

Wetlands

in the Cuyahoga River Watershed



Wetlands contribute to community vitality & safety:

- ◆ **Manage Storm Water Volume** by storing and absorbing excess water when floods threaten and supplying streams with water during dry weather.
- ◆ **Dissipate Storm Water Energy** by having heavy vegetation slowing the flow of storm water, allowing it to drop its sediment load.
- ◆ **Reduce Storm Water Pollutants** through natural processes of various organisms removing nutrients and organic compounds from the water.
- ◆ **Replenish Groundwater** by holding water on land and allowing water to soak into the ground.
- ◆ **Provide Wildlife Habitat** (food, shelter and nursery) for a wide variety of plants, birds, amphibians, insects and fish.
- ◆ **Offer Recreational Benefits** by providing opportunities for bird watching, fishing, hunting, nature study, photography, and enjoying greenspace.
- ◆ **Improve Quality of Life by providing and maintaining a safe, healthful living environment for residents.**
- ◆ **Wetlands Provide Important Financial Benefits by:**
 - \$ Storing water and protecting against flood damage.
 - \$ Trapping sediment and reducing dredging costs.
 - \$ Decreasing stream flow energy and reducing erosion rates and property damage.
 - \$ Providing greenspace and improving property values.

Wetland Characteristics:

Wetlands vary widely, yet they generally include these three distinguishing features:

Hydrology:

Periodic or continuous presence of water from precipitation, runoff, stream flow, flooding and/or ground water.

Soils:

Poorly drained or Hydric soils that show evidence of prolonged inundation.

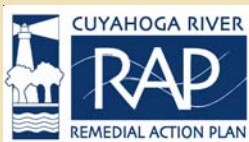
Vegetation:

Presence of plants adapted to grow in wet conditions.



An Essential Component of Healthy Streams

Wetlands are complex ecosystems within a stream network or watershed. *Wetlands* function as *natural sponges*, to absorb excess storm water, and as *natural kidneys*, to filter pollutants from the water. Wetlands slowly release water into groundwater supplies, local streams, the Cuyahoga River, and ultimately Lake Erie.



Wetland Types

Wetlands Take on Different Forms Depending on their Vegetation and Water Source



Marshes/Wet Meadows are dominated by soft-stemmed plants, such as cattails, reeds, rushes, and arrowhead and frequently inundated with water.



Swamps/Forested Wetlands are dominated by woody plants, such as red maples and pin oaks, & periodically and/or continuously inundated with water.



Scrub/Shrub Wetlands are dominated by shrubby vegetation, such as buttonbush, willows & dogwoods and periodically and/or continuously inundated with water.



Vernal Pools are shallow, seasonally inundated areas that are valuable habitat for amphibians (toads and salamanders).



Bogs are acidic wetlands that accumulate peat and trap precipitation as their water source.



Fens are alkaline wetlands that accumulate peat and have groundwater as their water source.

While these types of wetlands vary in abundance throughout the Cuyahoga River Watershed, they are all equally important and vulnerable.

Myths of Wetlands

- ◆ **Breeding Grounds for West Nile Virus?** A functioning wetland contains the predators that control mosquito populations. Clogged house gutters or outdoor containers with standing water are a more serious local threat.
- ◆ **Produces Unpleasant Odors?** Sometimes a faint smell comes from wetlands removing & processing the nutrients and pollutants from the water.
- ◆ **Restricts Use of Land?** Since wetlands are so scarce in our region and perform unique functions, there is no better land use that can offer the same benefits.

Persistent Threats to Wetlands

Historically, wetlands were drained and filled for agriculture, while today, the most common threat is development. Wetlands are increasingly valuable in our region due to their scarcity.

The Most Common Threats to Wetlands in the Cuyahoga Watershed include:

Urbanization, imperviousness or hardened surfaces, impair wetlands by:

- ◆ Increasing peak stream flows and exceeding wetland storage capacity.
- ◆ Reducing groundwater recharge and dry weather stream flow, which dehydrates wetlands.
- ◆ Allowing excess sediment from land development to smother wetlands and increase flooding.
- ◆ Concentrating polluted urban run-off (fertilizers, pesticides, and oil), which impacts fish and other aquatic life, and increases the costs for drinking water pollutant removal.

Invasive Species (non-native plants and animals) tend to occur in wetlands that have been disturbed. They displace more beneficial, native species, which further disrupts the balanced functions of the wetland ecosystem.

Displacement of wetland benefits occurs when a wetland is removed from one watershed and then recreated in a different watershed. Current Federal "No Net Loss" regulation allows a wetland to be destroyed, if another wetland is either created or restored to replace it. Although wetland regulations have greatly reduced loss of wetlands, they have not maintained the net acreage of wetlands within individual watersheds.

Loss of wetlands within a watershed, reduces storm water storage capacity, increasing flooding in downstream communities.

Indifference, or lack of community recognition, can lead to further loss and degradation of wetlands.

Almost all of the remaining wetlands in the Cuyahoga River Watershed show signs of urbanization, invasive species and community indifference.

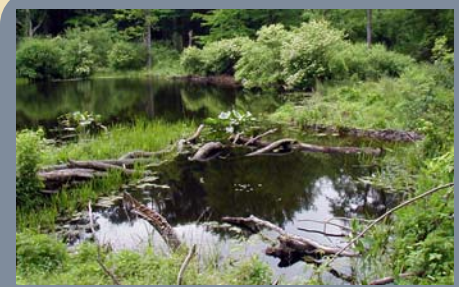
All wetlands are worth protecting and/or restoring.



Wetlands can be overwhelmed by surrounding urban effects.



Purple loosestrife displaces native plants and animals.



Wetlands function best when left in their original locations.



Failure to link land-use planning to the health of watersheds will further degrade wetlands

Protecting Wetlands in Your Community



The quality of our local water resources impacts the quality of our community environment. Wetland protection and restoration need public and private cooperation in a watershed context.

Watershed-based planning involves:

- ◆ Protecting local water resources through community policy
- ◆ Supporting a local watershed organization
- ◆ Educating the community about the benefits of watershed protection
- ◆ Adopting & coordinating watershed friendly ordinances, design standards and enforcements among communities within the same watershed
- ◆ Sponsoring remediation and preservation projects

Wetlands are subject to federal and state oversight.

The Clean Water Act stipulates certain procedures regarding wetlands.

- ◆ **Section 404** requires a permit from the US Army Corps of Engineers for filling or dredging of a waterway or wetland.
- ◆ **Section 401** requires certification from Ohio EPA of whether the loss of a wetland would impair state water quality standards, including "No Net Loss" provisions.

This federal and state oversight provides opportunities for protecting and restoring local wetlands through a variety of methods and funding sources.



Funding Resources:

Clean Ohio Grants- competitive grants to acquire and preserve wetlands

Water Resource Restoration Sponsor Program (WRRSP)- funds for planning and implementing projects that protect or restore water resources.

Mitigation projects- "No Net Loss" requirements provide an opportunity to enhance and restore existing wetlands when sites elsewhere are to be lost due to development.

Wetland Reserve Program- a voluntary program for landowners to receive financial incentives to protect wetlands.

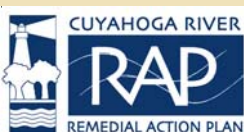
Supplemental Environmental Projects (SEP) – provide for environmental restoration and protection projects, which a violator agrees to perform as part of a settlement agreement.

Mitigation for Credits- offers a market-based approach where a party can produce a remedial project and accumulate marketable mitigation credits.

319 Funds- offers groups with approved watershed plans funds to protect wetlands.



The Cuyahoga River Remedial Action Plan, along with our American Heritage River Partners, can provide the necessary guidance and technical assistance to local watershed groups or communities to protect and restore the scarce and vital wetlands within the Cuyahoga River Watershed.



To sponsor a wetland remediation project contact the *Cuyahoga River Remedial Action Plan*.

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