



Environmental Backgrounder

Wetlands

Issue

The United States is losing one of its most valuable, and perhaps irreplaceable, resources--our wetlands. This natural heritage of swamps, marshes, bogs, and other types of wetlands is disappearing at an alarming rate. Today, less than half of our nation's original wetlands remain.

In the late 1600s, there were over 200 million acres of wetlands in the lower 48 states but by the mid-1970s it was estimated that there were 99 million acres of wetlands--an area about the size of California. Between 1955 and 1975 alone, more than 11 million acres of wetlands were lost entirely--an area almost two and a half times the size of New Jersey. Agricultural drainage of wetlands was responsible for 87 percent of these losses; urban development and other development were responsible for 8 percent and 5 percent of losses, respectively. The average annual loss during this 20 year period was 458,000 acres (440,000 acres of inland wetlands and 18,000 acres of coastal wetlands). Today, annual wetlands losses average 350,000 acres.

Background

DEFINITION

The vital component of wetlands is water. It gives life to a wetland and binds together all of its parts. It influences the soil structure and plants and animals associated with a specific wetland. One characteristic of all wetlands is their periodic or constant inundation or soil saturation.

Inland wetlands contain freshwater, while coastal tidal wetlands contain salty or brackish water. Acre for acre, wetlands match the most productive ecosystems in the world. Bottomland hardwoods, bogs, swamps, marshes, and arctic tundra all are types of wetlands.

BENEFITS

In their natural condition, wetlands provide many benefits including: water quality improvement, flood protection, shoreline erosion control, natural products

for human use, food, habitat and spawning grounds for fish and wildlife, and opportunities for recreation and aesthetic appreciation. One of the most important values of wetlands is their ability to help maintain and improve the water quality of our nation's rivers, estuaries, and other water bodies. Wetlands do this by removing and retaining nutrients, processing chemical and organic wastes, and reducing sediment from flood waters.

Wetlands function like natural tubs, storing either flood waters that overflow riverbanks or surface water that collects in isolated depressions. When wetlands absorb flood waters, they reduce damage downstream. Trees and other wetland vegetation help slow the speed of flood waters. This action, combined with water storage, lowers flood heights and reduce the water's erosive potential. The stored water is then slowly released downstream as flood peaks recede.

Each wetland works in combination with other wetlands as part of a complex, integrated system that delivers these benefits and others to society.

- + Many species of plants, birds, mammals, reptiles and amphibians, and invertebrates on the Endangered Species List depend on wetlands during some phase of their life. Examples include the manatee, Florida panther, whooping crane, Everglade kite, American alligator, Schaus swallowtail butterfly, and pondberry.
- + A major part of the commercial and recreational fish catch in the United States is comprised of species that use wetlands as a food source, or as a habitat, during some part of their life cycle.
- + Wetlands contribute commercially to support a fur and hide harvest worth \$300 to \$400 million annually, and are the basis for over \$10 billion in annual expenditures on nature study, fishing, hunting, and other outdoor recreation.
- + Wetlands have always been among the most fertile and productive ecosystems on earth. They can be as productive as the most productive cultivated lands.
- + Wild rices, marsh hay, and hardwood trees are among the commercial crops harvested in wetlands.

Legal Tools

Currently no comprehensive federal law for protecting wetlands exists. The major federal regulatory program for wetlands is Section 404 of the Clean Water Act,

which is jointly administered by EPA and the U.S. Army Corps of Engineers. The Corps has the day-to-day administrative responsibility for the program--reviewing permit applications, issuing permits, and taking actions against violators of the law. EPA and the Corps have developed guidelines which serve as environmental standards that the Corps must apply when evaluating a permit application for the discharge of dredged or fill material into waters of the United States, including wetlands.

The law authorizes EPA to prohibit or restrict the use of a wetland for discharge of dredged or fill materials if the Agency determines that the proposed discharge will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishing areas, wildlife, or recreational areas.

EPA's other responsibilities include: determining what areas are wetlands subject to the law's protection; defining activities that may be exempt from permitting; and approving and overseeing the assumption by states of responsibility for the Section 404 program. In addition, the law authorizes EPA to initiate administrative, civil, and criminal enforcement actions for violations of wetlands protection requirements. EPA's enforcement effort is directed primarily at persons who discharge fill material into wetlands without a necessary permit. During the last three years, EPA has issued over 200 administrative compliance orders in response to violations involving Section 404. EPA has also issued 13 complaints seeking administrative penalties for such violations in the last year, and initiated additional numbers of judicial enforcement actions seeking civil penalties and criminal fines.

Besides Section 404, there are also several other legal tools available at the federal level for protecting against wetlands loss:

- + Direct regulation of wetlands destruction and degradation under Sections 402 (effluent discharges) of the Clean Water Act and Section 10f of the 1899 Rivers and Harbors Act.
- + Economic sanctions designed to limit destruction of wetlands written into the "swamp buster" provisions of the 1985 Food Security Act that remove agricultural subsidies and loan guarantees when wetlands are converted; and the Coastal Barrier Resources Act, which precludes federal subsidies, such as coverage by the National Flood Insurance programs in undeveloped coastal areas. Recent changes in the Federal Tax

Code mandated by the 1986 Tax Reform Act have also removed many incentives for land conversion.

- + Enforcement designed to obtain prompt restoration of wetlands destroyed by unauthorized dredge or fill activities, to penalize violators, and to deter further noncompliance.
- + Federal programs that involve planning, public land management, and the development of infrastructure such as highways, water resources facilities, and flood control. Guided by the Executive Orders on Wetlands Protection and Floodplain Management and the National Environmental Policy Act (NEPA), most major land managing agencies are attempting to develop responsible policies for managing and conserving wetland resources under their care.
- + The final and critical area is federal land acquisition. In some situations, the only sure way to protect wetlands is for the federal government to simply buy the land and manage it. The most notable example of this is our network of National Wildlife Refuges, most of which include significant wetland acreage. The U.S. Fish and Wildlife Service is prioritizing wetlands for acquisition under the 1986 Emergency Wetlands Resources Act.

Federal Approach

Under the terms of the Act, EPA shares with the Corps, and with state and local governments, the responsibility for restoring and maintaining the chemical, physical, and biological integrity of the nation's waters, including wetlands.

The Agency believes that a truly effective program to protect our nation's wetlands depends on a concerted effort by all levels of government, private industry, developers, farmers, conservation organizations, the scientific community, and others. Active citizen support and participation is essential to the success of wetlands preservation programs.

EPA Action

In 1986, in recognition of the importance of our nation's wetlands, EPA elevated its wetlands division into an Office of Wetlands Protection to expand its efforts and emphasize its wetlands protection goals. This office is involved in regulatory actions, the development of strategies to protect wetlands, the coordination of wetlands policies among the several federal agencies, assisting states to assume the regulatory program, public outreach work, and scientific program development. In addition, each of EPA's 10 regional offices has a wetlands staff.

To address the strong need for a national wetlands policy, the EPA Administrator asked The Conservation Foundation to convene an independent National Wetlands Policy Forum in the Spring of 1987. Governor Thomas H. Kean of New Jersey chaired the Forum that was comprised of twenty members representing a very wide range of perspectives including state and local government, development, forestry, agriculture, environmental groups, and experts in wetland policy and science. Five federal agencies participated as ex officio members of the Forum. Four meetings were held over the course of one year, from July 1987 to July 1988.

Over 100 policy recommendations for wetlands issues were released by the Forum on November 15. From EPA's perspective, some of the most significant recommendations include:

- + Legislative changes to address the shortcomings of the Clean Water Act Section 404 program.
- + The strong emphasis on advance planning to address wetland loss and degradation within a broader environmental context and in advance of individual permit decisions.
- + The framework for a mitigation policy for wetlands.
- + The call for restoration of many previously altered wetlands to help balance the scale of overall losses.
- + The establishment of a Wetlands Agricultural Reserve to aid in addressing the very significant portion of losses attributed to agricultural actions.

EPA is drafting a Wetlands Action Plan in response to the recommendations.

State Action

Regulation of wetlands is certainly not limited to the federal level. Over the past three decades, numerous states have enacted laws to regulate activities in wetlands, and some towns have adopted local wetlands protection ordinances. States also have important authority under the Clean Water Act and the Coastal Zone Management Act to certify that federal activities are consistent with state requirements. Although most coastal states have laws protecting coastal wetlands, fewer than 20 states have laws specifically regulating activities in inland wetlands. Several states also have acquisition programs for important state resources, including wetlands.

Public Action

Pressures to degrade and destroy wetlands continue as there is an increase in the demand for areas to develop. Even if losses were controlled, the insidious problem of degradation of wetlands from waste discharges, urban encroachment, ground-water withdrawals, partial drainage, and other actions still requires attention.

Many opportunities exist for private citizens, corporations, government agencies, and others to work together to slow the rate of wetland loss and to improve the quality of our remaining wetlands. First, states and local governments need to establish programs to effectively protect all wetlands within their borders. Second, individual landowners and corporations own many of the nation's wetlands and are in key positions to determine the fate of the wetlands they own. Finally, every citizen can help protect wetlands by supporting wetland conservation initiatives, such as the following

- + Rather than drain or fill wetlands, seek compatible uses involving minimal wetland alteration, such as waterfowl production, fur harvest, hunting and trapping leases, selective timber harvest, and use of "hay and rotate" farming practices.
- + Select upland sites for development projects rather than wetlands, and avoid wetland alteration or degradation during construction.
- + Donate wetlands or funds for purchasing wetlands to private or public conservation groups or agencies.
- + Support various wetland conservation initiatives by public agencies and private organizations.
- + Maintain wetlands in and adjacent to buffer strips as open space.
- + Participate in the Clean Water Act Section 404 program, by reviewing public notices and, in appropriate cases, commenting on permit applications.

More Information For further information about wetlands, please contact:

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