

## ROUGE RIVER AOC HABITAT RESTORATION IMPLEMENTATION- WAYNE COUNTY PARKLAND

**Project Funding Request:** \$4,222,090  
**Organization:** Alliance of Rouge Communities (ARC)  
**Wayne County Sites:** Riverview, Lola Valley, Sherwood, Bell Creek, Lower Rouge River  
**Project Location:** Cities of Livonia, Westland, Redford Township, Wayne County,  
**Project Duration:** August 1, 2020 – December 31, 2023

### PROJECT ABSTRACT

The Rouge River watershed is a designated 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, Loss of Fish and Wildlife Habitat. The Rouge River Advisory Council (RRAC), the Public Advisory Council (PAC) for the Rouge AOC, finalized a list of projects, approved by Michigan Department of Environment, Great Lakes and Energy (EGLE) and US EPA, that need to be completed in order to remove the habitat BUIs. As part of that list, five activities/projects were considered as having significant impact on the removal of the BUIs that include the restoration/creation of wetlands in the Wayne County, MI park system at Riverview Park, Sherwood Park, Bell Creek Park, Lola Valley Park and habitat restoration on the Lower Rouge River. The implementation of these activities will result in 122 acres of habitat restoration.

### PROBLEM STATEMENT

During the last century, tributaries of the Rouge River have suffered from declining water quality, loss and impairment of aquatic habitat, and increased frequency and magnitude of peak flood flows, primarily due to increasing urbanization within the watershed. The flat river slope and the meandering channel could not pass the large flows associated with major precipitation events. Upstream urbanization continued to exacerbate this problem as runoff from increased amounts of impervious surfaces culminating in floods within downstream local communities. Water quality, though, has improved since 1992 thanks to the federally funded Rouge Project. Eighty nine of the 127 miles of the larger streams and tributaries in the watershed are now free from public health threats associated with uncontrolled combined sewer overflow discharges. Additional water quality improvement is exhibited by increased dissolved oxygen levels needed to sustain fish and aquatic life. Increased populations and diversity of benthos, fish and wildlife have been measured along the river since 1999. Also, the U.S. EPA Office of Inspector General declared the Rouge Project "a blueprint for success" (EPA OIG report number 2002-P-00012).

Many of the previously completed reports [Ex: Habitat Delisting Targets (2008), Rouge River Delisting Strategy (2012), Upper Rouge Delisting Strategy (2012), and Rouge River BUI Report Card (2013)] listed project types, in addition to specific projects, that needed to be completed in the watershed to remove the Habitat BUIs and delist the AOC have been implemented. The USEPA, EGLE, MDNR, RRAC, ARC, FOTR and local members began facilitating the development of the formal list for removal of the Habitat BUIs in 2015. This work resulted in the development of a final Rouge AOC Habitat list that was approved by EGLE in March 2018. On that list were five projects that were to be priority projects:

- Lower Rouge River Habitat Restoration – eliminate 10 debris jams causing fish blockages and habitat degradation, create 10 fish habitat structures, and improving 80 acres of riparian forest habitat
- Sherwood Park Habitat Restoration – create or restore 7 acres of habitat area
- Bell Creek Park Habitat Restoration - create or restore 9 acres of habitat area
- Lola Valley Park Habitat Restoration - create or restore 13 acres of habitat area
- Riverview Park Habitat Restoration - create or restore 13 acres of habitat area

Relevance to Existing Restoration Plans and Priorities - The proposed project, which includes the five above listed sites, responds directly to multiple plans and priorities within the Rouge River AOC:

- The Rouge RAP Advisory Council's *2016 Rouge River Remedial Action Plan Habitat Projects List* identifies these

activities as a top priority for delisting the Rouge River AOC.

- The Rouge River Watershed Management Plan prepared by the ARC supports river and lake restoration as key elements in the watershed restoration.
- Activities respond to the *Great Lakes Regional Collaboration Strategy* focus on “Riverine Habitats and Related Riparian Areas” and its long-term goals including conservation of rivers and sustaining native/ migratory fish and aquatic biota/ wildlife.
- Great Lakes Restoration Initiative Action Plan III, protecting and restoring communities of native aquatic and terrestrial species important to the Great Lakes.
- Alliance of Rouge Communities purpose to provide an institutional mechanism to encourage watershed-wide cooperation and mutual support to restore beneficial uses of the Rouge River to the area residents

#### **Anticipated Overall Restoration Outputs and Measures**

- Total of 122 acres of habitat restored/created (includes 13.5 acres of invasive species control):
  - 14.5 acres of conversion from lawn to wet meadow
  - 6 acres of conversion from lawn to prairie
  - 2 acres of wetland reconnected to riparian wetland
  - 2 acres of wet meadow restored
  - 9.5 acres of riparian restored
  - 88 acres of forested riparian restored
- Eliminate 10 debris jams causing potential fish blockages and habitat degradation

*Great Lakes Restoration Initiative Action Plan III*, Measures of Progress (MoPs) for the overall project when implementation is completed are:

- **Focus Area 2: Invasive Species - Objective 2.2. Control established invasive species.**
  - 2.2.1. Aquatic/terrestrial acreage controlled: 13.5 acres of invasive species management
- **Focus Area 4: Habitats and Species - Objective 4.1. Protect and restore communities of native aquatic and terrestrial species important to the Great Lakes**
  - 4.1.1. Acres of coastal wetland, nearshore, and other habitats restored, protected, or enhanced: 122 acres of habitats.

### **SUMMARY OF INDIVIDUAL PARK HABITAT RESTORATION**

#### **Riverview Park Habitat Restoration**

Much of Riverview is wooded, but a gravel public road and asphalt bike/walking path runs alongside the river throughout the area, causing habitat fragmentation. At this site, wetland restoration and lawn conversion to habitat is proposed. To accomplish this, the road will be shortened, and the path will be moved to reduce habitat fragmentation. Native herbaceous plants will be established via seed and plugs. The turf grass will be killed with herbicide and tilled. Then the areas will be planted with native seed and shrubs from containerized stock. Within the remaining forested area, invasive will be removed by cutting and herbicide application.

*Great Lakes Restoration Initiative Action Plan III*, Measures of Progress (MoPs) for the Riverview project when implementation is completed are:

- **Focus Area 2: Invasive Species - Objective 2.2. Control established invasive species.**
  - 2.2.1. Aquatic/terrestrial acreage controlled: 7.5 acres of invasive species management
- **Focus Area 4: Habitats and Species - Objective 4.1. Protect and restore communities of native aquatic and terrestrial species important to the Great Lakes**

- 4.1.1. Acres of coastal wetland, nearshore, and other habitats restored, protected, or enhanced: 13 acres of habitats.

### **Lower Rouge River Habitat Restoration**

The Lower Rouge River Habitat Restoration project will improve fish and wildlife habitat along a seven mile stretch of the Lower Rouge River. This project will create habitat for benthic organism colonization and fish habitat in the project area by installing ten (10) structures using wood recovered from problematic instream debris jams. Problematic debris jams block fish movement, erode streambanks, and degrade habitat quality. The engineered log jams will not only provide important fish habitat but will also provide loafing habitat for turtles and waterfowl while reducing soil erosion and sediment loading by protecting vulnerable streambanks. Also, replanting native trees in open canopy areas of the forested corridor will significantly improve wildlife habitat within 80 acres of riparian forest along the Lower Rouge River.

*Great Lakes Restoration Initiative Action Plan III*, Measures of Progress (MoPs) for the Lower Rouge project when implementation is completed are:

- **Focus Area 4: Habitats and Species - Objective 4.1. Protect and restore communities of native aquatic and terrestrial species important to the Great Lakes**
  - 4.1.1. Acres of coastal wetland, nearshore, and other habitats restored, protected, or enhanced: 80 acres of habitats

### **Sherwood Park Habitat Restoration**

Most of Sherwood Park area is routinely mowed, however, the park is low lying and routinely floods. The project plan proposes to convert the maintained lawn areas to wet meadow habitat and depression wetlands. Wetlands located north of Hines Drive will be hydrologically reconnected to the habitat located south of Hines Drive which is next to the River. The reconnection will use a culvert with a natural bottom to serve as a travel corridor under Hines Drive for small mammals, reptiles, and amphibians. Maintained lawn areas will be converted to wet meadow by planting with native plant species. The wet meadow community will contain diverse native forbs that provide food and habitat for pollinators.

*Great Lakes Restoration Initiative Action Plan III*, Measures of Progress (MoPs) for the Sherwood project when implementation is completed are:

- **Focus Area 4: Habitats and Species - Objective 4.1. Protect and restore communities of native aquatic and terrestrial species important to the Great Lakes**
  - 4.1.1. Acres of coastal wetland, nearshore, and other habitats restored, protected, or enhanced: 7.0 acres of habitats.

### **Bell Creek Park Habitat Restoration**

Bell Creek Park is routinely mowed and used for active recreation. However, the park is low lying and routinely floods. The project plan proposes to create wet meadow habitat and enhance existing forested riparian habitat by controlling invasive species and planting native seed, shrub, and tree species to increase plant diversity.

*Great Lakes Restoration Initiative Action Plan III*, Measures of Progress (MoPs) for the Bell project when implementation is completed are:

- **Focus Area 2: Invasive Species - Objective 2.2. Control established invasive species.**
  - 2.2.1. Aquatic/terrestrial acreage controlled: 6.0 acres of invasive species management
- **Focus Area 4: Habitats and Species - Objective 4.1. Protect and restore communities of native aquatic and terrestrial species important to the Great Lakes**
  - 4.1.1. Acres of coastal wetland, nearshore, and other habitats restored, protected, or enhanced: 9.0 acres of habitats.

## **Lola Valley Park Habitat Restoration**

Lola Valley Park is located along the floodplain and corridor of the Upper Rouge River. The project plan proposes to create wet meadows and prairies in maintained lawn areas. Emergent wetland plants will also be installed in the bottom of depressions excavated along both sides of the River.

*Great Lakes Restoration Initiative Action Plan III*, Measures of Progress (MoPs) for the Lola project when implementation is completed are:

- **Focus Area 4: Habitats and Species - Objective 4.1. Protect and restore communities of native aquatic and terrestrial species important to the Great Lakes**
  - 4.1.1. Acres of coastal wetland, nearshore, and other habitats restored, protected, or enhanced acres of habitats: 13.0 acres of habitats