

Wetlands Preservation



Wetlands — marshes, swamps, bogs and similar areas — are considered to be among the nation's most valuable natural resources.

Three hundred years ago, what is now the contiguous United States had about 215 million acres of wetlands, according to estimates by the congressional Office of Technology Assessment (OTA). About 99 million acres remain today. The Interior Department's Fish and Wildlife Service (FWS) estimates that in recent years more than 80 percent of the converted land went into agricultural uses.

From the turn of the 20th century until 1977, USDA and other government agencies provided support for converting wetlands to farmland. Farmers received both financial aid and technical assistance to turn wetland into cropland. Between the mid-1950s and mid-1970s, some 12 million acres of wetlands were converted, says economist Ralph Heimlich of USDA's Economic Research Service.

Most of the wetlands converted in the middle of this century were in the Southeast and the lower Mississippi Delta, which have a sizable portion of the nation's wetlands. Louisiana and Mississippi each converted 1.7 million acres, Arkansas more than 1.4 million, and North Carolina and Minnesota more than 500,000 each.

One of the first federal efforts to pro-

tect wetlands was the Water Bank Program of 1970, administered by USDA. In exchange for government payments, landowners pledged not to burn, drain or otherwise alter their wetlands for 10 years. When the first least period expired in 1982, however, only 50 percent to 60 percent of the landowners renewed their leases. Farmers, mostly in the prairie-pothole region of the north central states, were enrolling in the program when commodity prices were depressed and leaving when prices recovered, according to a 1984 report by OTA.

Section 404 of the Clean Water Act, passed by Congress in 1972, was the first attempt by the federal government to regulate the use of wetlands. Section 404 prohibits the discharge of dredged or fill material into wetlands without a permit. Permits are issued by the Army Corps of Engineers and reviewed by the Environmental Protection Agency.

The success of this program to slow the rate of wetlands conversion has been limited because most agricultural drainage is exempted as "normal farming activity," Heimlich says.

The Section 404 program, he adds, has more successfully curbed wetland conversion for development in coastal areas than it has the inland losses of seasonal wetlands. More than 96 percent of the applications for Section 404 permits have been granted. No data are available on

the acreage affected. An OTA study of the program, however, estimated that fewer than 100,000 acres were protected between 1980 and 1981.

New Role for USDA

Reflecting growing public awareness that wetlands are a valuable natural resource, an executive order on protection of wetlands in 1977 directed USDA and other agencies to "minimize the destruction, loss or degradation of wetlands" and ended direct assistance for converting wetlands.

Congress sought to reduce the loss of wetlands to agriculture by including the "swampbuster" provision in the 1985 Food Security Act. The provision disqualifies farmers from receiving many federal farm benefits — price support payments, farm storage facility loans, crop insurance, disaster payments, and insured or guaranteed loans — if they grow crops on wetlands converted since 1985.

The success of the swampbuster provision is limited, however, by the types of crops grown and by farmers' participation in government programs, Heimlich says. He estimates that, assuming full implementation, the provision will prevent destruction of about 6 million acres, which is 35 percent of convertible wetlands.

As of April 1989, 427 farm operators had lost their eligibility for federal program benefits because they chose not to adhere to the provisions of the swamp-

buster regulations, and more than half of those won back their benefits on appeal. Program benefits foregone by the few farmers who were found in violation totaled about \$850,000.

The swampbuster provision does not prohibit drainage or modification of wetlands, Heimlich says. It merely offers farmers a financial disincentive to cultivate wetlands.

Two current Senate bills would provide more stringent qualifications for eligibility.

Currently, farmers who convert wetlands to agricultural uses lose farm program benefits. Benefits are restored, however, if the land is not cropped the following year. Both bills would continue to deny benefits until the wetlands are restored, regardless of whether the land is cropped.

The Tax Reform Act of 1986 modified another federal incentive for converting wetlands. It restricted tax deductions for land-clearing and drainage activities undertaken for soil and water conservation, and it eliminated favorable tax treatment of capital gains, including increases in land values due to drainage.

While eliminating direct assistance and denying benefits for converting wetlands have probably reduced the rate of wetland conversion, wetlands are still being converted faster than they are being restored or created.

In 1988, the National Wetlands Policy Forum, composed of representatives from government, industry and environmental groups, proposed the no-net-loss policy and an eventual increase in wetlands.

The National Wetlands Priority Conservation Plan and the North American Waterfowl Management Plan, as well as provisions in several bills introduced in Congress, also propose increases in wetlands acquisition and restoration.

A national wetlands reserve may be the next step to protect wetlands, Heimlich suggests. Such a reserve could be created by expanding existing programs, as well as by establishing new programs, to acquire and restore wetlands.

For example, USDA wants to give landowners participating in the Water Bank Program a one-time payment for a permanent easement — partial ownership interest in the land — instead of offering 10-year leases.

Wetlands or permanent wetlands easements also can be purchased under the Small Wetland Acquisition Program administered by FWS. It purchased permanent easements on about 125,000 acres of wetlands between 1981 and 1988 for an average cost of \$279 per acre. Outright land purchases averaged \$800 per acre.

Wetlands are also being leased under USDA's Conservation Reserve Program (CRP). Eligibility rules for the CRP have

Yesterday's Wastes, Today's Ecological Treasures

If you don't have a wetland in your backyard, there's probably one nearby. There's one in every county in the United States, according to the Environmental Protection Agency.

Wetlands are mostly semi-aquatic lands. They are either constantly or periodically covered or saturated with water. The presence of water makes them hydric, or capable of supporting specially adapted plants like bulrushes, cattails and cypress.

There is a large variety of wetlands — swamps, bogs and marshes. Most are always wet, but some, like the prairie potholes in the Midwest, are dry much of the year. There are two broad categories, coastal and inland. Coastal wetlands are linked to estuaries where sea and fresh water mix. Many shallow coastal areas are unvegetated mud or sand flats. Marshes are abundant along the Atlantic and Gulf coasts. Mangrove swamps are common in Hawaii and in southern Florida.

Inland wetlands are most common on floodplains beside rivers and streams.

They are also found along the margins of lakes and ponds and in isolated depressions surrounded by dry land.

Inland wetlands include marshes and wet meadows, shrub swamps and wooded swamps. Some regional examples are the pocosins in North Carolina, prairie potholes in Minnesota and the Dakotas, and the tropical rain forests of Hawaii.

Historically, wetlands were viewed as pest-ridden wastes to be reclaimed for useful purposes. For many years no one noticed their environmental bene-

fits or their rapid disappearance.

In 1763, George Washington formed a company to drain for agriculture the Great Dismal Swamp on the border of Virginia and North Carolina. While his project failed, his attitude toward wetlands foreshadowed policy for nearly two centuries. The swamp in question has now been made a preserve.

Wetlands in the public domain were given to states to administer under the Swamp Lands Acts of 1849, 1850 and 1860. Florida, for example, sold the Everglades and Okefenokee wetlands for less than 50 cents an acre. Today, Iowa has lost about 95 percent of its natural marshes, and California more than 90 percent of its wetlands.

Other states — including Connecticut, Louisiana, Michigan, Minnesota and North Dakota — have lost about 50 percent of their wetlands, according to the National Wildlife Federation.

Ecologists and biologists were the first to recognize the environmental value of wetlands as some of the world's richest ecological stewes. They nourish such diverse wildlife as alligators in the Florida Everglades, whooping cranes in Texas, muskrats in Iowa, and ducks in the prairie potholes in Minnesota, North Dakota and South Dakota.

Wetlands are coveted by environmentalists and hunters alike. They not only provide a habitat for wildlife but also help maintain groundwater supplies and water quality, protect shorelines from erosion, store floodwater and trap sediments.

been broadened to include wetlands. Almost 156,000 acres of wetlands were enrolled during the most recent signup, with most of the land in the prairie pothole regions of North Dakota, South Dakota and Minnesota.

Paying for Restoration

Average costs of restoring wetlands have ranged from \$48 per acre in some of the easily restored prairie pothole regions of the Northern Plains to \$1,193 per acre in sections of Appalachia, according to estimates based on restorations done by FWS, the Reinvest in Minnesota program and Ducks Unlimited.

Heimlich estimates that the least cost of establishing a wetlands reserve involving 2.5 million acres of hydric cropland is \$845 million, with 66 percent of that cost for easements and the remainder for restoration. A 5-million-acre reserve could

cost \$2.4 billion and a 10-million-acre reserve \$6.7 billion, with easement costs rising to 77 percent of the total. Average costs per acre would probably range from \$338 to \$681.

Ten states contain 90 percent of the hydric land likely to be in these three least-cost reserve categories. Minnesota, with the most hydric cropland, would provide almost one-half of a 5-million-acre reserve. Corn Belt states would provide about one-quarter of the hydric cropland to the reserve, while North and South Dakota would add relatively little, only 8 percent. The share of the reserve from the three states with major proportions of wetlands — Louisiana, Mississippi and Florida — would be only 2.5 percent.

Editor's Note: This article reprinted from USDA's *Farmline*.