# 4.0 PUBLIC EDUCATION

Based on the variety of designs within this project, and the limited public education resources, decisions were made early on about the focus on individual projects. For instance, public education activities about the herbiciding and seeding of passive recreation areas at the Venoy and Inkster sites in Wayne County Parks took less precedence over those projects that had a more obvious impact on nearby residents and the public in general.

The Detroit Parks projects which relied on controlled burns in two parks adjacent to residential areas – a practice that had never been conducted in Detroit - became a public education priority. Staff attended numerous community meetings and workshops to explain the controlled burn concept and much more focused time and effort was needed to ensure the residents were comfortable with the project.

The Valley Woods Nature Preserve in Southfield also took priority, because it involved a controlled burn alongside a busy thoroughfare and adjacent to a senior citizen apartment complex and an office building. Again, this was the first time a controlled burn was conducted in the City of Southfield.

Finally, the Lola Valley site in Wayne County Parks also deserved attention, because it ran through a residential neighborhood in Redford Township. The project involved converting 10 acres of turf grass into natural areas with native seeding. This section will explain the variety of public education tools used to educate the public about *Transforming the Rouge AOC from Mowed Down to Grown Up (Transforming the Rouge).*

## 4.1 GENERAL PUBLIC EDUCATION

The Alliance of Rouge Communities (ARC) began public education activities for this grant as soon as notice of the award was announced. A fact sheet was created to explain the project to ARC members and other interested parties and is included as Attachment D at the end of this section. This fact sheet was posted on the ARC's website (www.allianceofrougecommunities).

Additionally, a fact sheet describing various federal grant activities, conducted by the ARC, including this GLRI project, was created as part of a public education fact sheet about the ARC and is included as Attachment E at the end of this section. This fact sheet was distributed in a variety of ways and at a variety of ARC public education events, which included ARC rain barrel sales (2011-13), seedling distribution events (2011-13) and public education workshops conducted by the ARC, such as homeowner native gardening workshops, green infrastructure workshops and various community meetings. To date, approximately 6,000 fact sheets have been distributed to the general public from 2011-13.

The ARC also conducted a tour of the Rouge Park project site for approximately a dozen attendees to the Healing Our Waters conference held in Detroit on October 11-14 and a display board was created for the conference describing the projects being conducted under the *Transforming the Rouge* grant. A smaller version of the display board is included as Attachment F at the end of this section.

## 4.2 DETROIT PARKS

ARC staff met with Friends of Rouge Park and Friends of Eliza Howell Park in Detroit in November, 2010 and June, 2011 to discuss the proposed grow zone projects in both parks. The presentation included preliminary designs for both parks and distribution of a fact sheet on the *Transforming the Rouge* project. In general, attendees were pleased with the proposed project. This project was stalled for most of the 2011, due to the retirement of two Detroit Parks project managers and difficulty getting a signed agreement with the City of Detroit to allow the ARC to conduct the projects. However, an agreement was signed with the City of Detroit in September, 2011 and the projects proceeded forward.

Staff met with the Friends of Rouge Park in November, 2011 to update the group on upcoming activities in Rouge Park and in December, 2011 met with *Neighbors Building Brightmoor*, a group of residents who live adjacent to Eliza Howell Park. A fact sheet was created for residents in the neighborhoods adjacent to both parks and was posted on the Friends of Rouge Park website and included in the *Neighbors Building Brightmoor* newsletter which is distributed to 600 residents and is included as Attachment G at the end of this section. ARC staff met with Friends of Eliza Howell Park on January 17, 2012 and Friends of Rouge Park on January 23, 2012 to provide project updates, including that the burns were scheduled for April, 2012. A power point presentation was developed for a joint neighborhood meeting for both parks slated for February 15, 2012, so residents could hear the latest details of the controlled burn activities. The power point presentation is included as Attachment H at the end of this section.

**Observers at Rouge Park burn on April 11, 2012**

Because controlled burns are reliant on weather conditions, the ability to give advance notice to interested residents was tricky, and in fact two scheduled burn days were cancelled because of windy weather. However, through the use of signage, emails and phone calls, those residents that were interested in observing the burns were contacted. Additionally, Friends of Rouge Park posted the information on a permanent sign at the entrance of Rouge Park. On April 11, 2012, the day of the burns, lawn signs publicizing the burns were installed around the Rouge Park and on surrounding residential streets. About 20 residents, including a school environmental club, and other interested persons observed the burn at Rouge Park and a half dozen residents observed the burn at Eliza Howell Park. Additionally, the media attended the event, as well as the Valley Woods controlled burn. The newspaper articles covering the controlled burns are included as Attachment I at the end of this section.

## 4.3 VALLEY WOODS

The City of Southfield conducted its own public education campaign, supported by ARC staff. A presentation was made to City Council and is provided at the end of this section as Attachment J. In addition, the City of Southfield generated press releases (see Attachment K at the end of this section), publicized the project on Southfield City Cable 15, met with area businesses, prepared road signage and sent flyers and letters to adjacent condo associations and senior housing.

There were no complaints from the public or businesses and on April 6, 2012, a successful burn was implemented at Valley Woods Nature Preserve, allowing for wetland restoration with minimal disturbance of sensitive soils. The Southfield Fire Marshall and City Administration was happy with effort and the event generated positive media interest on prescribed burns as shown in Attachment L included at the end of this section.

The City of Southfield also presented the Valley Woods Wetlands Restoration project at the Michigan Water Environment Association Watershed Seminar in December of 2012. The presentation is provided at the end of this section as Attachment M.

## 4.4 LOLA VALLEY

Lola Valley Park in Redford Township cuts a narrow green swath through a residential neighborhood along the Upper Branch of the Rouge River and is located in the floodplain and seasonally floods. Before this project, Lola Valley Park was primarily landscaped with turf grass and was used by nearby residents for a variety of activities, including walking, sledding in the winter and disc golf in the summer. A fact sheet was developed for residents in September, 2011 to explain that 8.8 acres of the 60- acre park would be converted to native grasses and flowers in the fall, 2011 or the spring, 2012 as part of this project. The fact sheet is included as Attachment N at the end of this section. Redford Township displayed the fact sheet on its website and mailed the flyers to 189 households surrounding Lola Valley Park. Unfortunately, the site was too wet in the fall, 2011, and most of the spring, 2012, so the site was not seeded until June, 2012. Unfortunately, the summer of 2012 was extremely dry and the grow zone failed to establish. The site was re-seeded in November 2012. Another fact sheet was developed for residents in the Lola Valley Park neighborhood in September, 2012 explaining the status of the project and is included as Attachment O at the end of this section.

**Lola Valley Park**

**Lola Valley Park with adjacent housing**

## 4.5 SIGNAGE

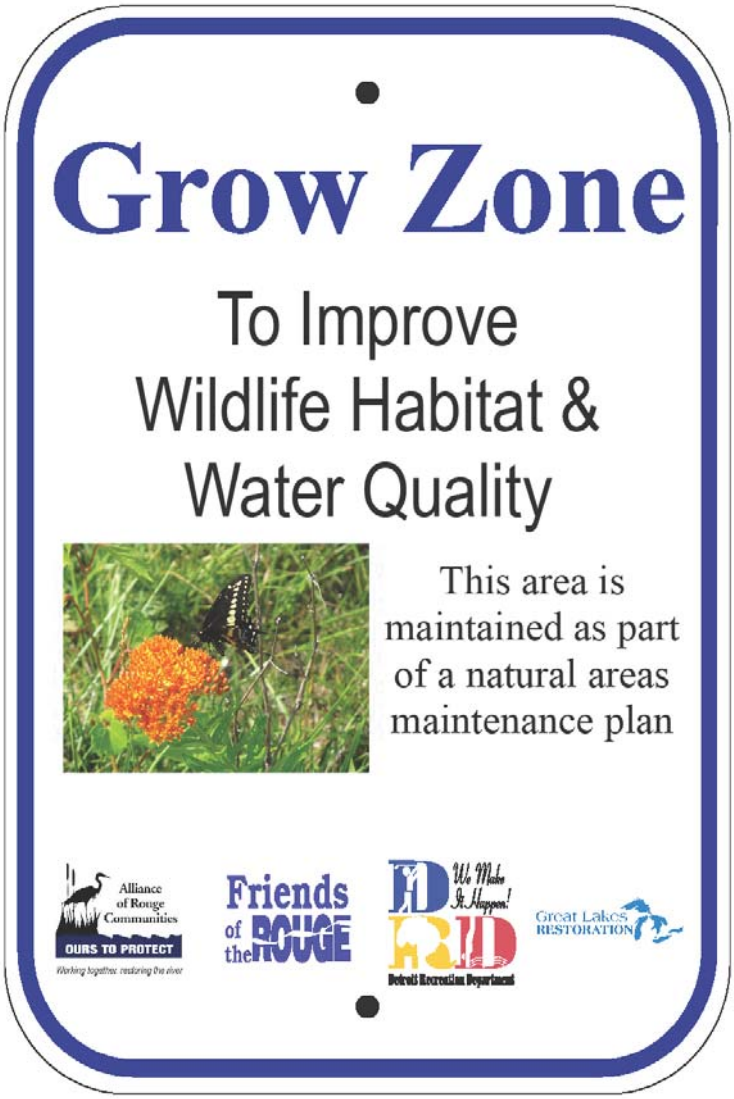
A variety of signage was developed for this project: Temporary signage during construction and permanent signage for the Grow Zones project.

The sign below was installed at the Valley Woods site during construction.

Signs were used in and around the Eliza Howell Park and Rouge Park neighborhoods in Detroit on the day of the controlled burns in April, 2012.

Permanent signage was created for the grow zones at Detroit Parks and Wayne County Parks. Ten signs were installed at Eliza Howell and Rouge Parks in Detroit and 50 signs were installed in Wayne County Parks at the Venoy, Inkster and Lola Valley locations.

Below is an example of the permanent sign for Detroit's Rouge Park.



Sign installation at Detroit Eliza Howell Park on May 30, 2013.

Friends of Eliza Howell Park member with newly installed sign.

Volunteers install permanent signage in Rouge Park on Rouge Rescue, July 1, 2013

Friends of the Rouge volunteer with newly installed sign.

Sign Installation at Wayne County Parks Venoy location on June 4-5, 2013

Installed sign at Wayne County Parks Inkster CSO Basin location

ATTACHMENT D

# TRANSFORMING THE ROUGE AREA OF CONCERN (AOC) FROM MOWED DOWN TO GROWN UP
## October 2010 – December 2012

| | |
|---|---|
| **EPA GLNPO Grant:** | **$648,750** |
| **Required Match:** | **$181,250** |
| *City of Southfield* | *$30,000* |
| *Wayne County* | *$56,250* |
| *FOTR (Erb Foundation)* | *$80,000* |
| *ARC (Public Education)* | *$15,000* |
| **Total Project Cost:** | **$830,000** |

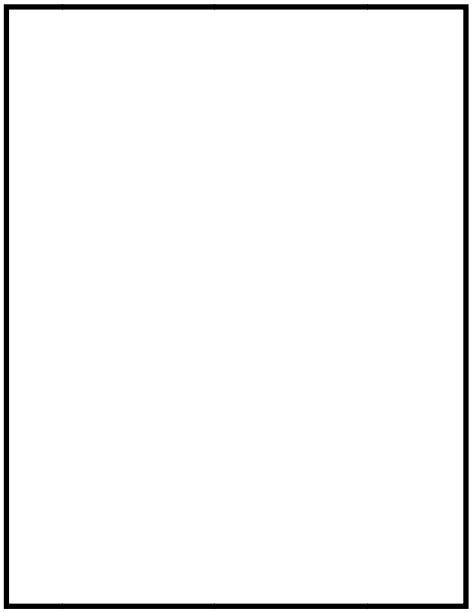
**The green infrastructure projects to be funded by this grant will:**

- Unite the major green corridors along the Rouge River,
- Create a framework to develop consistent priorities for restoration implementation, and
- Improve the Rouge River fisheries by creating green areas that will stabilize flow to encourage a healthy macroinvertebrate population. This will be achieved by improving, installing and enhancing riparian buffers, wetlands and upland habitat in the Rouge River Watershed.

## River Rouge Park (City of Detroit, Wayne County)

In the 1920s, the City of Detroit paid $1.3 million dollars to purchase land from six farmers at the western edge of the city to be used for Rouge Park. Rouge Park is the City of Detroit's largest park at 1,184 acres, making it larger than New York City's Central Park. The Rouge River flows for more than two miles through this park and it encompasses 26,000 feet of the river's Main Branch.

This park contains an 18-hole golf course, 14 regulation baseball diamonds, including the Hank Aaron and Aurelio Rodriguez baseball fields, 12 playgrounds, 11 tennis courts and eight miles of bicycle trails, including one used by the Michigan Mountain Biking Association. Additionally, it is home to the large Alex Jefferson Model Airplane Field. The Brennan Pools feature two Olympic-sized pools side by side and a smaller pool. The park is home to varied wildlife and includes over 15 acres of native prairie created about 10 years ago.



This project will restore approximately five acres of the prairie and adjacent areas to native vegetation grow zones. The project will conduct a prescribed burn and reseeding and planting in spring, 2012. This project is being conducted in partnership with Friends of the Rouge (FOTR), Friends of Rouge Park and the City of Detroit.

## Eliza Howell Park (City of Detroit, Wayne County)

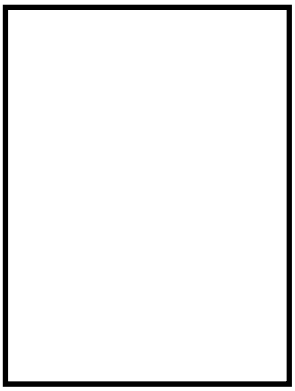
This project will restore approximately 5 acres of mowed turf grass to native vegetation grow zones. This 200 acre park contains the main stem of the Rouge River and connects the green corridor along this branch.

## Valley Woods Wetland Restoration

(Nature Preserve at 10-Mile Road, Southfield, Oakland County)

This project will restore 7 acres of wetlands and the capacity of wetlands to store and retain storm water from the park.

This 27-acre preserve is bound on the northeast, where the Rouge River enters the preserve by two major roads. The river channel meanders through a relatively intact floodplain forest containing mature sycamore, oak and red ash trees. A variety of other tree species including maple and elm, complete the overstory composition of this significantly large, functioning floodplain forest. The plant communities within this preserve are diverse relative to many of the other park/preserve sites; a large emergent marsh is present in the northern end and a shrub-carr wetland is present at the southern end of the preserve. This preserve provides a variety of natural functions, including floodwater retention and storage, wildlife habitat and green space.



## Lower Rouge and Upper Rouge Parkway

(Wayne County)

This project will convert approximately 15 acres of managed turf grass to native vegetation grow zones within Wayne County Parks in the Upper and Lower Subwatersheds.

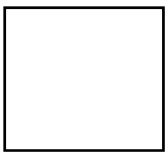
The Lower Rouge Parkway is nearly 1200 acres of riparian public lands beginning in the City of Dearborn at the downstream end of the Rouge River and extending to Canton Township at the upstream end. Approximately 15 miles of the Lower Rouge River flows through the Lower Rouge Parkway. Wayne County has identified approximately 20 acres of mowed turf area that could potentially be converted to native plant grow zones. With funding as proposed in this grant submittal a minimum of 5 acres would be converted to grow zone.

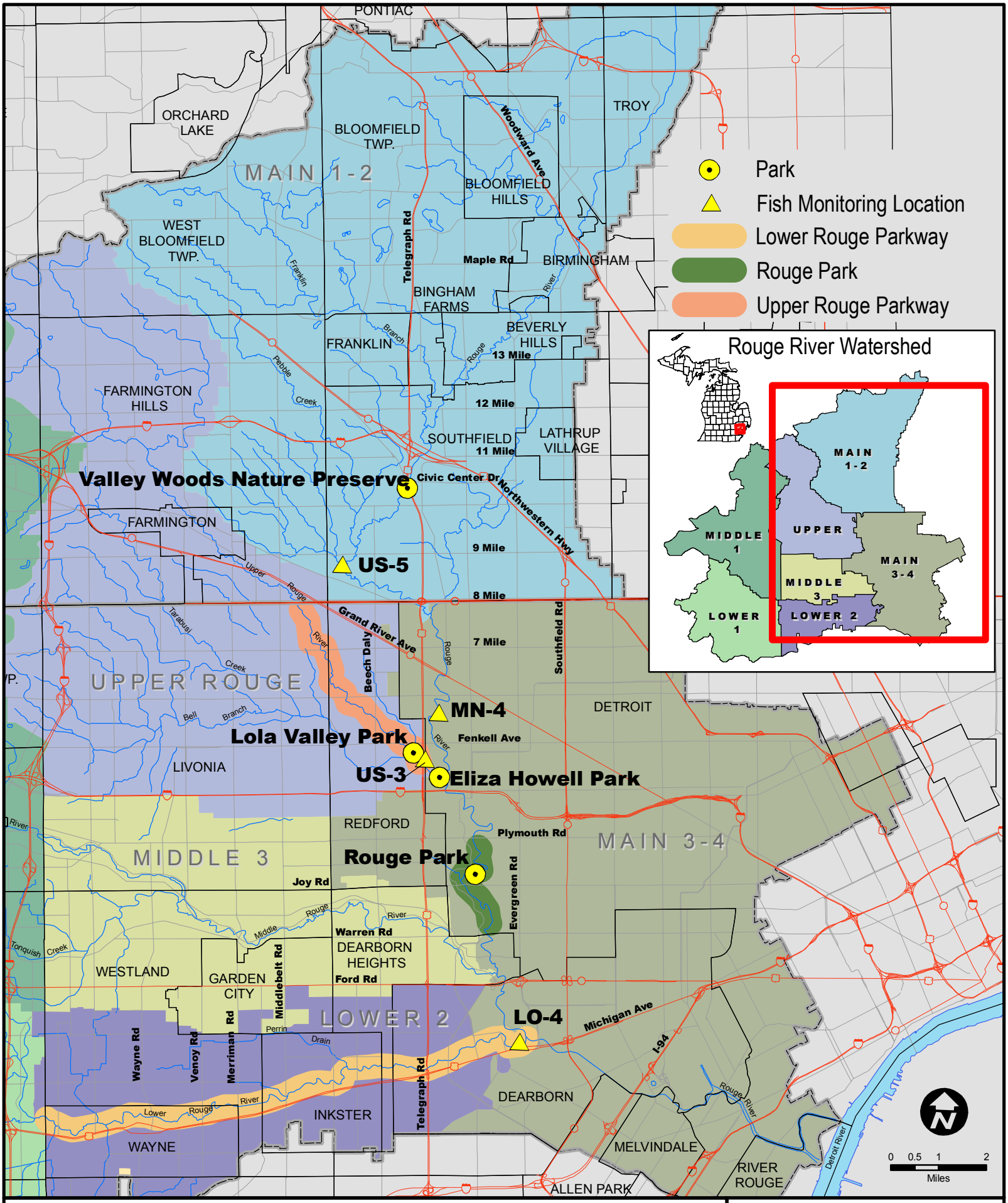
Lola Valley Park is within the Upper Rouge subwatershed and has approximately 1.5 miles of the Upper Rouge River flowing through the 58 acres of riparian parkland owned by Wayne County. Lola Valley Park is completely within Redford Township and winds through a residential neighborhood. The park is approximately one-half mile upstream from the City of Detroit's Eliza Howell Park. Wayne County has identified approximately 12 acres of mowed turf area immediately adjacent to the Upper Rouge River that could potentially be converted to native plant grow zone. With funding as proposed under this grant a minimum of 10 acres would be converted to grow zone.

## For More Information Contact:

**Alliance of Rouge Communities**
**James Ridgway, P.E., Executive Director**
**719 Griswold St., Suite 820, Detroit, Michigan 48226**

**Phone: 313-963-6600**
**Email: info@allianceofrougecommunities.com**
**Website: www.allianceofrougecommunities.com**






Rouge Watershed
Project & Fish Monitoring Locations

Alliance of Rouge Communities
OURS TO PROTECT
Working together restoring the River

ATTACHMENT E

# Alliance of Rouge Communities

The Alliance of Rouge Communities, or ARC, is a 501(c)(3) non-proýt organization consisting of 35 local municipalities, three 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 storm water permit and to restore beneýcial uses, such as canoeing, ýshing and other recreational activities, to the Rouge River. That means better water quality for less cost to its members!

## Membership has its Beneýts!

The ARC helps its members support a variety of activities that beneýt the Rouge River and meet the State of Michiganôs permit requirements. Some of the beneýts to members include:

- Access to grant funding
- Permit compliance support
- Simpliýed reporting
- Planning tools
- Native planting programs
- Public education
- Rain barrel sales
- Workshops and presentations

Questions? Contact us at info@allianceofrougecommunities.com.

*ARC Members:*
Auburn Hills
Beverly Hills
Bingham Farms
Birmingham
Bloomýeld Hills
Bloomýeld Twp.
Canton Twp.
Commerce Twp.
Dearborn
Dearborn Heights
Farmington
Farmington Hills
Franklin
Garden City
Henry Ford Community College
Lathrup Village
Livonia
Melvindale
Northville
Northville Twp.
Novi
Oak Park
Oakland County
Orchard Lake
Plymouth
Plymouth Twp.
Pontiac
Redford Twp.
Rochester Hills
Romulus
Southýeld
Troy
University of Michigan-Dearborn
Van Buren Twp.
Walled Lake
Washtenaw County
Wayne
Wayne County
Wayne County Airport Authority
Westland
Wixom

*Cooperating Partners:*
Cranbrook Institute of Science
Friends of the Rouge
Rouge River Advisory Council
Southeastern Oakland County Water Authority
Wayne State University

**For more information go to: www.allianceofrougecommunities.com**
**or email info@allianceofrougecommunities.com**

# What the ARC is Doing!

The ARC continues to leverage its resources by conducting these projects under the Great Lakes Restoration Initiative (GLRI) to restore the river.

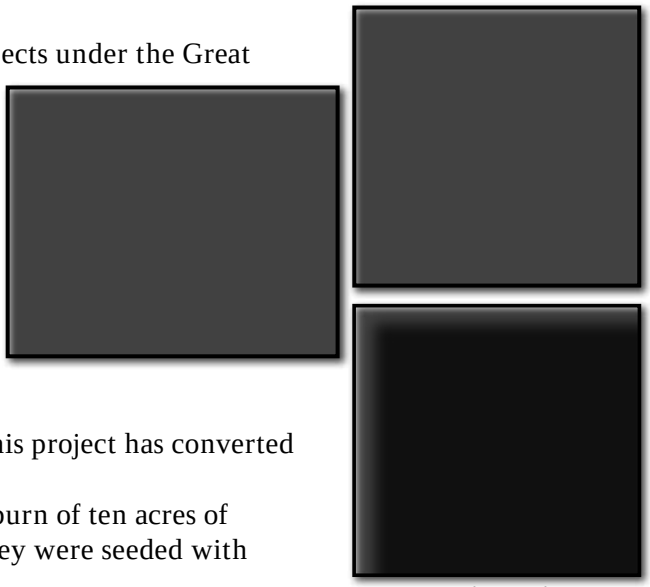


*Photo courtesy of Friends of the Rouge*

## EPA Great Lakes National Program Office – Transforming the Rouge Area of Concern (AOC) From Mowed Down to Grown Up, $830,000

The three green infrastructure projects to be funded by this grant are:

Southýeldûs Valley Woods Wetland: This project is restoring seven acres of wetlands which will store and retain storm water.

Wayne County's Lower Rouge Parkway and Lola Valley Park: This project has converted 15 acres of managed turf grass to native vegetation grow zones.

Detroitûs Eliza Howell Park and River Rouge Park: A controlled burn of ten acres of mowed turf grass and prairie was conducted in both parks and they were seeded with native plants.

## EPA Great Lakes National Program Office – Danvers Pond Dam Removal and Stream Restoration, $499,254

The Danvers Pond project, located in Farmington Hills, will:

Remove the existing dam to create a naturalized water course.

Stabilize erosion using bioengineering and naturalizing techniques.

Create and improve habitat and increase water quality in the tributary to the Rouge River.

*Before*

*After*

## National Oceanic and Atmospheric Administration (NOAA) Great Lakes Habitat Improvement Project – Wayne Road Dam Removal and Habitat Improvement, $1,033,536

The Wayne Road Dam project, located in the City of Wayne, will:

Remove the existing low head dam (Wayne Road Dam).

Reconnect approximately 22 miles of the Lower Rouge River to the Great Lakes system and the Detroit River.

Create related ecosystem restoration improvements.

*Before*

*After*

## U.S. Forest Service – Emerald Ash Borer (EAB) Forest Habitat Restoration, $374,980

The EAB Project will:

Restore the urban tree canopy that was destroyed by the Emerald Ash Borer infestation in the Rouge River Watershed.

Plant 2,400 trees in 12 communities and Wayne County. Participating ARC members are: Bingham Farms, Bloomýeld Hills, Bloomýeld Township, Canton Township, Lathrup Village, Livonia, Plymouth Township, Redford Township, Southýeld, Walled Lake, Wayne, Westland and Wayne County.

**The Alliance of Rouge Communities - Working Cooperatively to Improve the River!**

# Southern Michigan Projects Contribute to Great Lakes Restoration

## BACKGROUND

These projects illustrate a variety of activities being conducted by Environmental Consulting & Technology, Inc. (ECT) and local partners to improve the local waterways by restoring fish and wildlife habitat and local fisheries.

All of these projects are helping meet the goals of the Great Lakes Restoration Initiative Action Plan, and many constitute work toward restoring the following Beneficial Use Impairments (BUIs) to Michigan's Areas of Concern (AOCs):

- Loss of Fish and Wildlife Habitat
- Degradation of Fish and Wildlife Populations
- Degradation of Benthos

These projects are funded under the Great Lakes Restoration Initiative (GLRI) by U.S. Environmental Protection Agency's Great Lakes National Program Office (GLNPO) as well as National Oceanic & Atmospheric Administration (NOAA), and represent an exciting opportunity for the region, from the standpoint of ecological restoration and creating and retaining jobs.

In partnership with federal and state regulatory agencies, local and county governments, non-profit organizations, stewardship groups and other stakeholders, ECT is overseeing the following projects:

***Detroit River AOC***

- Belle Isle South Fishing Pier Habitat Enhancement
- U.S. Steel Site Habitat Restoration
- Blue Heron Lagoon Habitat Restoration

***Rouge River AOC***

- Danvers Pond Dam Removal and Stream Restoration
- Transforming the Rouge AOC from Mowed Down to Grown Up
- Wayne Road Dam Removal and Habitat Restoration

## PROJECTS FUNDED BY

## ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.

Over the last decade, ECT has been at the forefront of delisting activities in nearly half of the Great Lakes AOCs. ECT has worked in AOCs located in six of eight Great Lakes states on topics related to the development of delisting targets as well as pathways to delisting the AOCs. These projects have involved bringing together the major stakeholders, such as the technical community, government and the general public to reach consensus on addressing BUI issues within an AOC. We specialize in facilitating discussions focused on the application and interpretation of regulatory standards and guidance.

Along with its close working relationship with the basin's stakeholders, over the last five years, ECT has worked as a key member of the GLNPO's Mission Support Contract Consulting Team. As of 2011, ECT is also on the winning team for the GLNPO's Great Lakes Legacy Act - Construction Services Contract. These contract vehicles allow ECT's clients additional flexibility in accomplishing the goals of the GLRI-Action Plan.

ECT has had great success developing restoration blueprints to restore fish/wildlife habitat/population related BUIs and developing methods to prioritize hundreds of potential implementation projects to improve water quality in the Great Lakes. ECT has also been successful in assisting its clients secure funding to complete field implementation projects. Since 1999, ECT has secured over $66 million through a variety of grants for its clients and partners.

***Natural Resources Experience***

- Defining the final benchmarks to delist the AOCs by establishing delisting targets;
- Managing multi-million dollar, multi-year large-scale monitoring projects;
- Designing and/or constructing large and small-scale sustainable resource projects to improve a watershed's water quality and ecology

ECT's staff includes professionals providing services and expertise in: natural resources planning and management; developing strategies to restore and protect natural resources; stream and lake restoration; lake-wide management plan development; TMDL development and implementation; point and nonpoint source control selection; public education and involvement; monitoring and design; illicit discharge investigation; and numerical modeling in limnological, marine, lacustrine, estuarine, fluvial, and hydro-geological environments.

***For More Information Contact***

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John O'Meara, P.E.
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2200 Commonwealth Blvd., Suite 300, Ann Arbor, Michigan 48105, www.ectinc.com

## BELLE ISLE SOUTH FISHING PIER AND BLUE HERON LAGOON HABITAT ENHANCEMENT AND RESTORATION

Remedial actions to clean up the Detroit River over the past 30 years have led to improved conditions for reproduction and early life history survival by a large number of native fish species. The recent Belle Isle Sturgeon Spawning Reef Restoration has resulted in successful reproduction by 16 native fish species in the vicinity. However, the ability of fish larvae to find nursery habitat is critical for their survival and there is no suitable coastal wetland nursery habitat in the immediate area which is critical to the survival of fish spawned at enhanced habitats.

Friends of the Detroit River received Great Lakes Restoration Initiative funding to improve spawning habitat at Belle Isle in Detroit, Michigan. ECT is leading a team to complete two projects that will provide the necessary spawning habitat and contribute to the removal of the Loss of Fish and Wildlife Habitat BUI. The Belle Isle South Fishing Pier habitat enhancement project will construct 2.5 acres of coastal wetlands and deep water habitat along Belle Isle in the vicinity of the U.S. Coast Guard South Fishing Pier, which is immediately downstream from the Sturgeon Spawning Reef. The proximity of associated spawning to the newly created nursery habitats will increase the survival of young fish and support adult fish in what is becoming a world class fishery.

The coastal wetland will also benefit bird, reptile and amphibian wildlife on Belle Isle, the only park of its kind in the U.S. waters of the Detroit River.

***Highlights:***

- Over 97 acres of wetlands and nursery habitat enhancements;
- 2.2 miles of open free flowing canals that will enhance biological habitat;
- Increased abundance of target fish and wildlife species, and
- Changes in recreational angling use.

***Partners:***
Friends of the Detroit River, EPA-GLNPO, Detroit River AOC, JJR, Inc.

## DANVERS POND DAM REMOVAL AND STREAM RESTORATION

Danvers Pond Dam is located in Farmington Hills, Michigan, on Pebble Creek, a tributary of the Main Rouge River. The pond has a history of sediment accumulation contributing to the degradation of the creek and the dam has prevented fish passage. The primary goal of the project is removal of the dam, improvement of the habitat and water quality of Pebble Creek and its receiving waters. This will allow the Rouge River AOC to take steps towards delisting the Loss of Fish and Wildlife Habitat BUI.

The Alliance of Rouge Communities received Great Lakes Restoration Initiative funding to address the sediment accumulation by removing the Danvers Pond Dam. ECT designed, permitted and is providing construction oversight to remove the existing dam, create a naturalized water course and restore the former impoundment bottom lands as an open area connected to the stream to dissipate and store flood flows. The stream bank will be stabilized by using bioengineering and naturalizing techniques to prevent erosion. Habitat will be created to improve water quality in the creek.

The proposed project fulfills local community and subwatershed goals by improving the quality of the ecosystem and restoring approximately two acres of habitat for fish and terrestrial wildlife, reducing sedimentation within the creek and re-vegetating 300 linear feet of naturalized stream channel. The dam removal will allow unencumbered fish passage for the 6.5 mile Pebble Creek and create a natural buffer of native vegetation between private property and the stream corridor.

***Highlights:***

- Two acres of woodlands and wetlands habitat will be restored and preserved;
- 300 linear feet of channel will be enhanced, and
- 6.5 miles of stream will be opened up for fish passage.

***Partners:***
Alliance of Rouge Communities, EPA-GLNPO, City of Farmington Hills, Friends of the Rouge

## U.S. STEEL SITE HABITAT RESTORATION

The U.S. Steel site was identified as a key restoration priority for advancing restoration and contributing to the delisting of the Detroit River AOC. ECT is leading an interdisciplinary team to implement a key element in the habitat restoration plan for the Detroit River AOC located in southeast Michigan.

The project, funded through the Great Lakes Restoration Initiative, will transform an industrial riverfront site into viable shoreline habitat for fish, amphibians and waterfowl as well as upland habitat for reptiles, birds, and mammals. The project will restore 1,100 feet of shoreline, 1.7 acres of emergent wetlands, 750 feet of rock shoal (barrier island), and create over an acre of fish spawning area in the Detroit River and an embayment for turtle and fish habitat. Additionally, approximately 4.6 acres of upland habitat will be restored adjacent to the shoreline through removal of invasive species and replanting with native trees, shrubs, and other types of native vegetation.

***Highlights:***

- 1,000 linear feet of river shoreline restoration;
- 1.7 acres of wetlands habitat/nursery;
- 750 linear feet of shoal restoration;
- 1.0 acres of aquatic habitat/spawning restoration;
- 4.6 acres of upland restoration with tall grass;
- Increased abundance of target species, and
- Changes in recreational angling use.

***Partners:***
Friends of the Detroit River, EPA-GLNPO, Detroit River AOC, U. S. Steel

## TRANSFORMING THE ROUGE AOC FROM MOWED DOWN TO GROWN-UP

The Rouge River AOC suffers from extreme flow variation and volume which has impacted habitat and conditions for benthic macroinvertebrates, as well as fish and wildlife populations. The Alliance of Rouge Communities received Great Lakes Restoration Initiative funding to increase green infrastructure in the Rouge River AOC by creating 25 acres of native grow zones and restoring seven acres of wetlands within the watershed, along the Main, Upper and Lower branches of the Rouge River in Michgan. This project addresses the Degradation of Benthos and Loss of Fish and Wildlife Habitat BUIs.

The foundation of these efforts has been to create or restore habitat with grow zones, wetland restoration, invasive species management, and preservation of the flood plain. This project will significantly advance efforts to restore and better maintain the riparian corridor that encompasses the main branches of the Rouge River Watershed. The project will also support a comprehensive evaluation of the benthos communities and data in partnership with Wayne County and Friends of the Rouge.

***Highlights:***

- Enhance and convert approximately 25 acres of turf grass to native vegetation;
- Restore seven acres of wetlands;
- Remove approximately 11,250 cubic feet of stormwater volume from the Rouge River;
- Increase native vegetation from 0% to 75% in the implementation area, and
- Increase pollutant removal efficiencies within the watershed.

***Partners:***
Alliance of Rouge Communities, EPA-GLNPO, Wayne County, City of Southfield, Erb Foundation, Friends of the Rouge, City of Detroit, Rouge River AOC

## WATERVLIET DAMS REMOVAL

The Berrien County Brownfield Redevelopment Authority is the current owner of two concrete dams formerly owned by a now-defunct paper company on the Paw Paw River in the City of Watervliet, Michigan. The dams impounded the Paw Paw River to provide processing water. The dams block fish movement between upstream and downstream reaches, block potadromous fish spawning migrations, and alter the flow of water, sediment, nutrients, and organic matter. The two dams act in concert to redirect flow from a historical channel of the Paw Paw River through a single north channel. As a result, habitat in the historical channel has been significantly impacted by sedimentation, increased water temperatures, and insufficient flow velocity and depth.

Berrien County received grants from the Michigan Department of Natural Resources (MDNR), Fisheries Division; U.S. Fish and Wildlife Service; and National Oceanic and Atmospheric Administration (NOAA) to remove the dams. ECT provided the initial dam removal design and is providing permitting, construction oversight and grant management to remove the dams and create a naturalized channel to restore the habitat. Currently, construction is 40% complete. The spillway dam has been removed and restored along with 200 feet of eroded streambank downstream of the spillway dam. Construction is expected to be complete by December, 2011. Post-construction monitoring will occur in the spring of 2012.

***Highlights:***

- More than 100 miles of river will be accessible to all Great Lakes potadromous and resident fish species;
- Restore 1.7 miles of stream including an abandoned channel;
- Improve floodplain connectivity, flood conveyance and storage, and
- Eliminate a public safety hazard and economic liability.

***Partners:***
Berrien County Brownfield Redevelopment Authority, NOAA, MDNR Fisheries Division, U. S. Fish and Wildlife Service, Southwest Michigan Planning Commission, The Nature Conservancy, City of Watervliet

## WAYNE ROAD DAM REMOVAL

The MDNR 1998 Fisheries Assessment identified the Wayne Road Dam in the City of Wayne, Michigan, as a major impediment to restoring fish and wildlife habitat in the Rouge River's Lower Branch.

The Alliance of Rouge Communities received a grant from the NOAA to implement the Wayne Road Dam Removal and Habitat Improvement Project. The project will restore fish passage for migratory species such as salmon, walleye, northern pike and small mouth bass, while stabilizing and improving shoreline habitat. The project will also reconnect 22 miles of the Lower Rouge River with the Great Lakes for the first time in over a century. The Lower Rouge River flows through Dearborn, Dearborn Heights, Inkster, Wayne, Canton Township and Superior Township. This project will complement other projects conducted by neighboring communities, such as the Lower Rouge Recreational Trail in Canton Township and the creation of 15 acres of native plantings in Wayne County Parks in Inkster and Wayne. This project address the following BUIs: Degradation of Fish and Wildlife Populations, Degradation of Benthos and Loss of Fish and Wildlife Habitat. ECT provided the initial dam removal design and is providing permitting, construction oversight and grant management to remove the dam and create a naturalized channel to restore the habitat.

***Highlights:***

- Hydrologically reconnect 22 miles of the Lower Rouge River to the Great Lakes;
- New and enhanced outdoor recreational activities such as fishing, canoeing and park usage, and
- Fish passage for multiple valued species, such as trout, northern pike and walleye.

***Partners:***
Alliance of Rouge Communities, NOAA, Wayne County, City of Wayne, Friends of the Rouge

ATTACHMENT G

# Natural Area Restoration

## River Rouge Park and Eliza Howell Park, Detroit

Designated areas in River Rouge Park and Eliza Howell Park will be restored this spring using a method called controlled burns. The designated areas are five acres in River Rouge Park just north of Tireman and east of Parkland and five acres in the north end of Eliza Howell Park, south of Fenkell and adjacent to an existing nature trail (areas are outlined in yellow to the right).

Controlled burns have been used at natural areas at Detroitõs Belle Isle, in the City of Ann Arbor and throughout Michigan, including natural areas in White Lake Township and Berrien, Mason, Oceola and Van Buren counties.

Both River Rouge Park and Eliza Howell Park were seeded with native plants in 2000, but some portions have become a monoculture ð that is overtaken by one native species ð or have been degraded by an overgrowth of non-native plants. In order to restore these natural park areas, a controlled burn (or prescribed burn) will be conducted in both parks in March or April, 2012. To enhance the new growth after the burn, the areas will be re-seeded with native plants.

This project is being federally funded through the Great Lakes Restoration Initiative (GLRI) and is being conducted by the Alliance of Rouge Communities (ARC) in partnership with the City of Detroit.

### Areas targeted in Detroit Parks:

*River Rouge Park - north of Tireman, east of Parkland*

*Eliza Howell Park - north end of the park adjacent to the nature trail*

## Why Use Controlled Burns?

A controlled burn rejuvenates natural areas such as prairies, wetlands and woodlands. Non-native plants, such as phragmites, Canadian thistle, buckthorn and garlic mustard, can compete with natural areas, turning them into thickets of shrubs or weeds with little to no diversity. A controlled burn rids the native area of invasive, non-native plants and allows the native plants to thrive. It promotes diversity, enriches the soil and lengthens the growing season.

The burns will be conducted by well-equipped, fully trained staff and volunteers. The burns at both parks are conducted in cooperation with the Detroit Recreation Department and must be approved by the Detroit Fire Department.

### Questions?

In the Brightmoor Neighborhood call Riet Schumack, Neighbors Building Brightmoor, at (313) 283-8091, 8 a.m. - 5 p.m.

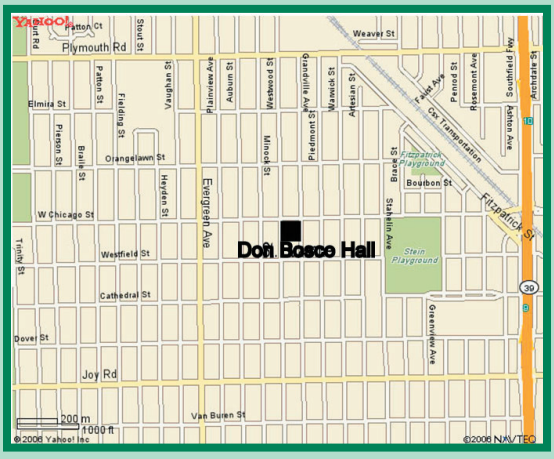
In the Rouge Park Neighborhood call Friends of Rouge Park, at (313) 799-FORP (3677)

Or e-mail the ARC at info@allianceofrougecommunities.com or call (734) 272-0291

### Learn More about the Project!

Friends of Rouge Park will sponsor an informational meeting about both projects:

Wednesday, February 15, 2012, 6 p.m. - 7 p.m.
Don Bosco Center, 9357 Westwood (at W. Chicago)



# Natural Area Restoration

River Rouge Park and Eliza Howell Park, Detroit

## When Will the Burns Happen?

The burns are scheduled for March or April 2012, but are dependent on weather conditions. In order to conduct a controlled burn, weather conditions ð temperature, wind direction and strength, humidity, barometric pressure and ground moisture ð all must be within the range specified in the burn plan before the burning can proceed. In urban areas, a controlled burn can last from 15 minutes to 45 minutes of actual fire time.

*Before burn*

*Burn in progress*

*After burn*

## How Will I Know?

If you would like to be notified the day before the burn, please send your phone number or e-mail address to info@allianceofrougecommunities.com with òDetroit Parksó as the subject or leave your phone number on the ARC information line at (734)272-0291. This information will only be used to notify you of these project activities. There will be periodic updates through your local neighborhood newsletters and on the ARC website at www.allianceofrougecommunities.com.

## About the Alliance of Rouge Communities (ARC)

The ARC is a 501(c)(3) non-profit organization consisting of 35 local municipalities, three counties, educational institutions and stewardship groups working together to improve the Rouge River. Founded in 2005, the ARC and its partners work cooperatively to meet water quality requirements mandated by the stateös storm water permit and to restore beneficial uses, such as canoeing, fishing and other recreational activities, to the Rouge River. The ARC is funded by membership dues from local governments and supported by grants. That means better water quality for less cost to its members!

## Funding for This Project

*Transforming the Rouge Area of Concern from Mowed Down to Grown Up* is a federally-funded project conducted by the ARC to improve the Rouge River by restoring or creating natural areas in Valley Woods Nature Preserve in Southfield, Eliza Howell and River Rouge parks in Detroit and Wayne County parks in Redford Township, Inkster and Westland. Partners in this effort include Wayne County, Friends of the Rouge, the City of Detroit, the City of Southfield, Friends of Rouge Park, Friends of Eliza Howell Park and the Fred A. and Barbara M. Erb Family Foundation.

The Great Lakes Restoration Initiative (GLRI) is a federal effort to restore the Great Lakes by cleaning up toxics and Areas of Concern; combating invasive species; promoting nearshore health by protecting watersheds from polluted run-off; restoring wetlands and other habitats, and working with partners on outreach.

The Alliance of Rouge Communities - Working Cooperatively to Improve the River! For more information go to: www.allianceofrougecommunities.com

**In Partnership with:**

We Make It Happen!
Detroit Recreation Department

Great Lakes RESTORATION

(US EPA grant #GL-00E00643-0)

# Natural Area Restoration
# River Rouge Park
# and Eliza Howell Park

## Use Of Prescribed Burns
## In Habitat Restoration

Great Lakes RESTORATION

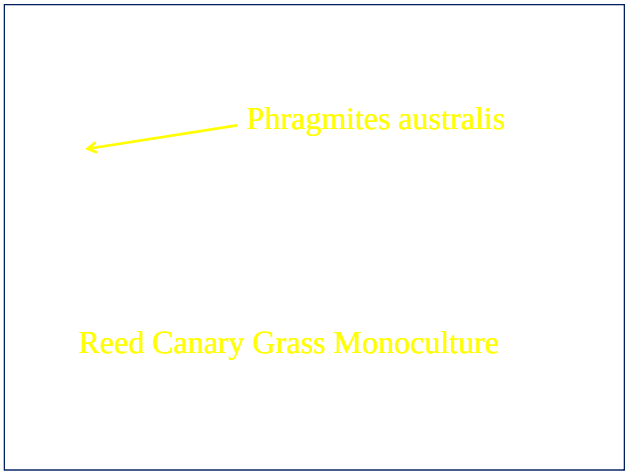
## Project Information

Eliza Howell Park

River Rouge Park

- Restore ten acres in Eliza Howell and River Rouge Park
- Overtaken by one native species or degraded by an overgrowth of non-native plants
- Eliza Howell Park – south of Fenkell at north end of the park adjacent to the nature trail
- River Rouge Park – north of Tireman, east of Parkland
- Funded through the Great Lakes Restoration Initiative

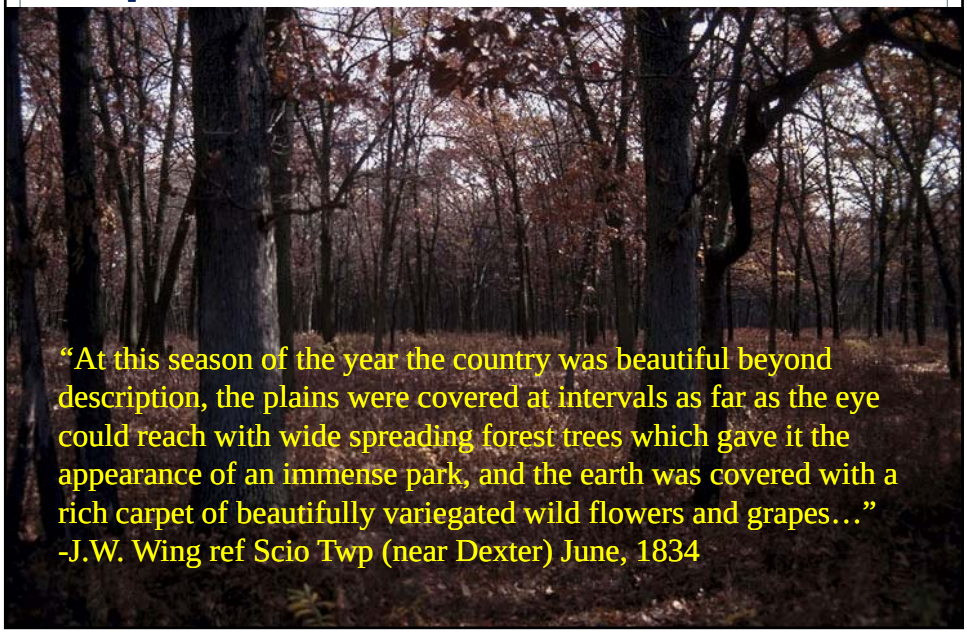
# Project Information




# Introduction

- Purpose & Need for Prescribed Burns
- Prescribed Burn Planning
- Prescribed Burn Implementation
- Project Information

## Purpose & Need for Prescribed Burns



"At this season of the year the country was beautiful beyond description, the plains were covered at intervals as far as the eye could reach with wide spreading forest trees which gave it the appearance of an immense park, and the earth was covered with a rich carpet of beautifully variegated wild flowers and grapes…"
-J.W. Wing ref Scio Twp (near Dexter) June, 1834

## Purpose & Need for Prescribed Burns

"The singular and interesting appearance of the country, in its alternating groves and fields…So far as my observations and inquiries have extended they go to the support of the hypothesis that **the fire annually communicated by the Indians for the purpose of hunting has produced the present prairies, plains and openings that diversify the whole face of the country. "**
-An 1829 letter from Ann Arbor by a traveler from Canada – (Beakes,1906)

**Maintain Ecosystem Diversity**

# Purpose & Need for Prescribed Burns

**Control Invasive Species**

Reed Canary Grass

Phragmites australis

# Purpose & Need for Prescribed Burns

**Restore Native Plant Communities**

# Planning a Prescribed Burn

- Determine goals
- Identify the burn unit
- Create a burn plan
- Secure your permits
- Work with neighbors and manage the smoke
- Identify crew and equipment
- Prep the site

# Planning a Prescribed Burn

## Determining Goals

# Planning a Prescribed Burn

**Identify the Burn Unit:** Based on habitat and "natural" breaks

# Planning a Prescribed Burn

Changes in fuel type make excellent burn lines or breaks

# Planning a Prescribed Burn

**Create a Burn Plan:**

- Provides ownership and emergency contact information
- Outlines goals of prescribed burn
- Describes physical characteristics of site
- Identifies neighbors and potential smoke concerns
- Establishes weather parameters for burn
- Lists crew and equipment needs
- Provides emergency (contingency) planning information
- Incorporates map of unit and surrounding

# Planning a Prescribed Burn

**Burn Plan**

**Site:** Big Valley Preserve **On Site Cell Phone (734) 649-4367**
**Location:** Oakland Co., Rose Twp T.4N.-R.7E Section 12 and Section 1

**Fire Control Access:** Access by vehicles from Perry Road and along railroad tracks. No access to the fen.

**Ownership:** Michigan Nature Association

**Prescribed Burn Leader:** David Mindell (PlantWise, LLC)

**Fire Jurisdiction:** North Oakland Fire Department

**Emergency assistance: 911**

**Site Description:** Prairie fen with small hills containing slopes of 15% with oak savanna community. Scattered dogwood shrubs and tamaracks in the low areas. Old field along south edge of unit (at access point).

**Total acreage:** 1 unit totalling 30 acres of prairie fen, degraded old field, and oak savanna
**Slope & Aspect** Unit is flat with small hills with slopes of 15% and an east aspect.
**Fuels surround unit:** Prairie fen with fine fuels (north and east), buttonbush swamp (west), oak woodland (north), old field and lowland forest (south).

**Burn Objective:** Use prescribed fire to help maintain the site as a prairie fen by setting back shrubs and stimulating native herbaceous vegetation.

**Fire Sensitive Animal Species of Concern:**

| Scientific name | Common name | State Rank |
|---|---|---|
| ** | ** | T |
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| ** | ** | SC |

**Window of opportunity to burn:** Spring, late March through early May, 2007.

**Justification for animals of special concern**: Burning may take place after the Massasauga rattlesnake, and box turtle have emerged from hibernation and are actively moving about.

**Before burning notify:**

_____ North Oakland Fire Department, Chief, Jeremy Lintz (248) 634-4511
_____ Dan Kennedy, MDNR LIP, Biologist (517) 641-4903, cell: (517) 930-4050
_____ Oakland Co. Sherrif, Michael J. Bouchard non-emergency (248) 858-4911
_____ Oakland Co. Emergency Response and Preparedness (248) 858-5300

# Planning a Prescribed Burn

- Discuss Burn Plan with Local Fire Marshal or designated local fire authority
- Obtain, complete and submit Burn Permit Application for approval.

# Planning a Prescribed Burn

**Smoke Management**:

- Requires understanding of how wind will effect smoke

# Planning a Prescribed Burn

**Crew and Equipment**

- Size of crew and type of equipment are determined prior to implementing prescribed burn

# Planning a Prescribed Burn

**Site Preparation:** Prior to, and during burning, we ensure that the site is properly prepared for example:

- Removing bird boxes
- Wetting around fencing, turtle enclosures, hibernacula, nests, and other “obstacles.”

# Prescribed Burn Implementation

**Backfire or Back burn:**

A backfire is set at the downwind edge of the burn unit and is perpendicular to the wind.

# Prescribed Burn Implementation

**Head fire:**

A head fire is set at the upwind edge of the burn unit and is pushed by the wind.

# Project Information

What to Expect?

- Burns scheduled for March or April 2012 and will be weather dependent
- Notifications will be within 24 hours of burn
- Actual fire time will be from 1 - 1 1/2 hours
- Smell and color of smoke will be similar to burned leaves

# Project Information

- If you would like to be notified the day before the burn, please:
  - send your phone number or e-mail address to info@allianceofrougecommunities.com with "Detroit Parks" as the subject
  - Call the ARC info line at 734-272-0291 and leave your phone number
- Project updates will be:
  - On the ARC Website at www.allianceofrougecommunities.com
  - In neighborhood newsletters

ATTACHMENT I

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# Controlled burns clear problem plants in Rouge Park, Eliza Howell Park

A couple of Detroit parks got minor face-lifts Wednesday, as fire burned off unwanted brush and grass.

Landscape and ecology experts torched Rouge Park and Eliza Howell Park on the city's west side, hoping to quell invasive plants and help seed normal grasses, flowers and brush that were choked out long ago.

Observing at Rouge Park were Southfield students, part of a homeschool 4H club.

"It's cool to see the actual thing happening," said Gabrielle Gordon, 14, as the flames took over a grassy area near West Outer Drive and Tireman. The students said they want to come back next week to help Detroit Public Schools students plant grass and flower seeds.

The Rouge River rises and falls erratically. Native grasses and plants retain water.

"Prairie plants have a much better uptake of water, which means less water in the river," said ecologist Gary Crawford of ECT, an environmental consultancy group from Ann Arbor.

Crawford said the experts also are trying to stem the growth of an ornamental crabapple shrub that turned parts of the prairie land into a mini-forest.

"It's really overgrowing the prairie," Crawford said.

Many communities in southeast Michigan have regular controlled burns as a way to manage woody and grassy areas, but with tight budgets, park maintenance often falls to the wayside. Wednesday's burns, which cost about $7,500, were funded through a two-year $648,000 grant the Alliance of Rouge Communities received from the U.S. Environmental Protection Agency Great Lakes Restoration Initiative, said Zachare Ball of ECT.

So, with a north wind blowing, landscape experts lit thin lines of a gasoline-kerosene mix and watched it go.

Matt Demmon of PlantWise, a landscape restoration company in Ann Arbor, trailed the fire as it hit wet edges.

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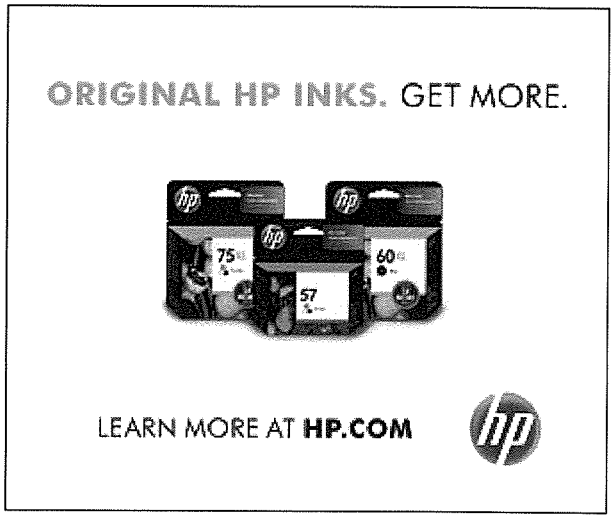


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"It pretty much puts itself out," he said.

Detroit fire officials looked on from the street.

"It's a beautiful thing when you don't have to put out a fire," said Lt. Quinton Levant.

Zoom

Marly Schneider watches the burn in Rouge Park. The Detroit Fire Department was standing by. "It's a beautiful thing when you don't have to put out a fire," said Lt. Quinton Levant.

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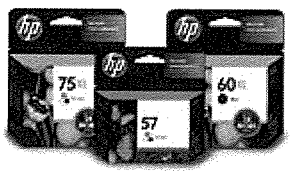

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# Across metro Detroit, fires set to control invasive species

Fire and parks officials in southeast Michigan are waiting for the wind to blow their way so they can set parks and preserves on fire.

Controlled burns, often associated with forests and large parks, are used so native plants can regain their stronghold in lands taken over by invasive species. They also are useful in urban parks as a way to repair off-kilter ecosystems, ecologists and parks officials said.

Parts of Belle Isle in Detroit were ablaze Thursday. Southfield's first controlled burn was Friday at Valley Woods Nature Preserve, near office buildings and houses at Telegraph and Franklin Road.

The fires were set to kill plants such as phragmites and canary grass, non-native invaders that choke out native irises, skunk cabbages, cattails and sedges that local reptiles, amphibians and water birds call home.

"It's a very good way to manage invasive species," said Merrie Carlock, City of Southfield park planner. "They don't have any wildlife value."

Forest fires, often vilified for the toll they take on structures and people, are many times a natural phenomenon that serves a purpose -- to clear forests for new growth and to help seeds germinate. Manmade controlled burns are similar, said ecologist Gary Crawford of ECT, an environmental consultancy in Ann Arbor, who was at the Southfield burn.

The fires clear out undergrowth, burn invasive plants and help plants in an ecosystem recover. On top of that, Crawford said, when invasives take over, the animals that relied on the normal flora for food and shelter take off. That is something Crawford said he has seen on Belle Isle, which has had burns three times during the past five or so years.

Crawford said he thinks something similar is going on at the Valley Woods wetlands in Southfield.

During the next couple of weeks, Crawford said, the goal is to perform controlled burns in parts of Eliza Howell Park and

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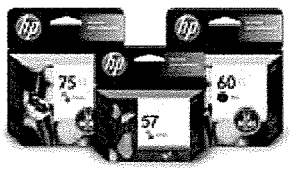

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River Rouge Park on Detroit's west side. Some roads will be closed, and he said the burns will take about 30 minutes each.

Just like much of outdoor life in Michigan, everything depends on the weather.

It is important to pay attention to wind when setting fires, said Paul Muelle, chief of natural resources for the Huron-Clinton Metroparks. This year, the Metroparks have staged controlled burns on about 30 acres each of Kensington and Stony Brook Metroparks.

In addition to invasive non-natives, Muelle said they also go after local shrubs that have started to sprawl.

"We are much more conscious of smoke," he said. "When the humidity starts to drop, you get those days with a lot of good lift."

But Crawford said the season is almost over, and park and fire officials are crossing their fingers for a few more dry days with good wind to finish up the burns for the year.

Two burns remain at Springfield Oaks Golf Course and White Lake Oaks Golf Course for non-playable areas surrounding the courses, said Brittany Bird, the natural resources planner for Oakland County Parks.

She said officials talk to neighbors to make sure people know the fires are managed.

Southfield Fire Marshal Jim Dundas said the department also lets people know the fires are not an emergency.

"It will smell very much like someone burning leaves," he said in advance of the Southfield fire, in which he issued the city's first burning permit. "Everything looks really good."

Contact Megha Satyanarayana: 313-222-8767 or megha@freepress.com

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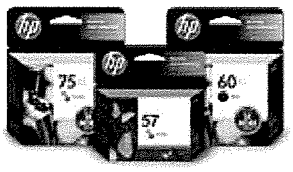


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# Southfield undertakes a controlled burn today

Southfield fire and park officials are overseeing the city's first controlled burn this morning near Telegraph and Franklin, starting at about 10 a.m. Residents and businesses in the area can expect to see smoke and smell burning leaves, city fire officials said, but the fire is expected to be put out by 11:30 a.m.

"We want to reassure people that there is no emergency," said Southfield Fire Marshall Jim Dundas.

Southfield's burn will be in the Valley Woods Nature Preserve, which has wetland areas that have been overwhelmed by invasive plants, reed canary grass and phragmites. The plants offer little in the way of food or shelter for wildlife and have displaced normal plants, said Southfield Park Planner Merrie Carlock.

"They don't have any wildlife value," she said.

Controlled burns are often used as a way to rapidly clear land of invasive species or undergrowth. The end result is that seedlings of native, or more desirable, plants can grow. In some areas, seeds germinate better after the intense heat of fire. Setting controlled burns in more dense urban settings is also a means to mitigate the displacement of plant species through construction and infrastructure.

Today's fire is being funded through a federal grant to the Alliance of Rouge Communities. The same grant fueled a controlled burn on Belle Isle on Thursday, said Carlock. Controlled burns have been used in other communities, such as Ann Arbor and in the Oakland County Parks system and Metroparks, to manage invasive growth and promote new growth.

The burn was also a new project for city government. Dundas said he does not give residents permits to burn leaves and debris. The parks department had to come up with a burn plan that included safety measures.

"Everything looks really good," said Dundas.

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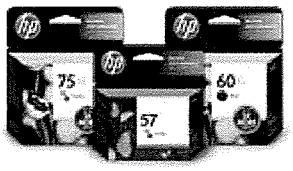


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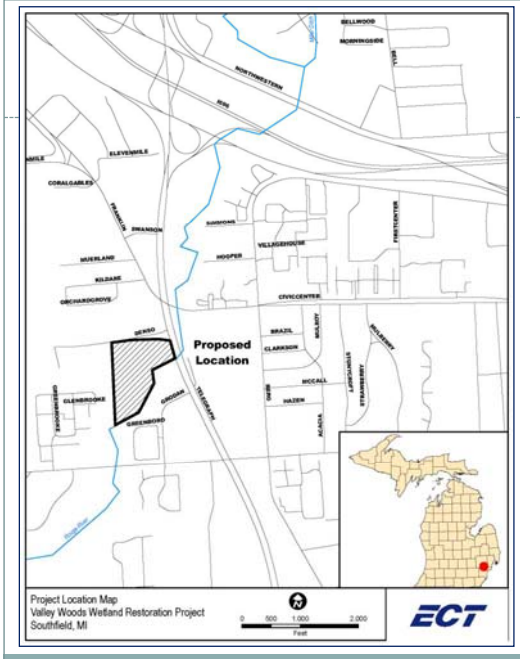
# City of Southfield
# Valley Woods Project

## Use Of Prescribed Burns
## In Habitat Restoration

Great Lakes RESTORATION

Southfield
the center of it all™



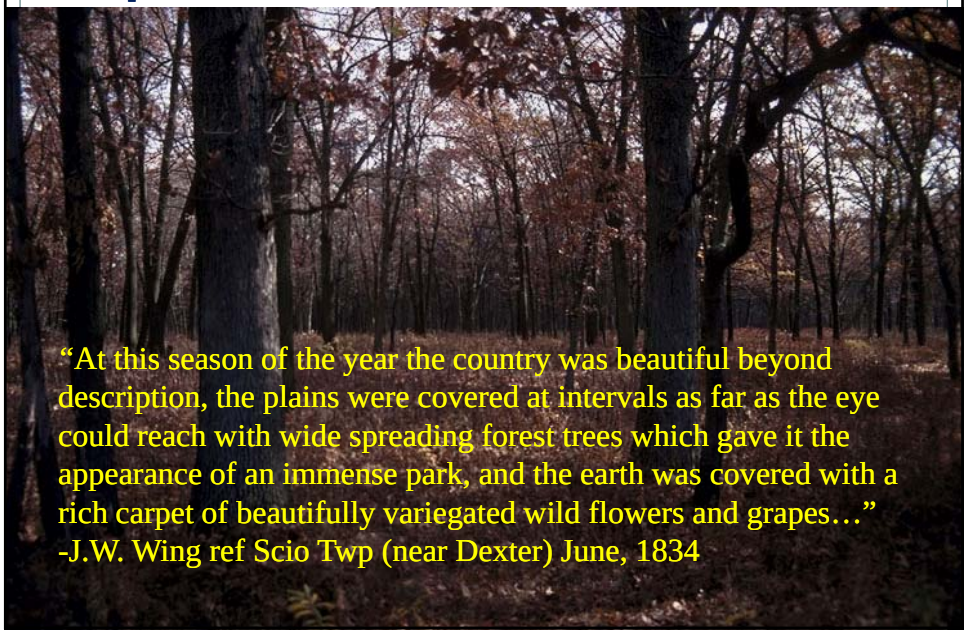

## Project Information

- Valley Woods Nature Preserve along the Rouge River
- Contains mature floodplain forests
- Project will restore 7 acres of degraded wetlands
- Funded through the Great Lakes Restoration Initiative

# Introduction

Purpose & Need for Prescribed Burns
Prescribed Burn Planning
Prescribed Burn Implementation
Project Information

# Purpose & Need for Prescribed Burns



# Purpose & Need for Prescribed Burns

"The singular and interesting appearance of the country, in its alternating groves and fields…So far as my observations and inquiries have extended they go to the support of the hypothesis that **the fire annually communicated by the Indians for the purpose of hunting has produced the present prairies, plains and openings that diversify the whole face of the country. "**
-An 1829 letter from Ann Arbor by a traveler from Canada – (Beakes,1906)

**Maintain Ecosystem Diversity**

# Purpose & Need for Prescribed Burns

**Control Invasive Species**

Reed Canary Grass

Phragmites australis

# Purpose & Need for Prescribed Burns

**Restore Native Plant Communities**

# Planning a Prescribed Burn

Determine goals
Identify the burn unit
Create a burn plan
Secure your permits
Work with neighbors and manage the smoke
Identify crew and equipment
Prep the site

# Planning a Prescribed Burn

## Determining Goals

# Planning a Prescribed Burn

**Identify the Burn Unit:** Based on habitat and "natural" breaks

# Planning a Prescribed Burn

Changes in fuel type make excellent burn lines or breaks

# Planning a Prescribed Burn

**Create a Burn Plan:**

- Provides ownership and emergency contact information
- Outlines goals of prescribed burn
- Describes physical characteristics of site
- Identifies neighbors and potential smoke concerns
- Establishes weather parameters for burn
- Lists crew and equipment needs
- Provides emergency (contingency) planning information
- Incorporates map of unit and surrounding

# Planning a Prescribed Burn

**Burn Plan**

**Site:** Big Valley Preserve **On Site Cell Phone (734) 649-4367**
**Location:** Oakland Co., Rose Twp T.4N.-R.7E Section 12 and Section 1

**Fire Control Access:** Access by vehicles from Perry Road and along railroad tracks. No access to the fen.

**Ownership:** Michigan Nature Association

**Prescribed Burn Leader:** David Mindell (PlantWise, LLC)

**Fire Jurisdiction:** North Oakland Fire Department

**Emergency assistance: 911**

**Site Description:** Prairie fen with small hills containing slopes of 15% with oak savanna community. Scattered dogwood shrubs and tamaracks in the low areas. Old field along south edge of unit (at access point).

**Total acreage:** 1 unit totalling 30 acres of prairie fen, degraded old field, and oak savanna
**Slope & Aspect** Unit is flat with small hills with slopes of 15% and an east aspect.
**Fuels surround unit:** Prairie fen with fine fuels (north and east), buttonbush swamp (west), oak woodland (north), old field and lowland forest (south).

**Burn Objective:** Use prescribed fire to help maintain the site as a prairie fen by setting back shrubs and stimulating native herbaceous vegetation.

**Fire Sensitive Animal Species of Concern:**

| Scientific name | Common name | State Rank |
|---|---|---|
| ** | ** | T |
| ** | ** | SC |
| ** | ** | SC |

**Window of opportunity to burn:** Spring, late March through early May, 2007.

**Justification for animals of special concern**: Burning may take place after the Massasauga rattlesnake, and box turtle have emerged from hibernation and are actively moving about.

**Before burning notify:**

_____ North Oakland Fire Department, Chief, Jeremy Lintz (248) 634-4511
_____ Dan Kennedy, MDNR LIP, Biologist (517) 641-4903, cell: (517) 930-4050
_____ Oakland Co. Sherrif, Michael J. Bouchard non-emergency (248) 858-4911
_____ Oakland Co. Emergency Response and Preparedness (248) 858-5300

# Planning a Prescribed Burn

Discuss Burn Plan with Local Fire Marshal or designated local fire authority

Obtain, complete and submit Burn Permit Application for approval.

# Planning a Prescribed Burn

**Smoke Management**:

Requires understanding of how wind will effect smoke

# Planning a Prescribed Burn

**Crew and Equipment**

Size of crew and type of equipment are determined prior to implementing prescribed burn

# Prescribed Burn Implementation

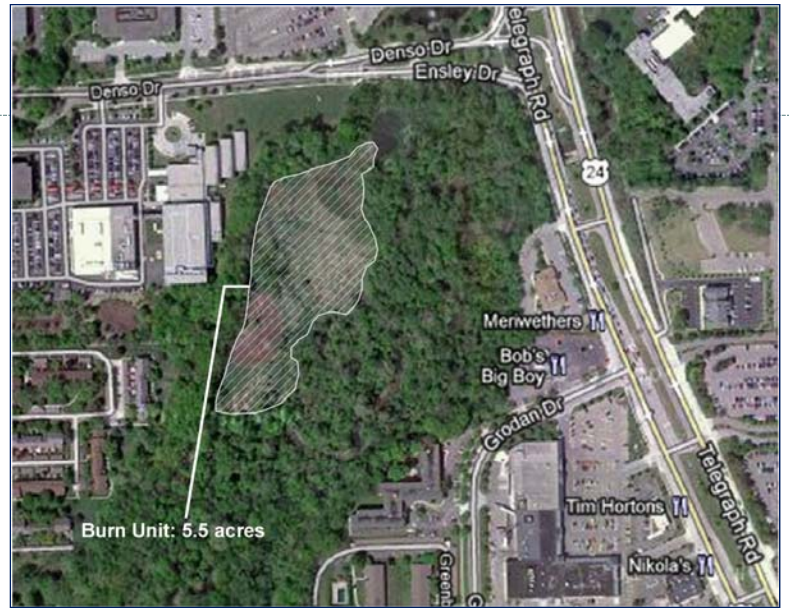
**Backfire or Back burn:**

A backfire is set at the downwind edge of the burn unit and is perpendicular to the wind.

# Prescribed Burn Implementation

**Head fire:**

A head fire is set at the upwind edge of the burn unit and is pushed by the wind.




# Project Information

Phragmites australis

Reed Canary Grass Monoculture

# Project Information

What to Expect?

- Burns scheduled for March or April 2012 and will be weather dependent
- Notifications will be within 24 hours of burn
- Actual fire time will be from 1 - 1 1/2 hours
- Smell and color of smoke will be similar to burned leaves

ATTACHMENT K

**Department:** Fire Department
Phone: (248) 796-5703
Fax: (248) 796- 5605

## *News Release*

Date: April 5, 2012
Subject: Controlled burn at Valley Woods Nature Preserve
Prepared by: Michael Manion, Community Relations Manager
Contact: Jim Dundas, Fire Marshall
(248) 672-4096 (cell)

*FOR IMMEDIATE RELEASE*

# Controlled Burn planned at Valley Woods Nature Preserve April 6

*(SOUTHFIELD, Mich.)* – The city of Southfield Fire and Parks & Recreation Departments will conduct a controlled burn at the Valley Woods Nature Preserve (located west of Telegraph, south of Franklin) on Friday, April 6 from approximately 10-11:30 a.m. to restore and re-seed the area with native plants.

Area residents can expect to see and smell smoke in the vicinity. The burns will be conducted by well-equipped, fully trained staff. The burn will be conducted in cooperation with the Southfield Parks & Recreation and Public Services Departments and under permit from the Southfield Fire Department.

For more information, contact Southfield Fire Marshall Jim Dundas at (248) 796-5703 or P&R Landscape Architect Merrie Carlock at (248) 796-4618.

###

ATTACHMENT L

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## Southfield

April 06, 2012

# Controlled burn helps restore Southfield nature preserve

**By Jennie Miller**
**C & G Staff Writer**

Jim LeBeau, 36, of Southfield, rested his bicycle against a fence near DENSO International America Inc. April 6 and wandered into the Valley Woods Nature Preserve on Southfield's west side.

He sat perched on a fallen log and looked over the vast acreage of sprawling wildlife and wetlands, watching it burn.

Flames lapped the invasive phragmities and reed canary grass that were overtaking the floodplain, and black smoke billowed into the air, spiriting away in a southwest direction in a plan methodically carried out by the city of Southfield and a prescribed burn contractor from Ann Arbor. The plan was funded through a Great Lakes Restoration Initiative grant to restore the wetlands at Valley Woods.

Photo by Jennie Miller

**A prescribed burn plan is carried out at Valley Woods Nature Preserve in Southfield April 6 in an effort to restore the wetlands.**

"It's important for water quality, for air quality and just having a place where people don't have to be in the city," said Merrie Carlock, Southfield's landscape architect and park planner. "You don't have to get in a car and drive out to the country somewhere. We have nature as high a quality as any right here. And we share the Earth with the plants and animals."

Southfield is among several communities in the region to benefit from the grant as part of the Alliance of Rouge Communities. Southfield's portion was $290,000. Five acres of the preserve's 128 total acreage along the Rouge River, near Telegraph and Franklin, were burned to rid them of the invasive species.

"We probably won't be able to eliminate all the reed canary grass and phragmities right away, but it'll help us knock it down," Carlock said. "We'll fill the ditches in — that's going to raise the water level, and that'll help delay the other stuff coming in. Then we'll come in

with our own seed mix and plug, little native plants, and try to restore the native plants in the area."

The effort will allow the area to act more as a wetland, slowing down the water, reducing erosion, providing a habitat for wildlife and reducing pollution in the water by acting as a filtration system.

While the burn had been planned for weeks, the city had a day's notice when determining its exact time. Certain weather conditions needed to be met to ensure safety and success, taking into account air temperature, precipitation and wind speed. Once it was decided, burn planners and city officials tried to spread the word as quickly as possible to ease the concerns of those who might see or smell smoke during the burn.

LeBeau was one of the many people gathered at Valley Woods to watch the fire.

"I had the day off and was going to go for a bike ride, so I decided to come out here and watch," he said. "I frequently bike the preserve. I think it's really overgrown and it'd be nicer with more native plants. It'll be a nicer experience when I bike through it."

The preserve and the city's dedication to the environment are among LeBeau's favorite things about the city.

"One of the reasons I live in Southfield is because of the bike paths and natural areas," he said. "Even though it's an urban environment, they have nice places right in your backyard where you can go to get away. It's something a lot of the inter-ring communities don't have."

The burn began at about 11:30 a.m. and was estimated to take an hour and a half to complete. Trained personnel spread the fire meticulously.

Southfield Fire Marshal Jim Dundas was on hand to observe and make sure the burn went smoothly.

"They had to apply for a permit, which means they have to meet certain safety conditions," Dundas said. "I'm here just to make sure the conditions of the permit are met, which means that they have a means of extinguishing it, the atmospheric conditions are right and things don't get away from them. ... More than anything I want to make sure it doesn't get away from them. Should we have to use our emergency backup plan, (firefighters) are ready. (But) it seems like they know what they're doing and it's going the way that they thought it would."

You can reach C & G Staff Writer Jennie Miller at jmiller@candgnews.com or at (586)279-1108.

**Source URL:** http://www.candgnews.com/news/controlled-burn-helps-restore-southfield-nature-preserve

# Fire set to kill plants foreign to Michigan

## Southfield Nature Preserve torched for a good reason

**Author: Brandon Roux, Local 4 Meteorologist , broux@wdiv.com**
Published On: Apr 06 2012 05:19:13 PM EDT Updated On: Apr 06 2012 07:02:40 PM EDT

**SOUTHFIELD, Mich. -**

Where there's smoke, there's fire.

A five acres portion of Valley Woods Nature Preserve overtaken by unwanted plant species was torched Friday. The goal of this controlled burn is to regenerate desired species.

It's a fascinating process to watch.

Controlled burns start and stay controlled by first lighting a protective fire line. Trained fire fighters do that by lighting a small fire around the perimeter of the target area to prevent the blaze from jumping the line and getting out of control.

Southfield Park Planner Merrie Carlock says, invasive grasses and foreign phragmites plants have flooded the wetlands and needed to go by way of a prescribed burn."It will filter the wetlands, bring back wildlife value and retain water during storms," says Carlock.

The controlled burn is federally funded as part of the Great Lakes Restoration Grant and is one of many future fires meant to improved the Rouge River Basin.

After the fire Carlock said, "We probably won't get 100 percent mortality on the plants we don't want but we will come back and retreat them as they resprout and we'll come back and plant with our own seed mix."

All of the charred ground absorbs sunshine and heat. So spring growth of newly planted seeds will be accelerated.

There are two more controlled burns planned for next week in Aliza Howell and Rouge Parks in Detroit weather permitting.

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# LOCAL

## Controlled Burns Under Way Across SE Michigan

April 9, 2012 3:08 PM

4 View Comments

(credit: ThinkStock)

**DETROIT (AP)** – Some blazes being set in and around Detroit aren't malicious – they are just an attempt to manage invasive species.

Parts of the city's island park of Belle Isle were set on fire last week, as was the Valley Woods Nature Preserve in suburban Southfield. The Huron-Clinton Metroparks have staged controlled burns on about 30 acres each of Oakland County's Kensington and Macomb County's Stony Brook parks.

"It's a very good way to manage invasive species," Southfield park planner Merrie Carlock told the Detroit Free Press for a story published Monday. "They don't have any wildlife value."

Carlock and other experts say the fires clear out undergrowth, burn invasive plants and repair and recover existing ecosystems.

**Filed Under**
Local, News

**Related Tags**
controlled burn, Huron-Clinton Metroparks

Gary Crawford, an ecologist with Ann Arbor-based environmental consultancy ECT, said controlled burns serve a similar purpose as forest fires, which are a natural phenomenon that help clear forests for new growth and help seeds germinate.

He said when invasive species take over, the animals that relived on the previous plant-life for food and shelter leave – something he's observed on Belle Isle.

Crawford said the season is almost over and officials hope for a few more dry days with good wind to complete the controlled burns for the year.

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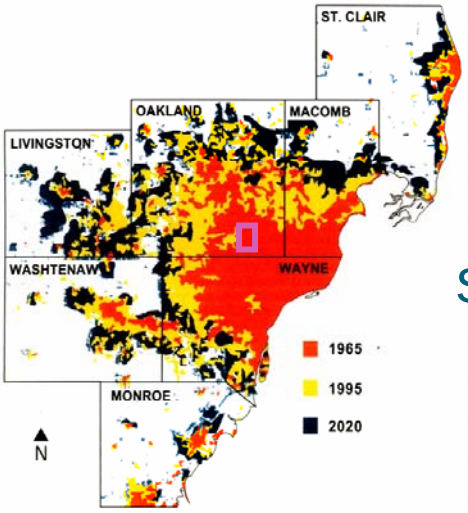
4 View Comments

**FROM AROUND THE WEB** **WE RECOMMEND**

# Valley Woods Wetlands Restoration Project

Merrie Carlock, LLA / Landscape Architect
Southfield Department of Parks & Recreation
Brandy Siedlaczek, CSM / Storm Water Manger
Southfield Department of Public Works
John O'Meara, PE / Principal Engineer
Environmental Consulting & Technology

## *Community Background*




## Urbanization in Southeast Michigan

1965-2010

## Community Background

- An urbanized 1st tier community bordering Detroit
- 26 square miles
- Population of 78,000
- Daytime population of 175,000
- 96% developed land
- Little land left for open space

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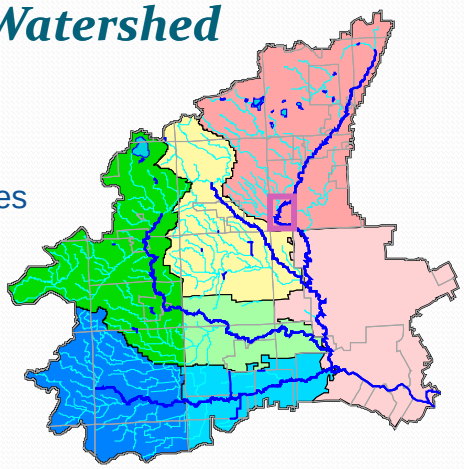
Valley Woods Wetlands Restoration Project

## The Rouge River Watershed

The Rouge River Watershed is an Area of Concern in the Great Lakes region

Watershed:

- 467 square miles
- 3 counties
- 48 municipalities
- 1.5 million people



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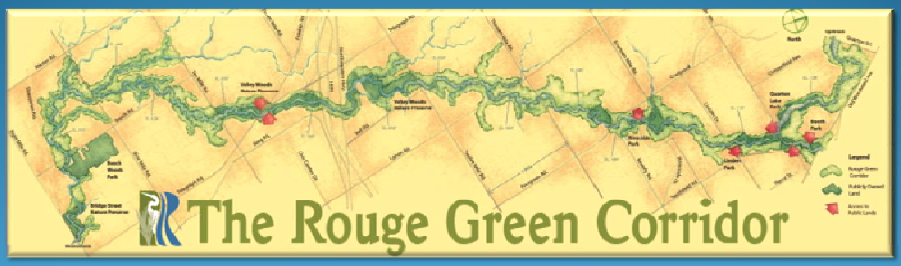
Valley Woods Nature Preserve is part of the Rouge Green Corridor on the Main Branch of the Rouge River as it flows through Birmingham, Beverly Hills and Southfield. The river corridor provides a haven for wildlife and a refuge for people to enjoy and explore nature. The Rouge Green Corridor project is a multi-agency effort which encourages regional management of the corridor and promotes stewardship of its natural resources by public.

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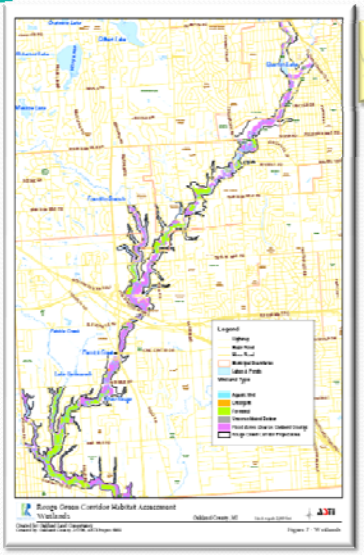

## *Features of the Rouge Green Corridor*

- Many areas of high floristic value
- Highest diversity of fish species in the Rouge River watershed
- Sensitive “River Bugs” macro-invertebrates
- Five kinds of turtles, two kinds of snakes, eight species of frogs, seventeen species of mammals and the largest and most diverse population of freshwater mussels within the entire watershed

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The Valley Woods Wetlands Restoration Project was undertaken as a result of recommendations of the Rouge Green Corridor Urban Habitat Conservation & Stewardship Project funded through the National Fish & Wildlife Foundation

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## *Habitat Restoration Goals*

The Rouge Green Corridor Urban Habitat Conservation & Stewardship Project identified 12 habitat restoration goals within the corridor. Each goal is associated with target habitat metrics used to measure progress and achievement:

1. **Connect river and floodplain**
2. **Maintain or expand riparian buffer**
3. Educate & involve residents in stewardship
4. Expand survey and monitoring efforts
5. Improve in-stream aquatic habitat
6. **Improve water quality to meet set criteria**
7. **Manage invasive species**
8. Manage woody debris
9. Promote the RGC as a recreational asset
10. **Reduce erosion and sedimentation**
11. **Reduce flashiness**
12. **Restore wetlands**

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## *Valley Woods Nature Preserve*

- Southfield nature preserve within the Rouge Green Corridor
- 128 acres along the Main Branch of the Rouge River
- Between Ten and Twelve Mile Roads
- Bisected by I-696, Telegraph & Northwestern Highways

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## *Restoration Site*

- Management plan made recommendations for all segments of the river through three communities
- Valley Woods site, west of Telegraph, south of Franklin and Civic Center Drive, was identified as potential site for a large scale restoration project

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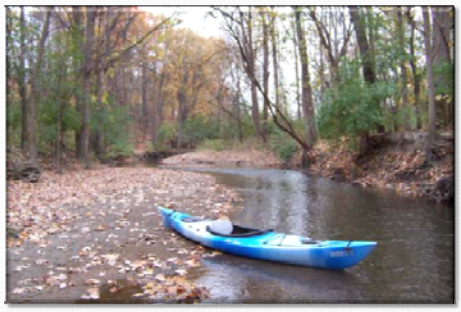
## *River Segment*



- Aquatic habitat in the river at this location is some of the best within the corridor.
- Undisturbed riparian forest
- Wildlife include fox, deer, mink, coyote and small mammals
- Birds include belted kingfisher

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## *Wetlands*

- One of largest floodplain wetlands in the corridor.
- Old ditches drained the wetlands, increasing flood flows to the river and impairing function of the wetland to retain floodwaters, and filter out sediments and pollutants before they enter the river system.
- Monoculture of invasive species of phragmites and reed canary grass diminish function of wetlands.

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## *Management Recommendations*

Restore capacity of wetlands to store and detain storm water by filling existing ditches and rock armor inlets into wetlands.

Manage invasive phragmites and reed canary grass and replace with native wetland species.

Allow spring flood waters to submerge the wetlands to discourage re-establishment of the invasive plants and reduce downstream flashiness and erosion.

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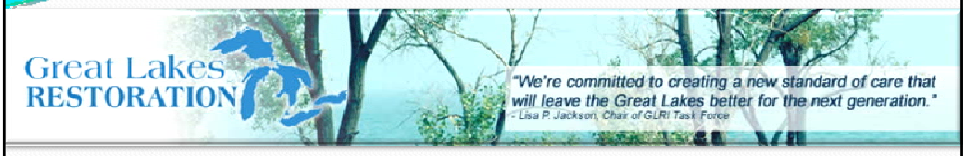


## *Great Lakes Restoration Initiative*

Alliance of Rouge Communities
OURS TO PROTECT
Working together, restoring the river

Alliance of Rouge Communities received a Great Lakes Restoration Initiative Grant (GLRI) for *"Transforming the Rouge Area of Concern"* to fund 4 projects in the Rouge River Watershed :

**Valley Woods Wetlands Restoration Project /Southfield**

Rouge River Park / Detroit
- Restore 5 acre parcel/controlled burn

Eliza Howell Park / Detroit
- Convert 5 acres of turf grass to native grow zones

Lower Rouge and Upper Rouge Parkway
- This project will convert 15 acres of managed turf grass to native grow zones within Wayne County Parks

Total Project Cost $830,000

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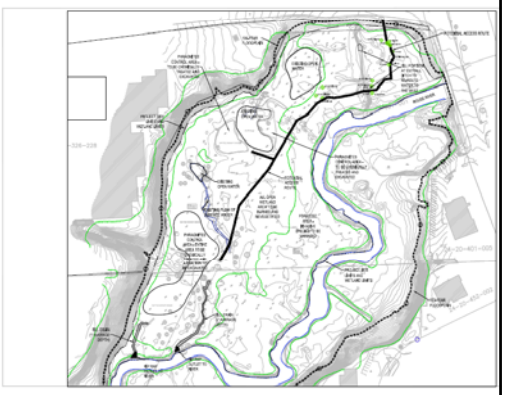
## *"Transforming the Rouge Area of Concern"*

- Southfield Portion
  - $320,000
- Management plan
  - Herbicide treatments
  - Excavation of invasives
  - Prescribed Burn
  - Planting / seeding
  - Hydrologic modifications



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DEQ MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

## *Environmental Permitting*

- Michigan Department of Environmental Quality
- Permit required for herbicide treatment and working in the floodplain wetlands.
- DEQ representative toured site

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## *Herbicide Treatment*

Phragmites and Reed Canary Grass were treated with herbicide to begin the control program.

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Multiple treatments with a specialized consultant

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## *Excavation*

- Phragmites next to pond was excavated
- Must be excavated to a depth of four feet
- Water depth prevents regeneration of plant

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## *Excavation*

Expanded a water feature both for habitat and public interest.

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## *Steps for a Prescribed Burn*

1. Determine goals
   - Control invasive species
   - Restore native habitats for plants and animals
   - Promote habitat diversity
2. Identify the area to be burned
3. Create a burn plan
4. Secure approvals & permits
5. Communicate to the public
6. Site preparation
7. Implementation

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## *Develop the Burn Plan:*

*Valley Woods - Burn Plan Page 1 of 5*
**Burn Plan**

**Site: Valley Woods On Site Cell Phone (734) 649-4367**
**Location: Oakland Co., City of Southfield T.1N R.10E Section 20 (SE)**
**Fire Control Access: Denso Dr/Ensley Dr at North**

**Ownership: City of Southfield**

**Prescribed Burn Manager: ECT, Inc.**

**Prescribed Burn Leader: David Mindell (PlantWise, LLC)**

**Fire Jurisdiction: City of Southfield Fire Department**
**Emergency assistance: 911**
Southfield Fire Department, Fire Marshal Jim Dundas, 248-672-4096 cell

**Site Description: Reed canary grass-dominated floodplain wetland surrounded on north and west by**
oak upland, and on south and east by Rouge River.

**Total acreage: 5 acres**
**Slope & Aspect: Flat.**
**Fuels surround unit: Oak woodlands surround site at north and west sides with 20% slopes; Rouge**
River with floodplain vegetation to east and south.

**Burn Objective: Eliminate invasive vegetation to allow re-growth of native wetland plant species.**
**Fire Sensitive Animal Species of Concern:**
**Scientific name Common name State Rank**
None Known
**Window of opportunity to burn: Spring, late February through mid May, with a preference to burn on**
weekends early during this burn window.
**Before burning notify:**
_____ Jim Dundas - Southfield Fire Department, Fire Marshal cell (248) 672-4096
_____ Merrie Carlock – Southfield Parks & Recreation, cell (248) 933-8737
_____ Brandy Siedlaczek – Southfield Public Works, cell (734) 673-1712
_____ Gary Crawford - ECT (734) 272-0290, cell (248) 830-2332

- Outlines goals of prescribed burn
- Defines area to be burned based on habitat & natural breaks
- Incorporates map of unit and surrounding affected area
- Provides ownership and emergency contact information
- Describes physical characteristics
- Identifies neighbors and potential issues
- Establishes weather parameters
- Identifies crews and equipment
- Defines smoke management plans
- Provides emergency (contingency) planning information

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## *Burn Location*

- Define burn perimeter
- 5 acres
- Multiple land use
  - Commercial
  - Apartments
  - Corporate
  - Senior Housing
  - Highways
  - Natural area

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## *Fire Marshall Approval*

- Meet with the Fire Marshall
  - Discuss concept
  - No history of any type of burn permit
  - Provide information on prescribed burns
  - Show examples in other communities

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## *City Approvals*

- Administrative Approval
- Council Presentation
  - Prescribed burn consultant
  - Fire Marshall
  - Education about burns
  - Address their concerns
  - Public outreach & notification plan

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## *Public Outreach*

- Council Presentation
- Press releases
- Southfield City Cable 15
- News coverage
- Road signage
- Met with area businesses
- Flyers / letters to local condos and senior housing

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## *Conditions*

- Seasonal requirements
  - Spring is a good time
- City requested weekend
  - Lower traffic issues
- Weather requirements
  - Must wait for ***perfect*** conditions
    - Morning best
    - Temperature
    - Humidity
    - Wind speed & direction
    - Precipitation
- Unable to make final notifications until 24 hours before the burn

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## *Crew & Equipment*

- Professional burn consultant
- Crew size based on the area
- Fire Marshall on site
- Can incorporate trained volunteers on crew

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## *Site Preparation*

- 1-2 hours prior
- Clear perimeter of burn area
- Wet down edge, trees, or other things within burn

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## *Smoke Management*

- How wind will effect smoke
- Odor of burned leaves
- Proximity to residences, businesses and highways

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***Fire Period***

- 2 hours
- Fire moves across burn area

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***Phragmites***

Burns high & fast

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## *Grass fire*

Lower fire heights & smoke

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## *Post Fire*

- Burn follow up
- Fire staff stays on site all day, until all fires are out
- Use water sprayers to put out fires/smoke

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## *Response*

- No complaints from the public or businesses
- Successful burn implementation
- Allowed wetland restoration with minimal disturbance of sensitive soils
- Fire Marshall & City Administration happy with effort
- Positive media interest and coverage for public education about prescribed burns

http://www.clickondetroit.com/news/Fire-set-to-kill-plants-foreign-to-Michigan/-/1719418/10294906/-/4dht6y/-/index.html

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Herbicide treatments of remnant invasives

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Valley Woods Wetlands Restoration Project

Restoration of wetland area with native planting and wetland seed mix

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Tree planting on access route

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Filled in ditches to restore natural flooding of wetlands

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Valley Woods Wetlands Restoration Project

2012 drought delayed germination and stressed new planting

Contractor watered and guaranteed plant material establishment.

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*Fall 2012*

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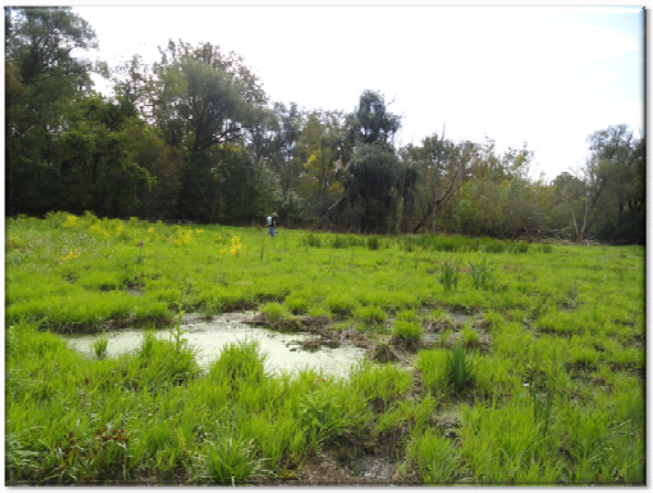
*Fall 2012*



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*Fall 2012*

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# Questions?

Merrie Carlock, LLA / Landscape Architect
Southfield Department of Parks & Recreation
248 796 4618 mcarlock@cityofsouthfield.com

Brandy Siedlaczek, CSM / Storm Water Manger
Southfield Department of Public Works
248 796 4806 bsiedlaczek@cityofsouthfield.com

John O'Meara, PE / Principal Engineer
Environmental Consulting & Technology
734-769-3004 jomeara@ectinc.com


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Valley Woods Wetlands Restoration Project

# Transforming the Rouge Area of Concern from Mowed-down to Grown-up

ATTACHMENT N

## Wayne County Lola Valley Park, Redford Township

The Alliance of Rouge Communities received grant funds to install Green Infrastructure in your neighborhood through the Transforming the Rouge Project. This project will create Green Infrastructure by converting 10 acres of mowed turf grass into native vegetation within Wayne County's Lola Valley Park along the Upper Rouge River. Designated areas shown below will be seeded with a mixture of native grasses and wildflowers.

This project is funded, in part, by the U.S. EPA's Great Lakes Restoration Initiative to improve water quality by creating more natural areas near the Rouge River. The Rouge River is the most urban river in the state and has been designated as a significant source of pollution to Lake Erie. Projects like this improve water quality by restoring the riparian corridor and help to reduce extreme flow variation and volume.

## What is Green Infrastructure?

Green Infrastructure is the interconnected network of open spaces, natural areas and native plant vegetation that naturally manages storm water, reduces flooding, improves water quality and creates wildlife habitat.

## About the Alliance of Rouge Communities (ARC)

The ARC is a 501(c)(3) non-profit organization consisting of 35 local municipalities, three counties, educational institutions and stewardship groups working together to improve the Rouge River. Founded in 2005, the ARC and its partners work cooperatively to meet water quality requirements mandated by the state's storm water permit and to restore beneficial uses, such as canoeing, fishing and other recreational activities, to the Rouge River. The ARC is funded by membership dues from local governments and supported by grants. That means better water quality for less cost to its members!

Great Lakes RESTORATION

(US EPA grant #GL-00E00643-0)

# Transforming the Rouge Area of Concern from Mowed-down to Grown-up

Lola Valley Park,
Redford Township

## When will the Lola Valley Park Green Infrastructure be installed?

It is anticipated that site preparation, seeding and planting will take place in the fall of 2011. If the project is delayed, planting activities will occur in the spring of 2012. Maintenance of the site by the contractor will occur during the summer of 2012.

## What can I expect to see once the plant material has been installed?

Initially, the site will be covered with straw mulch to facilitate the germination of the native seeds. After about a week or so, the seeds will begin to grow and it may initially look like new lawn as the native grasses in the seed mix will germinate first. For the first couple of years, there may not be much color as native plants spend more time developing their roots and less energy producing flowers. It may just look like someone forgot to mow at first but, with time, the native wildflowers will start to appear and provide colorful accents throughout the growing season. It often takes three to four years for native wildflowers to bloom proficiently. Native plants will generally grow to a height of four to six feet depending on the species.

Seeded area

Year 1 growth

Year 3 growth

## Will I still be able to walk through Lola Valley Park?

Yes, it will be possible to walk through the park and avoid the Green Infrastructure areas. It is requested that the green infrastructure areas be avoided while the native plants are young to prevent damage to the establishing plant material.

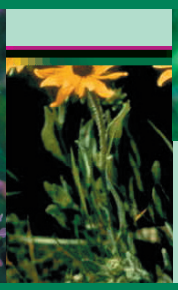
## What types of plants will be installed as part of the Green Infrastructure project?

The native seed mix contains a variety of native grasses and wildflowers suitable for growing in a river floodplain like Lola Valley Park. Below are a few of the 40+ species proposed for this Green Infrastructure project.

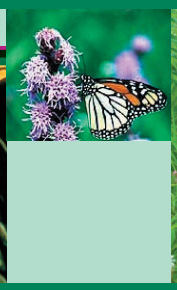
Big Bluestem

Bergamot

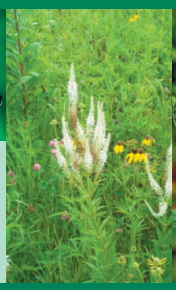
Black Eyed Susan



Rough Blazing Star

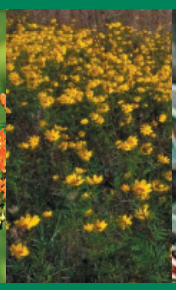


Culver's Root



Butter ÿ y Weed

Sand Coreopsis



Pur ple Cone ÿ ower

New England Aster

The Alliance of Rouge Communities - Working Cooperatively to Improve the River!
For more information go to: www.allianceofrougecommunities.com