



# Rouge River AOC Habitat Restoration at Wilcox & Phoenix Lakes

In partnership with:



\$512,218 in grant funds provided by the Great Lakes Restoration Initiative (GLRI) through the U. S. Environmental Protection Agency (USEPA) for design and \$5,008,595 in GLRI grant funds for implementation at both Wilcox Lake & Phoenix Lake.

## The Wilcox Lake & Phoenix Lake Habitat Restoration Will:

- Restore/enhance 6 acres of in-lake habitat
- Control 8 acres of invasive species
- Remove approximately 6,000 yd<sup>3</sup> of sediment
- Aid in the removal of BUIs

In 2021 the Alliance of Rouge Communities (ARC) received grant funding from the USEPA GLRI to design habitat restoration at Wilcox Lake and Phoenix Lake within the Rouge River Watershed. In 2022 the ARC received grant funding from the USEPA GLRI for implementation of the habitat improvements for Wilcox and Phoenix Lakes.

The Rouge River watershed is a designated Area of Concern (AOC) under the Great Lakes Water Quality Agreement (GLWQA) and has three Beneficial Use Impairments (BUIs) associated with fish and wildlife habitat: Degraded Fish and Wildlife Populations, Degradation of Benthos, and Loss of Fish and Wildlife Habitat. In 2016, the Rouge River Advisory Council (RRAC), the Public Advisory Council (PAC) for the Rouge AOC, recommended a list of projects that need to be completed to remove the Rouge AOC habitat BUIs and it was approved by EPA in 2018. As part of that list, habitat restoration at Wayne County's Wilcox Lake and Phoenix Lake were considered as having a significant impact on the removal of the BUIs.

## Conditions Prior to Restoration at Wilcox Lake/Phoenix Lake

As water quality in the Rouge River continues to improve, this project will build on past efforts to restore some of the damage done during the last century. Tributaries of the Rouge River have suffered from loss and impairment of aquatic habitat and increased frequency and magnitude of flood flows, primarily due to increasing urbanization within the watershed. The flat river slope and the meandering channel cannot pass the large flows associated with rain events. Upstream urbanization continues to exacerbate this problem as runoff from increased amounts of impervious surfaces culminates in flooding within the river system, bank erosion, and continued habitat degradation.

## Wilcox Lake Restoration - City of Plymouth

The park is used for fishing, picnicking, and passive recreation. The project goal is to enhance the in-lake and riparian habitat at the site through:

- Removal of sediment and re-shaping of the lake to create open water area, shallow and deep over-wintering habitats for fish spawning, nursery, and cover habitat.
- Restoration of aquatic benthic substrates submerged and emergent aquatic vegetation and riparian habitat. New substrates to include sandy gravel, cobbles, and boulders to provide spawning areas, attachment points, and cover for fishes, insects and fauna.
- Placement of woody debris along the shoreline to increase habitat diversity. Boulder clusters will be added offshore to add cover and feeding areas.
- Conducting invasive species management and planting of native shrubs and trees.
- Improvements to reduce direct non-point source pollution with bioswales and native plants.



Existing conditions at Wilcox Lake

## Phoenix Lake Restoration - City of Plymouth

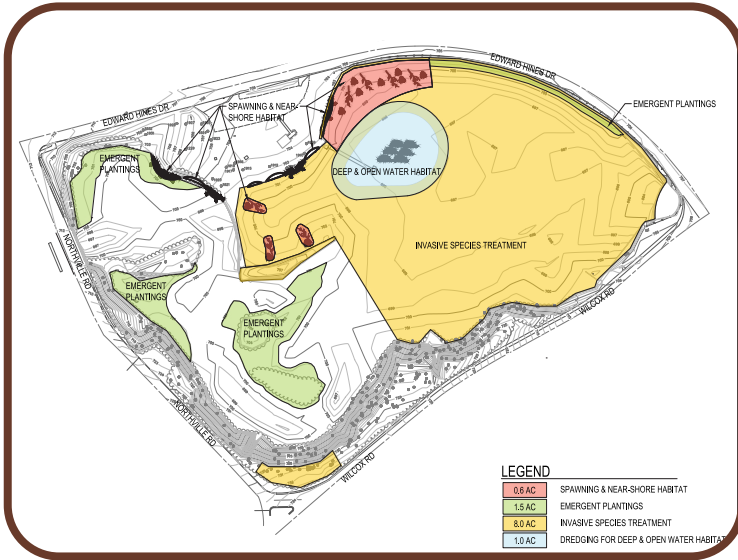
The goal of the project is to enhance the in-lake habitat value through:

- Installation of new substrates that include sandy gravels, cobbles, and boulder clusters providing spawning substrate, attachment points, and cover for fishes, insects, crustaceans, and fauna. Submerged, emergent, and floating aquatic vegetation will be planted in shallow water to create lacustrine wetland habitat for waterfowl feeding, fish spawning and nursery habitat, and nutrient sequestration.
- Placement of woody debris placed along the shoreline and offshore to increase habitat diversity. Boulder clusters will be added offshore adding cover and feeding areas.

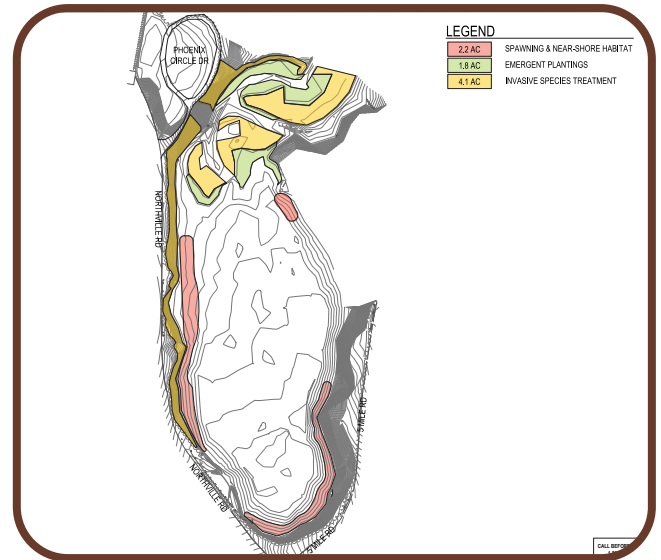


Existing conditions at Phoenix Lake

## Conceptual design



Wilcox Lake Concept Plan



Phoenix Lake Concept Plan

## Construction activities



Clearing invasive trees at Phoenix Lake



Placement of woody debris along the shoreline to increase habitat diversity at Phoenix Lake



Shoreline stabilization, habitat logs and aquatic plantings at Wilcox Lake



Bioswale installed with native plants to reduce direct non-point source pollution at Wilcox Lake

## About the Alliance of Rouge Communities

The ARC is a 501(c)(3) non-profit organization consisting of local municipalities, counties, educational institutions and stewardship groups working together to improve the Rouge River. Founded in 2005, the ARC is funded by membership dues from local governments and supported by grants. The ARC and its partners work cooperatively to meet water quality requirements mandated by the state's stormwater permit and to restore beneficial uses, such as canoeing, fishing and other recreational activities, to the Rouge River. That means better water quality for less cost to its members!

**For more information about this project and other ARC activities visit our website at: [www.allianceofrougecommunities.com](http://www.allianceofrougecommunities.com)**

*This project is funded through a grant from the Great Lakes Restoration Initiative Environmental Protection Agency (grant number GL-00E02997 & GL-00E03267)*

