***Wetlands provide habitat and enhance water quality.***

Many states and tribes have utilized WPDG funds to develop one or more aspects of their wetland management program. The case-studies described here are a few excellent examples. Of course, building a comprehensive wetland program is progressive and many WPDG recipients continue to work hard at developing and incorporating the remaining pieces of a comprehensive program. This document highlights successful use of WPDGs in building one or more elements of a wetlands protection program and serves as examples to others who are striving to develop comprehensive programs.

***Wetlands provide flood protection and stormwater management.***

The foundation of any wetland program is an understanding of the location, extent and condition of the wetland resources. Thus, improving the ability to monitor and assess wetland condition has been at the forefront of Clean Water Act activities for the past several years. Over the past few years many states, tribes and federal and state work groups have been exploring and developing wetland assessment methods to build that foundation of understanding. These efforts have emphasized the need for a scientifically sound assessment of the chemical, physical and biological health of wetlands and the need for standardized approaches to facilitate the ability to track trends and compare data across geographic areas. Several WPDG recipients have used the grant program to develop strategies, create and modify assessment tools and begin forums for sharing information in order to better characterize and manage their wetland resources.



# Wetlands Grants

EPA's WPDGs provide eligible applicants an opportunity to conduct projects that promote the coordination and acceleration of research, investigations, experiments, training, demonstrations, surveys, and studies relating to the causes, effects, extent, prevention, reduction, and elimination of water pollution.

Grants are awarded competitively by each EPA region and headquarters. Over 1450 grants have been awarded since the programs inception in 1990. WPDGs are generally given to projects that address at least one priority area identified by EPA in each year's Request for Proposal.

In order to better guide state and tribal efforts in establishing comprehensive wetland programs, EPA identified six core elements of a comprehensive wetland program in 1999. These elements, which provide a framework within which states and tribes can assess the completeness of their wetland programs, are:

1) Regulation;
2) Monitoring and Assessment;
3) Restoration;
4) Water Quality Standards;
5) Public-Private Partnerships; and
6) Cross-agency Coordination.

WPDGs can also continue to be used by recipients to build and refine any element of a comprehensive wetland program. States, Tribes, local governments, interstate associations, intertribal consortia, and national non-governmental organizations are eligible to apply. Contact your EPA Regional Office for more information. A list of grant coordinators can be found at: http://www.epa.gov/owow/wetlands/grantguidelines.

For more information about wetland projects funded through the Wetland Program Development Grants and other EPA wetland programs, please go to: http://www.epa.gov/owow/wetlands/

U.S. EPA Office of Wetlands, Oceans, and Watersheds
*http://www.epa.gov/owow/*

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# Wetland Program Development Grants

## Building State and Tribal Capacity to Protect Wetlands

**Highlights of advancements made possible through Wetlands Grants.**

The Environmental Protection Agency's (EPA's) wetland program has a primary goal of increasing the quantity and quality of wetlands in the U.S. through a variety of regulatory and non-regulatory approaches. State and Tribal wetland protection programs play a crucial role in achieving this goal. EPA has sought to build the capacity of state and tribal government to develop effective, comprehensive programs for wetland protection and management.

Wetland Program Development Grants (WPDGs) are the primary mechanism through which EPA supports state and tribal efforts to build programs that protect valuable wetland resources. These grants have enabled and supported successful collaboration among interested parties. This document highlights just a few examples of the progress being made by states and tribes through the use of these funds.

### *Monitoring Hualapai wetlands to help guide management plans and restoration activities*

The Hualapai Tribe resides on roughly one million acres of land adjacent to the Colorado River and the Grand Canyon. Wetlands comprise 956 acres within the reservation. From 1998 to 2004, with support from the WPDGs, Hualapai Department of Natural Resources began a biomonitoring program to assess water quality, vegetation, invertebrates, fish and birds on 18 wetlands on the reservation. These monitoring efforts, as part of the tribe's Comprehensive Wetland Strategy, help to guide management and restoration decisions for the tribe's wetlands. Eleven wetlands on the reservation have been protected and/or restored through removal of feral animals, fencing to restrict cattle, and planting of native vegetation.

### *Development of a wetland monitoring system to help protect and restore California's wetlands*

The California Resources Agency has relied on WPDG funds to assemble a multi-organizational team to develop an innovative wetland monitoring and assessment program in the state. Their work is part of California's State Water Monitoring Strategy. The core team consists of wetland management and science professionals from the San Francisco Estuary Institute (SFEI), Southern California Coastal Water Research Project (SCCWRP), the California Coastal Commission and San Jose State University Moss Landing Marine Laboratory. The team has produced a wetland assessment system, California Rapid Wetland Assessment Method - "CRAM" (swww.cramwetlands.org), and a state-of-the-art Geographical Information System (GIS), Wetland Tracker (www.wetlandtracker.org). Training programs for CRAM have been organized to teach regulatory agency staff how the method can be used in permit review and mitigation performance evaluation. CRAM will be used to conduct a statewide survey to report the condition of estuarine wetlands. In addition Wetland Tracker has been expanded to become an information "warehouse" for wetland assessment information. The system will lead to more holistic water resource protection and restoration program planning. Wetland data is becoming readily available for use in the development and implementation of watershed-based water quality and habitat management plans. The technical transfer of both CRAM and Wetland Tracker to other interested states is in progress.

### *Preserving valuable wetland resources in the face of development demands and increasing population*

In response to a 40% population growth rate since 1990 and a concern for the loss of wetland functions, the Baldwin County, Alabama Advance Identification Project jump-started wetland protection efforts in the county by locating, identifying and assessing wetland resources in an area of southern Baldwin County, located on Mobile Bay and the Gulf of Mexico. Using WPDG funding, the county developed the Baldwin County Digital Wetland Layer and validated it through field assessments of location, wetland determination and digital photography for 138 randomly selected sites. In addition, the county developed the Remote Functional Wetland Assessment Model which identified 260,000 acres as suitable for conservation, 30,000 acres as suitable for enhancement and approximately 6,000 acres as suitable for restoration. Baldwin County Commission distributes digital and hard copy data illustrating wetland location, watershed boundaries, impaired waters, and land usages for areas of interest to local developers and other stakeholders. As a result of this effort, wetland and watershed protection ordinances are currently being developed which advocate increased protection at the county and municipal levels.

### *Establishing a link to measurable environmental outcomes through increased monitoring and assessment of wetland projects*

Coordinating across several state agencies is a challenge, yet this coordination can be essential to leveraging the resources and collaboration necessary to protect wetland resources. The Colorado Wetland Partnership (CWP) was established in 1997 in response to a need for coordinated wetland protection statewide. CWP is a multi-agency collaborative that has completed over 600 projects protecting or restoring over 215,000 acres of habitat and over 200 stream miles. In 2002, using a WPDG, CWP initiated the Wetlands Monitoring and Evaluation Project (WMEP) to monitor and assess the ecological impacts from CWP projects. The project had three major initiatives: 1) project tracking; 2) site assessments; and 3) intensive monitoring. WMEP has successfully initiated statewide wetlands monitoring with over 165 site assessments in 10 of 11 Colorado wetland focus areas. The WMEP provides managers, biologists, conservation planners and funding agencies with a better understanding of wetland restoration and protection outcomes in Colorado. This allows improved decision-making about future restoration and protection projects.

### *Refining bioassessment methods to preserve the ecological integrity of Michigan's coastal and inland wetlands*

As one of only two states to administer Section 404 of the Clean Water Act, Michigan needed consistent and scientifically valid techniques for evaluating wetland quality in order to determine the state's success in protecting and managing its wetland resources and the associated public benefits. The Michigan Department of Environmental Quality (MDEQ) used a WPDG to develop Indices of Biological Integrity (IBI) for wetlands in the state and the Great Lakes region. These IBIs are now being implemented by the Great Lakes Coastal Wetland Consortium, Bird Studies Canada, and by MDEQ through an EPA Environmental Outcome Wetland Demonstration Pilot program to enhance protection of Michigan's most exceptional wetlands through monitoring, private stewardship and prioritization of exceptional coastal wetlands for acquisition.

### *Mapping, classifying and identifying restoration needs for 900,000 acres of wetlands in Adirondack Park*

The Adirondack Park Agency (APA) in New York State is entrusted with the very large task of overseeing private and public land use practices within New York's Adirondack Park. Wetlands cover nearly 900,000 acres of the Park. A major area of focus for APA has been to classify and map all wetlands within the park. Funds through a WPDG allowed the APA to begin mapping the Park's wetlands, focusing on the Oswegatchie/Black River Watershed as a pilot study to utilize infrared and digital technology to increase image quality and detail. In subsequent years, APA has used other WPDGs to incorporate additional data layers about the physical and chemical properties of the watershed and began work in the other major watersheds of the Park by piloting different mapping technologies. These grants have allowed APA to understand linkages between land-use, wetlands and water quality that have led to more efficient restoration and management of wetland areas in the Park.

### *A GIS targeting tool helps improve restoration of Virginia's wetlands*

Gauging which sites will be capable of sustaining the desired wetland condition over time is a critical challenge to successfully mitigating wetland impacts. Using a WPDG, the Virginia Institute of Marine Science (VIMS) addressed this challenge by developing a GIS targeting tool for selecting sites for wetland mitigation and restoration, using physical characteristics, land-use management and ecological value. Sites that ranked highest were agricultural areas that had hydric soils, hydrologic connectivity, were adjacent to another wetland and close to a conservation area. This tool will be a very valuable resource for Virginia land use planners and state and local government officials in making sound decisions on siting wetland mitigation and restoration. VIMS is also working with Maryland and Delaware to develop a regional guidebook for tidal wetlands assessment and with Virginia to incorporate cumulative impact assessments in the tidal and nontidal wetlands permit review process.

### *Engaging Iowa landowners in the Wetland Reserve Program and increasing participation in wetland restoration*

Fremont County, Iowa, was largely affected by extreme flooding in the 1980s and 1990s. With WPDG funding, the Two Rivers Wetland Project helped ease some of the landowners' financial burdens, while directing attention to and increasing enthusiasm for wetland restoration within the floodplain. The goal of the project was to increase farmer enrollment in the Wetland Reserve Program, a voluntary wetland restoration program administered by the Natural Resources Conservation Service (NRCS) to restore marginal wet farmland to wetland. Once interested land owners were identified and restoration potential was assessed, specific funding opportunities were identified. By the end of 2005, the Two Rivers Wetland Project helped to enroll over 10,000 acres of marginal agricultural land into wetland restoration programs along the Missouri and Nishnabotna Rivers. The Fremont County Soil and Water Conservation District is currently working to develop training modules to help landowners manage their conservation lands.