



Johnson Creek Fish Hatchery Park Habitat Restoration

In partnership with:



\$1,173,176 in grant funds provided by the Great Lakes Restoration Initiative (GLRI) through the U. S. Environmental Protection Agency (USEPA) for design and implementation

The Johnson Creek - Fish Hatchery Park Habitat Restoration Project will:

- Restore stream and pond to provide habitat for valuable fish and wildlife.
- Improve fish passage between pond and stream.
- Improve water quality within the Rouge River watershed.

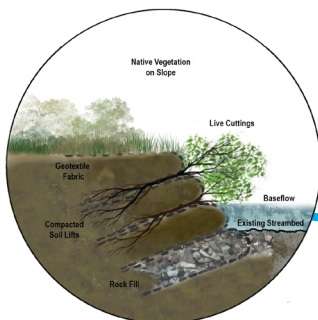
The Alliance of Rouge Communities (ARC) received grant funding from the Great Lakes Restoration Initiative (GLRI) U. S. Environmental Protection Agency (USEPA) for the Johnson Creek – Fish Hatchery Park Habitat Restoration design and implementation project as part of its effort to restore the only remaining cold-water fishery in the Rouge River.

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. The Rouge River Advisory Council (RRAC), the Public Advisory Council (PAC) for the Rouge AOC, in March 2016 approved a list of projects that need to be completed to remove the Rouge AOC habitat BUIs. The Johnson Creek Fish Hatchery Park Habitat Restoration Project is considered to have a significant impact on the removal of the BUIs.

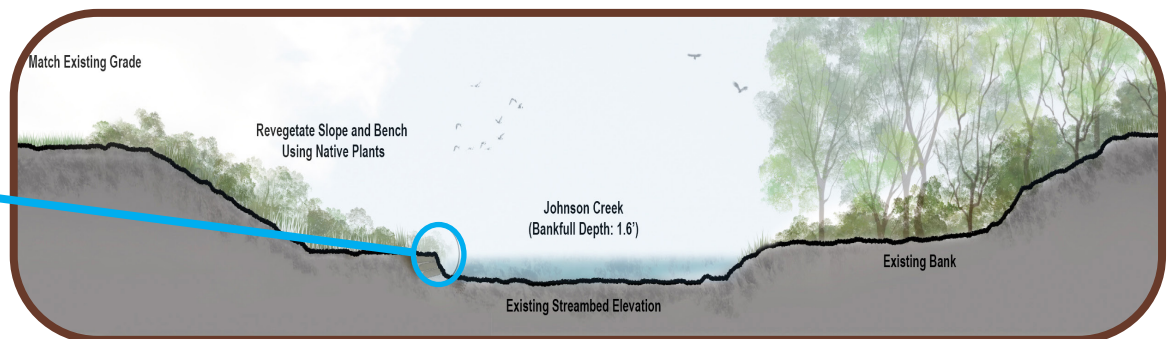
The only public access point to Johnson Creek is Fish Hatchery Park, which was the first registered fish hatchery in the nation. Fish and wildlife habitat associated with Johnson Creek have been lost and impacted by sedimentation, loss or conversion of riparian vegetation, and streambank armoring, reducing its viability as a cold-water fishery (the only one remaining in the Rouge River). A spring-fed pond, which flows into Johnson Creek, has been degraded by sediment-laden stormwater runoff from the unimproved parking lot at Fish Hatchery Park. The resulting sediment has been deposited into the pond to a point where it is less than 18 inches deep. This sediment escapes from the pond through the outlet structure and is impairing the stream bottom habitat in Johnson Creek. In addition to this, streambanks in the park have been impacted by the removal of native vegetation and historic placement of a concrete wall.

To address this concern and to restore the habitat at Johnson Creek, the project naturalized the streambanks, removed accumulated sediment in the pond, modified the pond outlet to create a fish passage channel between the pond and the creek, and installed a vegetated bioswale to improve water quality of runoff. In addition to these improvements, the project included the planting of over 250 native trees and over 300 native shrubs.

Conceptual designs



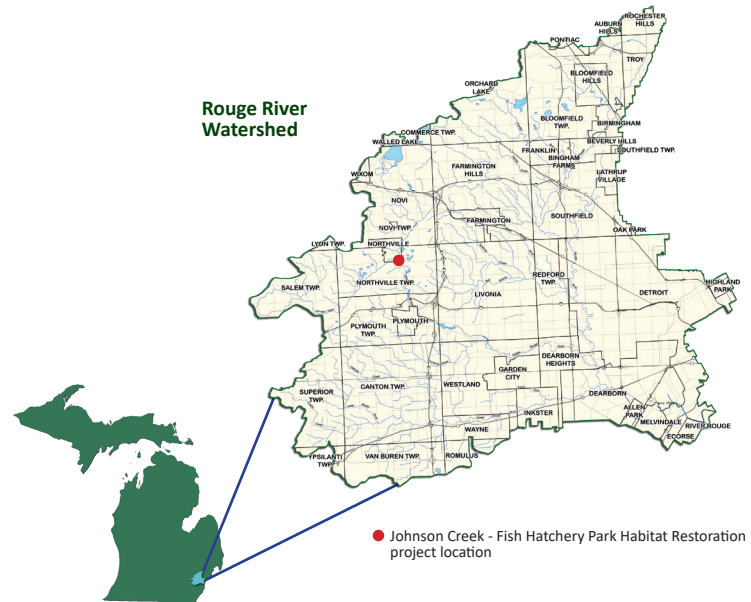
Vegetated mechanically stabilized earth detail



The Johnson Creek – Fish Hatchery Park Habitat Restoration Project will:

- Naturalize and stabilize 1,250 ft. of Johnson Creek's streambank for improved wildlife habitat
- Remove 2,000 cubic yards of sediment in Fish Hatchery Pond to create deeper water for fish habitat
- Modify the outlet of the pond to create a fish passage channel between the pond and the creek
- Install vegetative swale to filter stormwater from the parking lot before entering the pond

Rouge River Watershed



Conditions before restoration:



Concrete wall channelizing creek



Existing outlet



Existing pond conditions

Conditions after restoration:



Concrete wall removed and streambank naturalized



Modified outlet allowing fish passage



Restored pond

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

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