

OXBOW RESTORATION

Re-Establishment Of Habitat And Recreation On The Rouge River

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Project Partners:



History of the Rouge River



The Rouge River Watershed occupies 467 square miles and runs through the most densely populated and urbanized land in the state of Michigan. More than one million people live in the watershed that encompasses 48 communities and three counties.

The Rouge River National Wet Weather Demonstration Project (Rouge Project) initiated in 1992 by Wayne County (Michigan) spanned 22 years. This cooperative effort between federal, state and local agencies was supported by multi-year federal grants totalling more than \$350,000,000 from the U. S. EPA and additional funding from local communities. The Rouge Project is a working example of how a systematic watershed approach to pollution control can result in cost-effective, timely achievement of designated uses in a water body. The early focus of the Rouge Project was on the control of combined sewer overflows (CSOs) in the watershed. CSO control alone would not provide sufficient improvements to meet water quality standards. Sanitary sewer overflows (SSOs), storm water runoff, flow variability, discharges from illicit connections and failed on-site sewage disposal systems and other sources would continue to degrade the river. Additionally, wetlands, habitat and lakes needed restoration to support the fishery and wildlife desired by the citizens including the restoration of an oxbow at The Henry Ford in Dearborn.

ROUGE PROJECT STATS

- 88 - CSO/SSO projects
- 47 - stormwater control projects
- 48 - ecosystem restoration projects
- 71 - public education & involvement initiatives
- 23 - enhanced river-based recreation opportunities
- 106 - IDEP and water quality monitoring activities



History of the Oxbow Restoration

As a result of continued flooding, in the 1970s the federal government constructed a concrete channel that was hydraulically efficient and cost-effective. Unfortunately, it destroyed much of the aquatic habitat and all but precluded the passage of most fish from the abundant Detroit River to the upper reaches of the Rouge River. In an effort to provide habitat, resting locations for fish, recreational opportunities and wetland areas, Wayne County (MI) and The Henry Ford began to restore the historic oxbow in 2000 under the Rouge Project and has continued to this day with additional partners including the Alliance of Rouge Communities, Wayne County, EPA and NOAA.



Concrete channel

Oxbow Restoration Objectives

- Restore valuable fish and wildlife habitat within the Rouge River.
- Restore functioning riverine wetlands that have been lost due to channelization of the Rouge River.
- Improvement of water quality.
- Increase floodplain storage.
- Provide educational/interpretative opportunities.
- Improve aesthetics.



Oxbow Restoration Phases

- 2002: Restore the wetland and aquatic environment which provided 13 acres of aquatic, wetland, and upland habitat in the oxbow channel.
- 2005: Restore the southeast open cut connection between the channelized Rouge River and the restored oxbow.
- 2018: Restore the northwest open cut connection between the channelized Rouge River and the restored oxbow.

2000	2002	2005	2015	2018
Design of oxbow channel restoration funded by the Rouge Project	Construction of oxbow channel wetlands funded by the Rouge Project	Construction of southeast connection to the Rouge River completed by Wayne County and The Henry Ford	Design of the northwest connection to the Rouge river funded by GLRI-NOAA	Construction of the northwest connection to the Rouge River begins funded by a grant from the U.S. EPA



Channel restoration using bioengineering techniques



Completed channel restoration



Project signage viewable by visitors to The Henry Ford



Channel construction



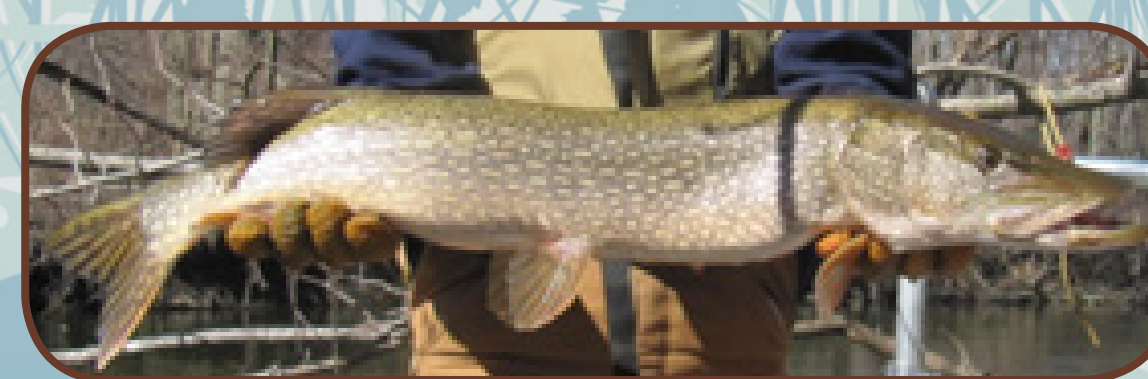
Adult brown snake found during herpetology survey

Oxbow Restoration Success

- Restored valuable fish habitat in a critical area.
- Restored 2,200-foot functioning riverine wetlands lost due to channelization of the river.
- Restored historic flow characteristics and ecological functions by hydraulically re-connecting the oxbow through open channels to the river.
- Improved water quality and increased wildlife usage.
- Modified riverbank to include bioengineering techniques, riparian habitat creation, and slope stabilization.
- Constructed hydraulic structures to withstand the high velocities associated with flood flows and contain the 100-year storm while providing the open connection.
- Restored ten acres of upland woodlands and meadows, associated trail system, programmatic amenities and educational opportunities.



Tour of oxbow at The Henry Ford



Northern Pike stocked at oxbow



White false indigo at oxbow



Trail system installed throughout oxbow



Juvenile black-crowned night-heron at oxbow