

Wetlands and People



Only recently have we begun to understand the importance of the functions that wetlands perform. Far from being useless, disease-ridden places, wetlands provide values that no other ecosystem can, including [natural water quality improvement](#), [flood protection](#), shoreline [erosion control](#), opportunities for [recreation and aesthetic appreciation](#), and [natural products](#) for our use at no cost. Wetlands can provide one or more of these functions. Protecting wetlands in turn can protect our safety and welfare.

Water Quality and Hydrology

Wetlands have important filtering capabilities for intercepting surface-water runoff from higher dry land before the runoff reaches open water. As the runoff water passes through, the wetlands retain excess nutrients and some pollutants, and reduce sediment that would clog waterways and affect fish and amphibian egg development. In performing this filtering function, wetlands save us a great deal of money. For example, **a 1990 study showed that, without the Congaree Bottomland Hardwood Swamp in South Carolina, the area would need a \$5 million waste water treatment plant.**



Heron

In addition to improving water quality through filtering, some wetlands maintain stream flow during dry periods, and many replenish groundwater. Many Americans depend on groundwater for drinking.

Flood Protection



Flood

Wetlands function as natural sponges that trap and slowly

release surface water, rain, snowmelt, groundwater and flood waters. Trees, root mats, and other wetland vegetation also slow the speed of flood waters and distribute them more slowly over the floodplain. This combined water storage and braking action lowers flood heights and reduces erosion. Wetlands within and downstream of urban areas are particularly valuable, counteracting the greatly increased rate and volume of surface- water runoff from pavement and buildings.

The holding capacity of wetlands helps control floods and prevents water logging of crops. Preserving and restoring wetlands, together with other water retention, can often provide the level of flood control otherwise provided by expensive dredge operations and levees. **The bottomland hardwood- riparian wetlands along the Mississippi River once stored at least 60 days of floodwater. Now they store only 12 days because most have been filled or drained.**

Shoreline Erosion

The ability of wetlands to control erosion is so valuable that some states are restoring wetlands in coastal areas to buffer the storm surges from hurricanes and tropical storms. Wetlands at the margins of lakes, rivers, bays, and the ocean protect shorelines and stream banks against erosion. Wetland plants hold the soil in place with their roots, absorb the energy of waves, and break up the flow of stream or river currents.

Fish and Wildlife Habitat

More than one-third of the United States' threatened and endangered species live only in wetlands, and nearly half use wetlands at some point in their lives. Many other animals and plants depend on wetlands for survival.



Alligator

Estuarine and marine fish and shellfish, various birds, and certain mammals must have coastal wetlands to survive. Most commercial and game fish breed and raise their young in coastal marshes and estuaries. Menhaden, flounder, sea trout, spot, croaker, and striped bass are among the more familiar fish that depend on coastal wetlands. Shrimp, oysters, clams, and blue and Dungeness crabs likewise need these wetlands for food, shelter, and breeding grounds.

For many animals and plants, like wood ducks, muskrat, cattails, and swamp rose, inland wetlands are the



Otter

only places they can live. Beaver may actually create their own wetlands. For others, such as striped bass, peregrine falcon, otter, black bear, raccoon, and deer, wetlands provide important food, water, or shelter. Many of the U.S. breeding bird populations-- including ducks, geese, woodpeckers, hawks, wading birds, and many song-birds-- feed, nest, and raise their young in wetlands. Migratory waterfowl use coastal and inland wetlands as resting, feeding, breeding, or nesting grounds for at least part of the year. Indeed, an international agreement to protect wetlands of international importance was developed because some species of migratory birds are completely dependent on certain wetlands and would become extinct if those wetlands were destroyed.

Natural Products for Our Economy



Shrimp Harvest

We use a wealth of natural products from wetlands, including fish and shellfish, blueberries, cranberries, timber, and wild rice, as well as medicines that are derived from wetland soils and plants. Many of the nation's fishing and shellfishing industries harvest wetland- dependent species; the catch is valued at \$15 billion a year. In the Southeast, for example, nearly all the commercial catch and over half of the recreational harvest are fish and shellfish that depend on the estuary- coastal wetland system.

Louisiana's coastal marshes produce an annual commercial fish and shellfish harvest that amounted to 1.2 billion pounds worth \$244 million in 1991. Wetlands are habitats for fur-bearers like muskrat, beaver, and mink as well as reptiles such as alligators. The nation's harvest of muskrat is worth \$70 million annually.

Recreation and Aesthetics

Wetlands have recreational, historical, scientific, and cultural values. More than half of all U.S. adults (98 million) hunt, fish, birdwatch or photograph wildlife. They spend a total of \$59.5 billion annually. Painters and writers continue to capture the beauty of wetlands on canvas and paper, or through cameras, and video and sound



Hunting in a Wetland

recorders. Others appreciate these wonderlands through hiking, boating, and other recreational activities. Almost everyone likes being on or near the water; part of the enjoyment is the varied, fascinating lifeforms.