epa.gov/owow/wetlands/restore/5star>

Programs that Maintain the Wetland Base

Wetlands Grants Program: The EPA has annually provided \$15 million to states, local governments, tribes, and non-governmental organizations to strengthen non-Federal regulatory and non-regulatory wetlands programs. FY 2007 funding request is \$17 million.

<http://www.epa.gov/owow/wetlands>

Clean Water Act (CWA) Section 404 Program: The EPA and the USACE share regulatory responsibility pursuant to CWA section 404. EPA and the USACE establish the regulations and policies for implementation of the program, including development and implementation of the Section 404(b)(1) guidelines. The guidelines establish the substantive environmental criteria used to evaluate applications for permits to discharge under section 404. FY 2007 funding request is \$21 million.

<http://www.epa.gov/owow/wetlands/>

Appendix I.

Coastal Wetlands Planning, Protection and Restoration Act

Table I-1. CWPPRA Funding Supporting the President's Wetland Goal in FY 2007 (millions of dollars)

Agency	Restore or create	Improve	Protect	Total	Difference from FY 2006
CWPRA	0	63.060	0	63.060	5.005

Table I-2. Planned CWPPRA Accomplishments by Agency in FY 2007 (in acres)

Agency	Restore or create	Improve	Protect	Total	Difference from FY 2006
EPA	7	0	6	13	0
FWS	299	428	33	760	-17,903
NMFS	581	713	32	1,326	338
NRCS	19	4,753	48	4,820	-47,158
USACE	157	2,325	50	2,532	2,516
Total	1,063	8,219	169	9,451	-62,206

The Coastal Wetlands Planning, Protection and Restoration Act (CWPPRA) is funded by the Aquatic Resources Trust Fund (Wallop-Breaux fund), which was passed in 1990 and is authorized until 2019. The fund is created from excise taxes on fishing equipment and on motorboat and small engine fuels. Funds are distributed to the Louisiana Coastal Wetlands Conservation and Restoration Task Force, North American Wetlands Conservation Act Program, and the National Wetlands Conservation Grant Program at rates of 70 percent, 15 percent, and 15 percent, respectively. The Louisiana CWPPRA accomplishments are presented in this appendix. The other CWPPRA accomplishments are presented in DOI Appendix F under the appropriate Fish and Wildlife Program areas.

The CWPPRA funding distributed to the Louisiana Coastal Wetlands Conservation and Restoration Task Force is used to

design and construct projects to preserve and restore Louisiana's coastal landscape. The Louisiana portion of CWPPRA is provided on average \$50 million per year. The USACE administers the funding and tracks project status of all CWPPRA projects. With the USACE as chair, a task force consisting of NOAA's National Marine Fisheries Service, U.S. Fish and Wildlife Service, Natural Resources Conservation Service, Environmental Protection Agency, and the State of Louisiana (the non-Federal sponsor) manages the program. Currently, the program has 138 approved projects, of which 67 are complete and 16 are under construction.

http://www.mvn.usace.army.mil/pd/cwppra_mission.htm

A map of Louisiana restoration sites is available at http://lacoast.gov/maps/coastal_la_2005_restoration_projects.pdf

Acronyms

AOC	Areas of Concern, Great Lakes, NOAA	GIS	Geographic Information System
BLM	Bureau of Land Management, DOI	LCA	Louisiana Coastal Area Environmental Restoration
CELCP	Coastal and Estuarine Land Conservation Program, NOAA	LWCF	Land and Water Conservation Fund
CERP	Comprehensive Everglades Restoration Plan	MDC	Missouri Department of Conservation
CPRD	Coastal Protection and Restoration Division, NOAA	NAWCA	North American Wetlands Conservation Act, DOI/FWS
CRP	Conservation Reserve Program, USDA/FSA	NEP	National Estuary Program, EPA
CRP	Community-based Restoration Program, NOAA	NERI	National Estuaries Restoration Inventory, NOAA
CTA	Conservation Technical Program, USDA/NRCS	NERRS	National Estuarine Research Reserve System, NOAA
CWA	Clean Water Act	NOAA	National Oceanic and Atmospheric Administration
CWPPRA	Coastal Wetlands Planning, Protection and Restoration Act	NPS	National Park Service, DOI
CZMP	Coastal Zone Management Program, NOAA	NRCS	Natural Resources Conservation Service, USDA
DARP	Damage Assessment and Restoration Program, NOAA	NRI	Natural Resources Inventory, USDA/NRCS
DOA	Department of the Army	NRPP-NRM	Natural Resource Preservation Program - Natural Resource Management, DOI/NPS
DOI	Department of the Interior	NWI	National Wetlands Inventory, DOI/FWS
DOT	Department of Transportation	NWRS	National Wildlife Refuge System, DOI/FWS
EPA	Environmental Protection Agency	PCSRF	Pacific Coastal Salmon Recovery Fund, NOAA
EPMT	Exotic Plant Management Team, DOI/NPS	PMC	Plant Materials Centers, USDA/NRCS
EQIP	Environmental Quality Incentives Program, USDA/NRCS	USACE	U.S. Army Corps of Engineers
ERDC	Engineer Research and Development Centers, U.S. Army	USBR	U.S. Bureau of Reclamation
FAA	Federal Aviation Administration, DOT	USDA	U.S. Department of Agriculture
FHWA	Federal Highway Administration, DOT	USFS	U.S. Forest Service
FRPP	Farm and Ranchlands Protection Program, USDA/NRCS	USGS	U.S. Geological Survey
FSA	Farm Service Agency, USDA	WHIP	Wildlife Habitat Incentives Program, USDA/NRCS
FTA	Federal Transit Administration, DOT	WHWWG	White House Wetlands Working Group
FWMA	Fish and Wildlife Management Assistance	WRD	Water Resources Division Competitive funding, DOI/NPS
FWS	Fish and Wildlife Service, DOI	WRP	Wetlands Reserve Program, USDA/NRCS
GAO	Government Accountability Office, Congress		

Endnotes

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⁴ Dahl, T.E. 2006. Status and Trends of Wetlands in the Conterminous United States 1998 to 2004. U.S. Fish and Wildlife Service, Washington, D.C.

⁵ Louisiana Coastal Wetlands Conservation and Restoration Task Force and the Wetlands Conservation and Restoration Authority. 1998. Coast 2050: Toward a Sustainable Coastal Louisiana. Louisiana Department of Natural Resources, Baton Rouge.

