





PROJECT BACKGROUND



The Alliance of Rouge Communities (ARC), a 501(c)(3) organization, is a voluntary public watershed entity currently comprised of 34 municipal Alliance governments (i.e. cities, townships and villages), three counties of Rouge (Wayne, Oakland and Washtenaw), Henry Ford Community College, University of Michigan-Dearborn, Wayne County Airport Authority and **OURS TO PROTECT** six cooperating partners (i.e. other organizations) as authorized by Part 312 (Watershed Alliances) of the Michigan Natural Resources and ng together, restoring the river Environmental Protection Act (MCL 324.101 to 324.90106) as amended by Act No. 517, Public Acts of 2004.

The purpose of the ARC is to provide an institutional mechanism to encourage watershedwide cooperation and mutual support to meet water quality permit requirements and to restore beneficial uses of the Rouge River to the area residents.

In 2010, the ARC received a grant from the Great Lakes Restoration Initiative (GLRI) to conduct Transforming the Rouge AOC from Mowed Down to Grown Up (Transforming the Rouge) which would unite the green corridors of the Rouge River, by improving, installing and enhancing riparian buffers, wetlands and upland habitat in the Rouge River Watershed. The project addressed the benthos Beneficial Use Impairment (BUI) with the ultimate goal of delisting the Fish and Wildlife Habitat and Population BUIs.

The Rouge River Watershed, located in southeast Michigan, is the most urban watershed in the state and a tributary to the Detroit River and eventually Lake Erie. The Rouge River has historically been identified as a significant source of pollution to the Great Lakes system along the border between the United States and Canada. Recent efforts have been focused on restoring or installing green infrastructure in the watershed to create habitat and promote a more natural environment.

Project activities included:

 Valley Woods Wetland Restoration (Southfield, Oakland County - MI): Restore seven acres of wetlands and the capacity of wetlands to store and retain storm water in the Rouge Main Branch.



 Lower Rouge and Upper Rouge Parkway (Wayne County - MI): Convert approximately 15 acres of managed turf grass to native vegetation grow zones in Wayne County parkland in the Rouge Upper and Lower Subwatersheds. Convert another ten acres along the Middle Rouge through controlled burns.



Restored Valley Woods wetland

- Eliza Howell Park (City of Detroit, Wayne County MI): Restore approximately five acres of mowed turf grass to native vegetation grow zones in the Rouge Main Branch.
- River Rouge Park (City of Detroit, Wayne County MI): Restore approximately five acres of mowed turf grass/ barren land to native vegetation grow zones in the Rouge Main Branch.

TRANSFORMING THE ROUGE AOC FROM MOWED DOWN TO GROWN UP

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WETLAND RESTORATION

VALLEY WOODS WETLAND

The Valley Woods wetland is located within the City of Southfield and is bounded by commercial and residential development and the Rouge River. Valley Woods is recognized for its state-significant plant community and has a floodplain plant community that is slightly better than average undeveloped land within the state. Many pre-settlement species and plant communities are present. This project restored 7 acres of wetland habitat.

BEFORE RESTORATION

Prior to implementation Valley Woods consisted of large areas of phragmites and a monoculture of reed canary grass. Additionally, three existing ditches had formed as a result of erosive storm water forces, which were affecting the wetland's hydrology, as well as discharging sediment into the Rouge River.





Reed canary grass

PROJECT ACTIVITIES

The main goal of the project was to restore the Valley Woods Wetlands by removing invasive species, reintroducing plant diversity and restoring wetland hydrology. This was achieved through the following activities:

- The phragmites were chemically treated and partially excavated (to create open water
- habitat as well). Two herbicide applications were completed (fall 2011 and spring 2012), minor re-growth of phragmites were subsequently hand treated. The pockets of open water were created to increase habitat diversity.
- The open wetland area was burned and re-vegetated. A controlled burn was conducted to provide optimum conditions for the establishment and restoration of native wetland vegetation. The controlled burn was planned in accordance with methods outlined in a guidance document developed by the State of Michigan. Cooperation from the community and local businesses allowed for this, the



Chemical treatment

- first controlled burn, to be conducted within Southfield. The re-vegetation was chosen to include a diverse assortment of native species and wetland seeding and plugs were proposed throughout the wetland.
- Two ditches in the south west area of the site were filled and their outlets were stabilized with riprap resulting in a restored hydrology within the wetland.
- Two segments of a storm water outfall ditch in the northeast area of the site were filled with two rock "check dams" to slow erosive velocities.





Prescribed burn

Ditch fill being smoothed

Plugs being planted

GROW ZONE RESTORATION AND INSTALLATION

ELIZA HOWELL PARK AND ROUGE PARK

Eliza Howell Park and Rouge Park in the City of Detroit protect a floodplain and riparian corridor that is undisturbed except for streambanks that have been altered by excessive flows. Rouge Park is the City of Detroit's largest park at 1,181 acres and includes 6.13 linear miles of the Rouge River's Main Branch. It has as an abundance of recreational opportunities, is home to varied wildlife and has over 15 acres of restored native prairie and native areas. Eliza Howell Park is a 200-acre park with 3.77 linear miles of the Rouge River and contains the river's main stem and the confluence of the Rouge River's Upper Branch and Main Rouge River. Both parks are the focus of neighborhood efforts to maintain and restore the parks.

PROJECT ACTIVITIES

As part of this project, approximately five acres of prairie was restored in Rouge Park and five acres of turf grass and native plants in Eliza Howell Park was restored to native vegetation grow zones through controlled burns and seed installation. Given the close proximity to homes and businesses, public outreach and education was provided to Detroit neighborhood organizations through public meetings, workshops and fact sheets.



School students distributing seed after controlled

LOLA VALLEY, VENOY PARK & INKSTER CSO

Wayne County is the single largest riparian corridor landowner in the Rouge River AOC watershed (approximately 4,200 acres of riparian corridor) and has spent hundreds of millions of dollars over the last 20 years to help restore the river. The parkland along the Rouge River protects the riparian corridor. This project converted 15 acres of upland and riparian property into green infrastructure along the Upper and Lower branches in Wayne County Parks.

PROJECT ACTIVITIES

Lola Valley Park has approximately 1.5 miles of the Upper Rouge River flowing through 58 acres of riparian parkland owned by Wayne County. Lola Valley Park is completely within Redford Township and winds through a residential neighborhood, ending approximately one-half mile upstream of the City of Detroit's Eliza Howell Park. The Lola Valley Park project converted 8.8 acres of riparian turf grass to native plant grow zone.

The Lower Rouge Parkway is nearly 1,200 acres of riparian public lands. Approximately, 15 miles of the Lower Rouge River flows through the Lower Rouge Parkway. 6.6 acres of turf grass was converted to native plant grow zone at Venoy Park (4.0 acres) and adjacent to the Inkster CSO basin (2.6 acres). These grow zones were planted in the fall of 2011 and established in the summer of 2012. All of the Venoy Park and Inkster CSO Basin grow zone areas were seeded with a prairie seed mix.



Areas seeded at Lola Valley Park



la Valley Park after grow zone installation





BENEFITS AND RESULTS IN THE ROUGE RIVER AOC

- Increased focus on the benefits of native areas and habitat. A Detroit Public Schools program by a local stewardship group expanded from two classrooms to 10 classrooms in Detroit's Rouge Park since the prairie was restored in 2012. Students visit the restored prairie throughout the school year to document seasonal changes. At the annual Rouge Rescue watershed stewardship event on June 1, 2013, 70 schoolchildren participated in activities such as invasive species management and tree planting
- Increased wildlife. Wild turkeys and coyotes were observed in Rouge Park in 2012 and a Blue Heron rookery is thriving in Rouge Park. At the Valley Woods Wetland in Southfield, increased wildlife usage of the project site was evident. Whitetail deer, great blue herons and coyotes have been observed. Small mammal tracks have been observed. Frogs and toads have also been observed. Wildlife usage will increase as the vegetation grows and matures.
- Increased butterflies and birds. There is an increase in butterflies in Detroit's Eliza Howell and Rouge parks since the prairie was restored and native areas planted. There are more butterfly and bird watching events at Eliza Howell Park. In February, 2013, Leonard Webber, the president of the Detroit Audubon Society wrote: "I thought you might be interested in hearing that the grasses and wildflowers that grew this year in Eliza Howell in the area of the burn have been very popular with birds all fall and continue to be this winter. Most days when I go there, there are a couple dozen individuals (usually at least three different species) foraging for seeds. There have probably been more birds in that area of the park in the period from October to February this year than in any of the previous years I have been going there."
- **Praying mantis observed.** An abundance of praying mantis was observed in Rouge Park and a local school group captured and released some praying mantis from Rouge Park into Eliza Howell Park.

• Stoneflies observed. Sensitive stoneflies were observed hatching in the channelized portion of

the lower portion of the Rouge Main Branch, downstream of three o the Transforming the Rouge projects (Valley Woods Nature Preserve, Eliza Howell Park and Rouge Park).



Inkster CSO Basin grow zone



Students visit Rouge Park grow zone to



Deer at restored Valley Woods Wetland



Black Swallowtail on butterfly milkweed in Rouge Park grow zone



Eliza Howell Park grow zone



Venoy Park grow zone