

Wetland Restoration



Although wetland protection regulations have slowed the rate of wetland losses, it is estimated that the United States still loses approximately 100,000 acres of wetlands annually. In addition to protecting the remaining wetlands, it has become evident that further steps are necessary to enhance our wetland resources. Beginning in the late 1980s and early 1990s, the United States Department of Agriculture's, Natural Resources Conservation Service and the United States Fish and Wildlife Service began efforts to reverse the tide of wetland losses by establishing wetland restoration programs. These programs are designed to assist landowners who wish to voluntarily restore wetlands on their property.

The restoration of drained or altered wetlands re-establishes and adds important ecological functions to the landscape, including the creation of new wildlife habitat, increased flood storage, and the enhancement of water quality. Resource management plans developed at both the state and federal levels identify wetland restoration as a key component for environmental improvements and set ambitious restoration goals.

Wetland restoration projects are not designed to create deep water ponds or alter existing natural wetlands. Depressions or low lying areas, and areas that are seasonally wet and generally difficult to farm, are often good potential restoration sites.

Wetland restoration projects are designed to put the "wet" back into drained wetlands. Most wetland restoration projects involve simple techniques such as plugging agricultural ditches or breaking field tiles in order to restore the hydrology of an area. Once the water has been restored, wetland vegetation can reestablish and then wildlife of all types can utilize the restored habitat.

Benefits

The ecological and societal benefits of river corridor and wetlands restoration are substantial:

- Rivers transport water, sediment, and nutrients from the land to the sea, play an important role in building deltas and beaches, and regulate the salinity and fertility of estuaries and coastal zones. Rivers serve as corridors for migratory birds and fish, and provide habitat to many unique species of plants and animals, including federally endangered and threatened aquatic species. According to the 1985 National Survey of Fishing, Hunting, and Wildlife -Associated Recreation (U.S. DOI, Fish and Wildlife Service, 1988), 38.4 million fishermen spent \$17.8 billion for non-Great Lakes freshwater fishing in 1985, with 45 percent of reported anglers fishing in rivers and streams.

- Wetlands provide food, protection from predators, and other vital habitat factors for many of the nation's fish and wildlife species, including endangered and threatened species. In addition, wetland ecotypes have economic value associated with recreational, commercial, and subsistence use of fish and wildlife resources and they remove pollutants from overland flows before they reach our lakes, rivers and bays.
- Wetlands intercept storm runoff and release floodwaters gradually to downstream systems. When wetlands are converted to systems without water retention capacity, downstream flooding problems increase.

Restoration Guiding Principles

These principles focus on scientific and technical issues, but as in all environmental management activities, the importance of community perspectives and values should not be overlooked. The presence or absence of public support for a restoration project can be the difference between positive results and failure. Coordination with the people and organizations that may be affected by the project can help build the support needed to get the project moving and ensure long-term protection of the restored area. In addition, partnership with stakeholders can also add useful resources, ranging from money and technical expertise to volunteer help with implementation and monitoring.

- Preserve and protect aquatic resources
- Use reference sites
- Restore ecological integrity
- Anticipate future changes
- Restore natural structure
- Involve a multi-disciplinary team
- Restore natural function
- Design for self-sustainability
- Work within the watershed/landscape context
- Use passive restoration, when appropriate
- Understand the potential of the watershed
- Restore native species, avoid non-native species
- Address ongoing causes of degradation
- Use natural fixes and bioengineering
- Develop clear, achievable and measurable goals
- Monitor and adapt where changes are necessary
- Focus on feasibility