



# **Wetlands Action Plan**

**EPA's Short-term Agenda  
in Response to Recommendations  
of  
The National Wetlands Policy Forum**

**Prepared by  
Office of Water  
Office of Wetlands Protection**

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# EPA WETLANDS ACTION PLAN

## **WHAT IS THE NATIONAL WETLANDS POLICY FORUM?**

Protection of wetlands is a top priority of EPA. In the absence of a conscious decision on how we as a nation want to treat these valuable resources, wetlands are being degraded and destroyed bit by bit. "Wetlands" is a collective term for a set of vegetated aquatic environments which include such areas as bogs, marshes, swamps and riparian corridors (forested wetlands), and prairie potholes. This nation has already lost over half of its original wetland acreage. We continue to lose wetlands at an alarming rate estimated from 300,000 to 450,000 acres per year. In some regions the losses are even more dramatic, such as in coastal Louisiana where we lose as many as 40-50 square miles of wetlands per year or in California or Iowa where over 90% of the original wetland acreage is already lost. In addition, unknown numbers of wetlands have been degraded by pollution, and by hydrological and physical changes. When these wetlands are destroyed or degraded, we lose many vital functions they perform, including habitat for wildlife, fish, and shellfish; water quality enhancement; recreational and scientific research opportunities; production of organic material which supports intricate food chains; and protection from flooding and erosion.

EPA plays an important role in wetlands protection. The cornerstone of our efforts is the regulatory program under Section 404 of the Clean Water Act. EPA jointly administers this program with the Army Corps of Engineers. However, many activities which adversely affect wetlands are not adequately regulated under Section 404. EPA conducted a strategic planning study beginning in 1985 to assess the problems associated with wetlands and determine what directions EPA should take to enhance our wetlands protection efforts. In October 1986, EPA created an Office of Wetlands Protection (OWP) within the Office of Water to strengthen EPA's commitment to wetlands protection.

In the Spring of 1987, EPA's Administrator asked the Conservation Foundation to convene and facilitate a national forum on wetlands issues. Although EPA provided initial funding, additional funding came from several foundations. The Conservation Foundation conducted an initial assessment, talking to over 200 people involved in wetlands to identify the key issues and the interests which should be represented on the Forum. The National Wetlands Policy Forum operated independent of existing institutions in order to take a step back from the ongoing policy debates.

Governor Thomas Kean of New Jersey chaired the Forum's efforts. The twenty members of the Forum are leaders from a very broad range of interests including: state and local governments; real estate developers; oil/gas industry; agriculture; forestry; environmental and conservation groups; and academic experts in wetland policy and science. EPA participated on the Forum along with the four other key federal agencies as ex officio members.

On November 15, 1988, the Wetlands Forum issued its report, "Protecting America's Wetlands: An Action Agenda". The report contains over 100 specific actions for all levels of government and the private sector. A subgroup of the Forum will work on implementation of the recommendations over the next year. The full Forum will reconvene in one year to assess the success of implementation and consider additional actions needed.

### **WHAT WILL EPA DO AS A RESULT OF THE FORUM?**

EPA has adopted the goal of the National Wetlands Policy Forum to achieve no overall net loss of the nation's remaining wetland base, as defined by acreage and function; and to restore and create wetlands, where feasible, to increase the quality and quantity of the nation's wetlands resource base.

EPA has developed this Action Plan as a first step to respond to the Forum's recommendations as fully as we can within existing resource constraints. The plan outlines EPA's objectives and some of the major steps EPA has underway or plans to initiate which implement specific Forum recommendations under EPA's scope of influence. The plan does not encompass the full range of activities of OWP or other EPA offices. Rather it highlights actions most relevant to the Forum recommendations. OWP will spearhead these actions along with EPA's ten regional offices. EPA's Office of Research and Development (ORD) is currently addressing some of the Forum's research recommendations through its wetlands research program, and program expansion is planned. EPA will develop additional actions needed in future years to more thoroughly implement the Forum's template for improving wetlands protection and management. Through the budget planning process, EPA will recommend that these additional actions take place.

#### **Executive and Statutory Changes:**

EPA will call for and participate in revisions to Executive Order 11990 to incorporate the Forum's goal and key recommendations.

EPA will also work with other agencies and with Congress on the recommended legislative changes. In particular, EPA will examine the following:

Recommendations to improve the water quality and wetlands protection benefits of farm programs (particularly Swampbuster and Conservation Reserve programs) in the reauthorization of the Farm Bill in 1990.

Important legislative issues associated with the Clean Water Act including: expanding the activities covered by the permit program; providing adequate incentives for the states to assume the entire permit program; and providing a statutory framework for the planning requirements suggested by the Forum.

Expansion of the areas set aside under the Coastal Barrier Resources Act (CBRA) to include wetlands and other critical aquatic habitats, and other undeveloped coastal areas. EPA will also examine the application of the CBRA approach to protect vital freshwater inland wetlands as well.

As part of the Resource Conservation and Recovery Act (RCRA) reauthorization process, amendments to improve our ability to protect wetlands and other waters of the United States from ecological damages due to discharge of solid waste. EPA will also explore amendments to the Superfund Amendments and Reauthorization Act of 1986 to allow access to the Superfund for the purpose of restoring ecological damages to wetlands at Superfund sites.

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## **GOAL TO PROTECT THE NATION'S WETLANDS**

EPA has adopted the goal of the National Wetlands Policy Forum to achieve no overall net loss of the nation's remaining wetland base, as defined by acreage and function; and to restore and create wetlands, where feasible, to increase the quality and quantity of the nation's wetlands resource base. Consistent with this goal, EPA will review and, when necessary, revise its programs to protect the chemical, physical, and biological integrity of wetlands.

In order to assess progress towards achieving the national goal, ORD will develop indicators to monitor the environmental health of wetland ecosystems and establish a program in coordination with Fish and Wildlife Service to track changes over time. The scale for assessing progress towards the goal has not yet been finalized. However, watersheds or ecological wetland regions seem to be the most appropriate scale.

To implement this goal, EPA has established the following seven objectives:

### **A. WETLANDS PLANNING INITIATIVE**

*EPA will provide technical support and participate in the application of planning approaches to protect wetland resources including the preparation of State Wetlands Conservation Plans.*

### **B. MECHANISMS TO INCREASE STATE / LOCAL ROLE IN WETLANDS PROTECTION**

*EPA will provide guidance, technical assistance and support to enhance the role of state and local governments in both regulatory and nonregulatory wetlands protection efforts.*

### **C. SECTION 404 REGULATORY "FIXES"**

*Enforcement - EPA will increase enforcement through the application of administrative and judicial penalty authorities. EPA will work with the Corps to increase enforcement against unpermitted discharges into wetlands.*

*Guidelines - EPA will work with the Corps to reduce uncertainty and confusion regarding the implementation of the Section 404 permit program and, in particular, to address key provisions in the Section 404(b)(1) Guidelines through guidance and staff training.*

*Jurisdiction / Delineation - EPA will work with the Corps, Fish and Wildlife Service, and Soil Conservation Service to establish and implement a single delineation methodology for jurisdictional wetlands.*

**D. MITIGATION POLICY**

*EPA actions will reflect a policy that unavoidable wetland impacts should be fully offset by wetlands restoration or creation. EPA will work with the other key federal agencies in the Section 404 permit program to develop a joint mitigation policy which reflects the Forum's mitigation recommendations, focusing in particular on the goal of no net loss of wetlands.*

**E. INFORMATION & EDUCATION**

*EPA will work to increase public awareness of wetland functions and values, of the Clean Water Act regulatory programs affecting wetlands, and of nonregulatory approaches for protecting wetlands.*

**F. CUMULATIVE IMPACTS**

*EPA will develop and test methods for assessing the cumulative effects of wetland loss and degradation. EPA will work to incorporate these assessment approaches into comprehensive planning and permit decisions for wetlands.*

**G. WETLANDS RESTORATION**

*EPA will identify opportunities and initiate projects to restore and create wetlands to increase the quantity and quality of wetlands and to meet other national environmental goals including those of the Clean Water Act. EPA will also identify areas appropriate for wetland restoration based upon advance planning processes and consideration of cumulative impacts such as point or nonpoint source problems within watershed areas.*

The following sections identify major EPA actions under each of the seven objectives.

## REGIONAL HIGHLIGHT

### REGION VI: Dallas, Texas COASTAL LOUISIANA INITIATIVE

The Forum specifically mentions coastal Louisiana as a problem area suffering "extremely high wetland losses from erosion and subsidence". The Forum suggests targeting this area for restoration as well as protection. In Louisiana, which has forty percent of the coastal marshes in the United States, eighty percent of the coastal losses are occurring. If the loss rate of forty to sixty square miles of wetlands per year continues, the Gulf shoreline will retreat inland as much as thirty-three miles in some areas in 50 years. Meeting the Forum's national goal in this area will be a particularly difficult challenge. Region VI has identified coastal Louisiana as a special initiative for study and action. The Forum calls for a coherent framework to link various wetland protection efforts together. Involvement in and coordination of many different approaches are needed to address the complex problems in coastal Louisiana. Region VI is approaching the issues from several perspectives: Planning; Research and Demonstration Projects; and Regulation.

#### Planning

Region VI is taking an active role in all major planning efforts related to wetland losses to ensure that the broad array of wetland characteristics and values are considered (e.g., fisheries, wildlife, water quality, flood storage, water supply, and recreation values), and to ensure consistency with the Clean Water Act regulatory program. These interagency efforts include:

- New Orleans District Corps - Louisiana Comprehensive Coastal Wetlands Plan
- Louisiana Marsh Management Strategies
- Corps Marsh Management Programmatic Environmental Impact Statement
- Corps Land Loss and Marsh Creation Study
- Louisiana Coastal Area Shore and Barrier Island Initiative
- Environmental Impact Statements for designating Corps dredge disposal sites

#### Research and Demonstration Projects

Region VI is participating in the following:

- Cumulative impact assessment of losses in the Pearl River Basin
- Advance Identification of priority wetlands near Slidell, Louisiana
- Designation of Barrataria Bay Basin into the National Estuary Program
- Atchafalaya Basin Delta Creation Studies
- Louisiana Coastal Area- Mississippi River Delta Study
- Interpreting and digitizing aerial photos of coastal LA
- Mapping, field monitoring, impact assessment of marsh management areas
- Oil/Gas operations impacts handbook for wetland managers
- Golden Meadows Plant Materials Laboratory erosion control
- Gulf of Mexico Program

#### Regulation

Region VI will continue to focus on review of about 1000 individual coastal Section 404 permits each year, and work toward compliance with the Clean Water Act Section 404(b)(1) Guidelines through 404(q) elevations and 404(c) actions. The Region will increase enforcement through Administrative Orders and Penalties. Recommendations from the planning efforts may add additional direction or changes to the regulatory efforts.

## A. WETLANDS PLANNING INITIATIVE

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**Objective:** *EPA will provide technical support and participate in the application of planning approaches to protect wetland resources including the preparation of State Wetlands Conservation Plans.*

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### **Forum Recommendations:**

The Forum strongly emphasizes that state and local governments with the support and participation of federal agencies should undertake planning for wetlands to achieve at a minimum no net loss and to aim at a net improvement in the wetlands inventory. In addition, states should prepare State Wetlands Conservation Plans to demonstrate how all of their programs will work together to achieve the national wetlands protection goals recommended by the Forum. The recommendations call for guidance, technical support, and data from the federal agencies to carry out effective planning efforts. They suggest that federal participation in wetlands planning processes ensure that cross-boundary considerations are addressed and valuable and/or threatened systems are protected.

### **EPA Actions:**

In anticipation of increased planning on the state and local level and to meet the recommendation for federal involvement in and support of these processes, OWP and the regional wetland offices are increasing our current wetlands resource planning efforts. Advance planning provides the context for coordinating actions among agencies and considering the cumulative effects of wetland loss and degradation within particular geographic areas. This information can then be factored into decisions regarding permits and mitigation requirements, and in identifying areas for acquisition or restoration.

We are developing a base of knowledge about approaches that work, and transferring lessons learned and skills required to those initiating planning processes. EPA's initiative has several major components:

- \* Increase the use of EPA Advance Identification; encourage and, where possible, participate in other wetlands planning actions across the country.
- \* Provide seed money to test innovative planning approaches for wetlands. The Administration has requested grant money for states in Fiscal Year '90 for state pilots.
- \* Issue Advance Identification (ADID) guidance for EPA regions and an ADID information "kit" for state and local governments.



- \* Conduct case studies evaluating wetlands planning efforts.
- \* Host workshops and training sessions in planning and negotiation, and in river corridor management.
- \* Use Section 404(c) in advance of individual permit applications to protect significant aquatic resources which are identified through the planning processes.
- \* Develop criteria for the design and approval of State Wetlands Conservation Plans. Provide models for incorporating wetlands into geographic specific state and local plans which implement the goals of State Wetlands Conservation Plans.

**REGIONAL HIGHLIGHT  
REGION VII: Kansas City,  
Kansas  
CENTRAL FLYWAY MASTER  
PLAN**

The objective of this project will be to coordinate on a flyway basis federal, regional, state, and local agencies, as well as private interest groups focused on protecting the integrity of wetlands within the central migratory bird flyway of the U.S. Projected activities will include:

- \* Identify the wetlands protection needs within the flyway;
- \* Identify information, and current or planned projects that could aid the wetlands protection goals of the central flyway;
- \* Establish a forum to coordinate and enhance future efforts between and among the relevant agencies based on recommendations of the National Wetlands Policy Forum;
- \* Develop a plan to meet the identified needs and to integrate the capabilities of Region VII with the activities of other agencies and private interests.

## **B. MECHANISMS TO INCREASE STATE/LOCAL ROLE IN WETLANDS PROTECTION**

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**Objective:** *EPA will provide guidance, technical assistance and support to enhance the role of state and local governments in both regulatory and nonregulatory wetlands protection efforts.*

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### **Forum Recommendations:**

The Forum report emphasizes a significant role for state and local government in both regulatory and nonregulatory wetlands protection efforts. The recommendations stress the need for strong state involvement in the Section 404 regulatory program (some of the recommended actions require legislative changes). The recommendations also include: review EPA / state water quality programs and revise to reflect wetland considerations; have states develop action plans addressing chemical integrity of wetlands; provide grant funds for wetlands programs.

### **EPA Actions:**

EPA will work with state, tribal, and local governments to develop and support wetlands programs and to review the more traditional state water quality programs to enhance the protection of wetlands. Examples of EPA's actions (planning related actions with states are covered under the "Planning Initiative" objective) include:

- \* EPA is working with states to improve application of Section 401 water quality certification to protect wetlands. OWP has drafted a handbook for states with examples and guidance and will issue the final handbook in early 1989. EPA will help states assess the impacts of certifying reissued or new general permits.
- \* The Administration has requested grant money for states in Fiscal Year 1990 for program development (including studies to prepare for assumption of Section 404) and program operation for Sections 404 and 401, and other state wetlands protection programs. EPA will develop regulations and guidance for distributing these grants.
- \* OWP, along with the Office of Research and Development and Office of Water Regulations and Standards, will assess how well current water quality criteria protect wetlands. EPA will develop short term guidance for the states on developing wetland-specific water quality standards. The Office of Research and Development will issue a long range plan to develop water quality criteria appropriate for wetlands in Spring 1989.
- \* EPA will host regional workshops of EPA / state / local officials, and increase assistance and information to help state and local governments protect their wetlands.

- \* EPA is developing regulations to treat tribes as states under the Section 404 program.
- \* EPA's Office of Marine and Estuarine Protection will develop an appendix to their National Estuary Program Primer on protection of ecologically sensitive areas which will focus on wetlands.
- \* OWP will continue to work with other water programs and the Office of Solid Waste to help ensure that wetlands are properly protected in relevant regulatory and nonregulatory programs.

## **REGIONAL HIGHLIGHT**

### **REGION X: Seattle, Washington**

### **WETLAND WATER QUALITY STANDARDS**

Beginning in 1989, Region 10 will work with the Washington Department of Ecology to develop water quality standards (WQS) for wetlands. Once developed, these WQS will be implemented through Washington's Clean Water Act Section 401 certification process, strengthening it substantially for wetlands. Our goal is to develop a model process that can be readily adopted by other states. This two year project will focus on the following areas:

- \* Include wetlands in the definition of waters of the state;
- \* Recognize wetland functions and values as beneficial uses;
- \* Develop narrative standards (or quantitative where possible) to prevent significant degradation of these beneficial uses, consistent with EPA and the state's antidegradation policies;
- \* Apply the new WQS in an advanced planning mode, similar to the treatment of surface waters (i.e., inventory wetlands statewide, designate uses and apply specific standards).

### **C. 404 REGULATORY "FIXES"**

In addition to statutory changes, the Forum recommends actions agencies should take right now to improve the 404 program including:

#### **Enforcement**

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**Objective:** *Enforcement - EPA will increase enforcement through the application of administrative and judicial penalty authorities. EPA will work with the Corps to increase enforcement against unpermitted discharges into wetlands.*  
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#### **Forum Recommendations:**

The Forum recommends that the Corps and EPA agree on strategies to effectively and aggressively monitor, verify, and enforce permits and mitigation requirements.

The Forum calls for increased resources to be directed towards enforcement of Section 404 permitting requirements.

#### **EPA Actions:**

- \* OWP will complete a Memorandum of Agreement with Army to clarify enforcement roles and implementation of the new administrative penalty authority.
- \* OWP will conduct enforcement training for our regional field staffs.
- \* EPA will aggressively enforce against violations of Section 404 by increasing the number of administrative enforcement actions, and civil and criminal judicial referrals.
- \* EPA will encourage voluntary compliance with the Section 404 program through its public outreach and education efforts (see Information and Education objective).

## **Guidelines**

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**Objective:** *Guidelines - EPA will work with the Corps to reduce uncertainty and confusion regarding the implementation of the Section 404 permit program and, in particular, to address key provisions in the Section 404(b)(1) Guidelines through guidance and staff training.*  
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### **Forum Recommendations:**

The Forum recommends that the regulatory agencies issue clear guidance to their staff and the public on how the regulatory programs are to be implemented. This guidance should be supplemented by a strong program of staff training.

The Forum calls for the regulatory agencies to explicitly address activities not being effectively regulated under the Section 404 program and which contribute to continuing losses of wetland resources. The Forum also suggests taking actions needed to prevent the willful alteration of wetland characteristics to circumvent regulatory jurisdiction.

### **EPA Actions:**

- \* EPA will work with the Corps to reduce gaps in the Section 404 regulatory program by:
  - Developing a joint definition of fill material;
  - Addressing the regulation of pilings and placement of other structures that have the effect of fill;
  - Clarifying the appropriate application of the Section 404 permit program to discharges involving the removal or excavation of soil or the destruction of vegetation.
  
- \* OWP will develop and conduct regulatory courses for EPA regional staff.

- \* OWP will develop regulatory guidance on key provisions of the Section 404(b)(1) Guidelines and other EPA Section 404 statutory responsibilities including:
  - Streamline Section 404(c) procedures to restrict or prohibit the use of sites for the discharge of dredged or fill material.
  - Develop guidance on the application of Section 404(f) exemptions.
- \* OWP will, in conjunction with the Corps, develop guidance under the Section 404(b)(1) Guidelines for determining the availability of alternatives to a proposed project.

### **REGIONAL HIGHLIGHT**

#### **REGION I: Boston, Massachusetts EXPANDING THE USE OF 404(c)**

Region I is making a concerted effort to strengthen their wetlands protection efforts by increasing the application of EPA's Section 404(c) authority. A powerful tool to protect wetlands, Section 404(c) may be used to restrict or prohibit environmentally unacceptable projects. This authority can be used for specific permit applications or in advance of specific proposals. Region I has committed to expand use of this authority to prohibit or restrict projects which would cause unacceptable adverse impacts to wetlands. The region, in conjunction with headquarters, has vetoed one project, and has indicated its intent to recommend a "veto" of several additional environmentally damaging projects. These Section 404(c) actions signal a new determination by the Region to use this potent regulatory authority to the fullest. In addition, Region I hopes to use Section 404(c) more creatively by identifying and restricting the use of priority wetlands in advance of specific permit applications in the following way:

- The region is considering an advance Section 404(c) action for a valuable wetland complex in south central Massachusetts;
- Region I is also exploring a combined approach in Lake Champlain, Vermont which links Section 404(c) and EPA's Advance Identification authority. Under this approach, Section 404(c) would be applied to specific wetland sites within a larger (county) advance identification area (see Wetlands Planning Initiative objective for additional discussion of Advance Identification).

A new emphasis on Section 404(c) will help carry out several of the Forum's objectives. Foremost, it could reduce the loss of wetlands in accord with the national goal. Second, increased use of Section 404(c) in advance of individual applications will provide more certainty in the regulatory process, and serve as a strong tool to implement agreements made in the planning process.

## **Jurisdiction / Delineation**

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**Objective:** *Jurisdiction / Delineation - EPA will work with the Corps to establish and implement a single delineation methodology for regulated wetlands.*

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### **Forum Recommendations:**

**The Forum recommends a single federal method to determine wetland regulatory boundaries.**

### **EPA Actions:**

- \* OWP, the Corps, Fish & Wildlife Service, and Soil Conservation Service. The agencies recently agreed to a single method for identifying wetlands and determining wetland boundaries. The agencies will issue the joint manual for the method in early 1989.
- \* These four agencies will develop a training program on the application of the joint wetlands identification and delineation methodology.
- \* The interagency group will also work with the Society of Wetland Scientists to develop a certification program for application of the methodology.

## **D. MITIGATION POLICY**

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**Objective:** *EPA actions will reflect a policy such that unavoidable wetland impacts should be fully offset by wetlands restoration or creation. EPA will work with the other key federal agencies involved in the Section 404 permit program to develop a joint mitigation policy which reflects the Forum's mitigation recommendations, focusing in particular on the goal of no net loss of wetlands.*

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### **Forum Recommendations:**

The Forum outlines eight parameters for mitigation policies not only for regulatory programs, but also for mitigation under the National Environmental Policy Act and Executive Order 11990, Federal Energy Regulatory Commission licenses, and the Fish and Wildlife Coordination Act.

The Forum recommends that EPA verify compliance with mitigation commitments made in Environmental Impact Statements.

The Forum supports the establishment of mitigation banks when used within appropriate parameters (e.g., when permit review determines their use to be appropriate).

### **EPA Actions:**

- \* EPA will pursue a joint federal policy on mitigation under the Section 404(b)(1) Guidelines which is consistent with the Forum's national goal and incorporates the recommended decision sequencing of avoiding the impact first, then designing ways to minimize the impact, and finally compensating for unavoidable impacts. This policy will recognize that there are certain circumstances where the impacts of the project are so significant that even if alternatives are not available, the discharge may not be permitted regardless of the compensatory mitigation proposed. The first step will be to propose the revitalization of the federal agency mitigation task force.
- \* OWP will work with the Office of Federal Activities to identify potential approaches to pursue sound mitigation practices through EPA's Section 309 Clean Air Act authority to review Environmental Impact Statements (EIS). EPA's EIS reviews will specifically consider potential wetland impacts and state the need to avoid, minimize, and finally compensate for unavoidable impacts in Section 309 review letters. The Office of Federal Activities is drafting regional guidance on how to track the progress of mitigation commitments made in Environmental Impact Statements. (Existing resources preclude a very active role in enforcing these agreements.)



- \* OWP will work with the Office of Policy, Planning, and Evaluation (OPPE) to both explore existing mitigation banking efforts and determine acceptable conditions for their implementation. OWP and OPPE will host a workshop on these issues next year.
- \* The Office of Research and Development is developing a "Mitigation Handbook" to provide guidelines to evaluate the likelihood that a proposed mitigation project will succeed; to formulate permit conditions or goals for the project; and to determine if a project met the goals. The handbook will be issued in 1989. OWP will coordinate with ORD to provide training for EPA regional staff.

## **E. INFORMATION & EDUCATION**

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**Objective:**    *EPA will work to increase public awareness of wetland functions and values, of the Clean Water Act regulatory programs which affect wetlands, and of nonregulatory approaches for protecting wetlands.*  
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### **Forum Recommendations:**

**The Forum members and the public workshops both stressed a pressing need for information on existing management programs, alternative development techniques, management & protection options for farmers, and technical assistance to local governments on techniques to expand their wetlands protection efforts.**

### **EPA Actions:**

EPA is working to improve public awareness of wetland functions and values. We are also targeting special groups such as farmers, the development community, and local zoning authorities.

- \*    Upcoming projects of OWP and the Regional offices include: slide shows; poster sessions; wetlands brochures; videos on wetlands mitigation and creation, general wetlands values and trends, and key wetland areas; citizen's guide to 404 program; publishing cases of wetlands planning efforts.
- \*    EPA will begin preparations to sponsor a public awareness effort, "Year of the Wetlands" for 1991 in coordination with other federal, state, and local agencies and private organizations.

## F. CUMULATIVE IMPACTS

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**Objective:** *EPA will continue to develop and test methods for assessing the cumulative effects of wetland loss and degradation. EPA will work to incorporate these assessment approaches into comprehensive planning and permit decisions for wetlands.*  
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### Forum Recommendations:

The Forum report calls for research on methods to assess the cumulative affects of many individual actions on wetland integrity within a system. It also calls for such approaches to be incorporated into wetlands planning processes.

### EPA Actions:

- \* OWP has drafted Section 404 guidance for enhancing the protection of bottomland hardwoods which have been severely depleted through cumulative losses. OWP is addressing comments from the Corps and plans to issue final guidance in 1989.
- \* OWP has completed a pilot test of the cumulative impact assessment procedure for bottomland hardwood wetlands in the Tensas River Basin in Louisiana. OWP, ORD and Regions IV and VI have initiated an Advance Identification effort in the Pearl River Basin of Mississippi and Louisiana which will apply this assessment method.

#### REGIONAL HIGHLIGHT REGION VIII: Denver, Colorado PRAIRIE WETLAND INITIATIVE

EPA and the U.S. Fish and Wildlife Service (FWS) regional staffs have initiated a joint plan to improve protection of prairie wetlands in the Prairie Pothole Region in the north central United States. The effort focuses on practical ways to more effectively protect this diminishing resource within the existing institutional and legislative framework. The goal of this initiative is to implement short-term (1-3 years) and long-term (3-5 years) activities which will show measurable wetland protection results.

EPA and FWS jointly developed a strategic plan which includes the following action items:

- Make more effective use and enforcement of Clean Water Act regulations;
- Expand public outreach program;
- Provide technical and administrative support for North Dakota's "no net wetlands acres loss" law;
- Initiate an Advance Identification project to protect threatened prairie wetlands;
- Develop a program which identifies and supports the use of "non-persistent" pesticides;
- Digitize National Wetland Inventory data to improve the information available on wetlands;
- Implement a joint non-point source and wetlands demonstration project.

- \* **ORD is developing a general assessment method to anticipate the cumulative ecological effects of wetland loss on landscape functions and to consider these impacts in the permit process. A draft method is currently being tested and the final methodology is scheduled to be completed by 1991.**
- \* **ORD is investigating the cumulative effects of wetland loss on water quality. One pilot study of 15 drainage areas is complete, and a second study is planned.**

## **G. WETLANDS RESTORATION**

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**Objective:** *EPA will identify opportunities and initiate projects to restore and create wetlands to increase the quantity and quality of wetlands and to meet other national environmental goals including those of the Clean Water Act. EPA will also identify areas appropriate for wetland restoration based upon advance planning processes and consideration of cumulative impacts such as point or nonpoint source problems within watershed areas.*  
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### **Forum Recommendations:**

**The Forum suggests several recommendations with an emphasis on restoring former wetland areas to achieve the goal of increasing the quantity and quality of the nation's wetlands base, including a public / private wetlands restoration initiative.**

**The Forum suggests including wetlands restoration and creation in government programs (including EPA's).**

### **EPA Actions:**

- \* OWP is conducting a pilot project to identify Superfund sites which are located in, or impact, wetlands. OWP will work with the Superfund program to develop their "Superfund Environmental Evaluation Manual" as technical guidance to evaluate ecological damage at Superfund sites.
- \* Through its participation in Advance Identification and other advance planning processes, EPA will encourage and assist in identifying potential sites for restoring wetlands. EPA will consider the cumulative impacts of wetland losses within that watershed when making these recommendations.
- \* EPA will support demonstration projects creating wetlands for wastewater treatment which could help offset past losses due to the municipal wastewater construction program. EPA will also evaluate the creation and restoration of wetlands as a strategy for managing stormwater runoff in a manner which provides other wetland functions as well. ORD has requested funding to evaluate the effectiveness of wetlands constructed for wastewater treatment in 1990.
- \* EPA will continue to provide technical support to the Des Plaines River Wetlands Restoration project to restore wetlands along a stretch of the river.

The sites will be used as an outdoor laboratory to test the potential and limitations of wetlands to moderate nonpoint and point source pollution.

- ORD will conduct its third pilot study comparing created or restored wetlands with naturally occurring wetlands. Techniques for evaluating specific wetland components will be incorporated into a wetlands characterization manual.

### **REGIONAL HIGHLIGHT**

#### **REGION IV: Atlanta, Georgia WETLANDS RESTORATION INITIATIVES**

Region IV is involved in several wetland restoration demonstration projects which will help to implement the Forum's restoration recommendations. These projects involve wetlands creation for wastewater treatment and public education, wetland restoration in response to permit conditions, and EPA funded research efforts exploring the feasibility of restoring bottomland hardwood wetlands on surface mined land.

- Region IV (Construction Grants Program) currently has five "constructed wetland" projects underway ranging from 1.5 to 15 acres in size for the purpose of sewage treatment. Three of these systems are operational and two are not yet under construction. Region IV's wetlands program has initiated a wetlands creation project at the Chattanooga Nature Center in Tennessee.
- Region IV will also continue to monitor the restoration of Central and Northern Florida wetland systems impacted by phosphate mining. This effort is part of an agreement developed between the Corps of Engineers, Florida Department of Environmental Regulation, EPA, and Occidental Chemical Agricultural Products, Inc. The "Occidental Agreement" is an attempt to establish "up-front" restoration requirements from a regulatory perspective and establish criteria to judge success for a self-sustaining system. Given the protracted nature of wetland restoration, monitoring efforts will take place for several more years.
- Finally, Region IV recently entered into an interagency agreement with the Tennessee Valley Authority to investigate the feasibility of bottomland hardwood restoration on lands which have been surface mined for coal. This project will include a mining reclamation workshop, a proposal for research in an area identified by the workshop, and the generation of a Technical Guidance Document on mining reclamation. This project will begin in January 1989.