Riverine Habitat Restoration
Using a Full Management Tool Box

Brandy Siedlaczek, CSM/ Stormwater Manager
Merrie Carlock, LLA / Landscape Architect
City of Southfield, Michigan
John O’Meara, P.E., Principal Engineer
Environmental Consulting & Technology
Rouge Green Corridor

- Multi-partner planning effort for the main branch of the Rouge River.
- Encompassed both public and private lands.
- Identity program
- Logo & road crossing signage
- Public tours & workshops
- Informational poster
- Web links

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Rouge Green Corridor

- 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
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 river corridor 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
Restoration Site

- Management plan made recommendations for various road-bounded segments of the river through all three communities

- The Valley Woods site was identified as potential site for a large scale restoration project
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River Segment

- Quality aquatic habitat
- Mature forest canopy
- High diversity of fish species
- Macro-invertebrates
- Five kinds of turtles, two kinds of snakes, eight species of frogs, seventeen species of mammals and several species of freshwater mussels
**Wetlands**

- Largest floodplain wetlands in the corridor.
- Old ditches drained the wetlands, increasing flood flows to the river and impairing function of the wetland to filter out sediments and pollutants before they enter the river.
- Monoculture vegetation & invasive phragmites diminish function of wetlands.
Management Recommendations

- Restore capacity of wetlands to store and detain stormwater by filling existing ditches and rock armor inlets into wetlands.
- Manage invasive phragmites
- Allow spring flood waters to submerge the wetlands to discourage re-establishment of the invasive plants and reduce downstream flashiness and erosion.
- Detain and filter road runoff from entering the river
Management Plan Toolbox

- Herbicide treatments
- Excavation
- Prescribed burn
- Planting / seeding
- Hydrologic modifications
- Outfall stormwater structure
Herbicide Treatment

- Total treatment of 4 acres
- Focused applications on Phragmites.

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Herbicide Treatment

- Initial broadcast application in August
- Secondary application prior to excavation
- 3 Follow-up spot treatment applications

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Phragmites Stands
After 2 herbicide treatments
Excavation min. 4 feet in depth
Any remaining roots submerged

Excavation

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Excavation

- Removal of approximately 2000 cubic yards of material
Excavation

Created \( \frac{1}{2} \) acre of open water habitat
Prescribed Burn

- First prescribed burn within the community
- Multiple land uses surrounding the area
  - Commercial
  - Apartments
  - Corporate
  - Senior Housing
  - Highways
  - Natural area

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Prescribed Burn

- **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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Prescribed Burn

- Crew & Equipment
- Site Preparation
- Smoke Management
- Fire Period
Prescribed Burn
**Prescribed Burn**

- Removed built-up dead vegetative material
- Allowed wetland restoration with minimal disturbance of sensitive soils
- Release of native seed bank
- Allow access to soils for re-seeding and planting of new stock
Planting and Seeding

- Herbicide treatments of remnant invasives
- Restoration of wetland area with native plantings and wetland seed mix
- 5 acres of planting restoration

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• Hydrologic Modifications

Eliminate drainage ditches to provide for stormwater storage and restore function.
**Storm Water Outfall**

- Direct runoff from local streets
- Eroding sidewalk and stream banks
- Potential trailhead location
Outfall Stormwater Structure

- Filters pollutants from roadway
- Reduces erosion to the river
- New steps provide public access to river & preserve

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Outfall Stormwater Structure

- Interpretive signage provides public education about stormwater runoff.
Grant Support

- **Great Lakes Restoration Initiative**
- **Rouge River Wet Weather Demonstration Project**

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:

- Southfield portion GLRI Grant: $320,000
- Rouge Grant: $63,650
- Local Match $63,650
- Southfield Project Cost: $447,300
Questions?
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Brandy Siedlaczek, CSM/ Storm Water Manager
248 796 4806 bsiedlaczek@cityofsouthfield.com

Merrie Carlock, LLA / Landscape Architect
248 796 4618 mcarlock@cityofsouthfield.com

John O’Meara, P.E., Principal Engineer
Environmental Consulting & Technology
734 769 3004 jomeara@ectinc.com