



Rouge Growing Green

A Series of Green Infrastructure Workshops

Rouge Friendly Landscaping: Native Plants for Better Water Quality



Why is Green Infrastructure Important?



Noel Mullett, Jr.
Wayne County Department of Environment

What is Green Infrastructure?



- Green Infrastructure is nature...its vegetation and the soil it grows in.
- The purpose of GI is to sustain life on earth.



Green Infrastructure can be...

- Parks & Nature Preserves
- Native Trees
- River Friendly Lawns
- Wildflower Gardens
- Riparian Buffers
- Rain Gardens
- Green Roofs
- Native Plant Meadows
- Schoolyard Habitats
- No-Mow Areas
- Butterfly Gardens
- Streambank Stabilization



Why is Green Infrastructure Important?

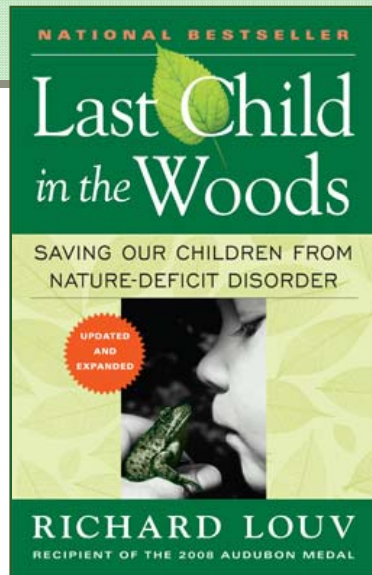


The Solution 2 Pollution is Vege2tion!!!! ☺

- Mother Nature is a Better Engineer than We Will Ever Be!!
- Plants are Our Teachers, Our Models, Our Waste Treatment/Pollution Control Experts
- Native Plants are the Heart, the Arteries, the Skin and the Hair of Our Earth.







KIDS NEED NATURE!!

Lost Green Infrastructure causes:

- Nature Deficit Disorder
- Attention Deficit Disorder
- Child Obesity & Diabetes
- Loss of Purpose/Spirituality
- No sense of “place”



Why is Green Infrastructure Important?

GI SAVES MONEY!!!

- Energy Savings
- Storm Water Detention
- Maintenance Cost savings

Hines Park Grow Zones

- \$85,000 storm water detention savings
- \$84,000 maintenance per year savings

Child chasing butterfly ... **PRICELESS!!**



Why is Green Infrastructure Important?

What Happens to the “Green Infrastructure”

Determines the:

- Quality of Our Water,
- Quality of the Air We Breathe
- Quality of Our Recreation Opportunities – the Quality of Our Communities

Ultimately “Green Infrastructure” Determines the:

- the Economic Viability of Our Communities,
AND
- the Quality of Our Lives!!!



So... What Can You Do ??



Use Your Head - You Live in a Watershed !!

- Recognize Your Home is Water Front Property
 - impervious surfaces
 - storm sewers
- Admit You are Part of the Problem and Want To Be Part of the Solution!!
- Use Water As a Resource Not a Waste.



REMEMBER....

Green Infrastructure Makes It Happen!!

The Solution 2 Pollution is Vege2tion!!!!!! ☺



Why is Green Infrastructure Important?



Rouge Growing Green

A Series of Green Infrastructure Workshops

Rouge Friendly Landscaping: Native Plants for Better Water Quality



The Greening of Detroit

Jill Dohner
Nursery Operations Manager



Mission Statement

The Greening of Detroit works to guide and inspire others to create a “greener” Detroit through planting and educational programs, environmental leadership, advocacy and by building community capacity.





- In the last 20 years The Greening of Detroit has planted over 58,279 trees & revitalized:
 - 1,217 city blocks
 - 1,379 vacant lots
 - 41 playfields
 - 92 parks

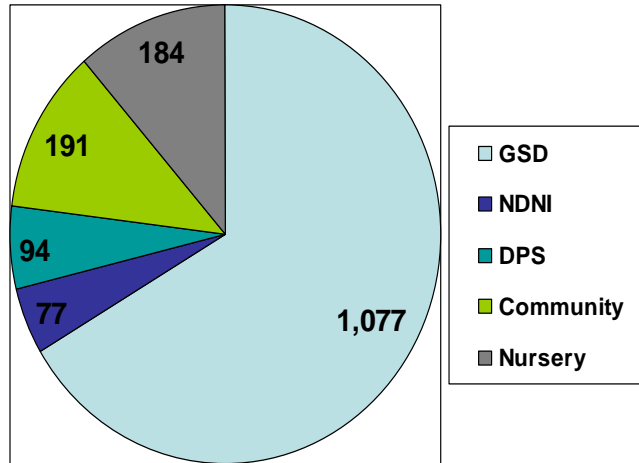


City of Detroit Planting Contract

- Renewed 2-year planting contract with the city (current agreement expires June 30, 2010)
- \$200,000 per year for tree planting on selected streets and parks in order to expedite canopy cover lost due to EAB, DED, neglect and decline
- Planting locations are determined by city forester; species selections are made collaboratively by city forester and the Greening forestry staff
- Current policy promotes: Species diversity by using over 50 tree species with 80/20 ratio of shade to ornamental trees
- Change in city administration may affect contract



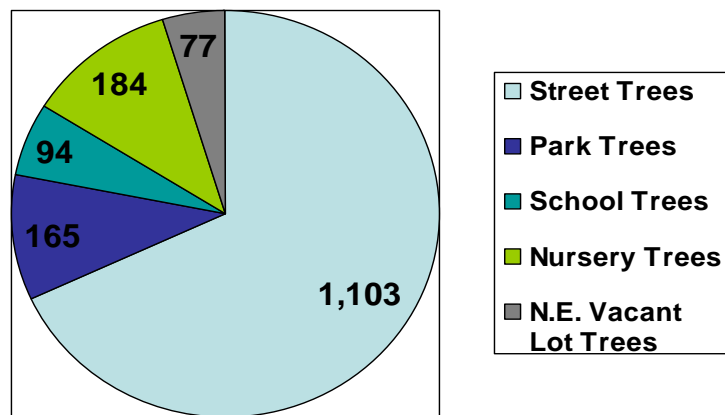
Spring, 2009 Tree Planting (Type)



1,623 Total Trees Planted



Spring, 2009 Tree Planting (Site)



Species Planted Spring 2009

- River Birch
- Tulip Tree
- Maples
- London Plane
- Common Hackberry
- Oak
- Linden
- Elm
- Japanese Zelkova
- Kentucky Coffee Tree
- Hop Hornbeam
- Serviceberry
- Crabapple
- European Hornbeam
- Horsechestnut
- Yellow Buckeye
- Golden Rain Tree
- Dawn Redwood
- Bald Cypress
- Autumn Gold Ginkgo
- Yellowwood
- Eastern Redbud
- Cornelian Cherry
- Ivory Silk Tree Lilac
- Winter King Hawthorn
- Flowering Pear



Forestry Programs

- Tree Plantings
- Arbor Day Celebration
- Spring Tree Sale
- Pruning Workshops
- New Professional Staff
- Tree ID Boot Camp
- Meyers Nursery
- Neighborhood Nurseries
- Future Goals & Projects



Tree Planting Season



Partnerships

- 116 block clubs and neighborhood organizations
- 122 Detroit public schools have participated in urban forestry education programs and 263 schools have planted trees
- City of Detroit partnership to plant trees throughout spring and fall





Community Planting

The Greening of Detroit works collaboratively with hundreds of community partners in Detroit, Hamtramck, and Highland Park to plan, implement, and maintain plantings on public property. Plantings range from “peas to trees” and include street tree plantings, greenways, park improvements, beautification initiatives, and urban vegetable gardens.



Partnerships

- City of Detroit
- Creekside CDC
- Neighborhood Centers Inc.
- Corporations
- Block Clubs
- Greater Corktown CDC
- Detroit Public Schools



Street Trees

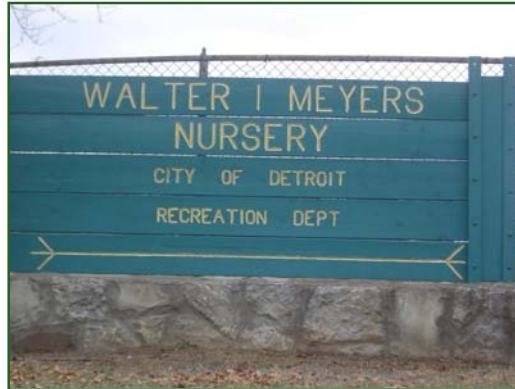


Neighborhood Tree Nurseries

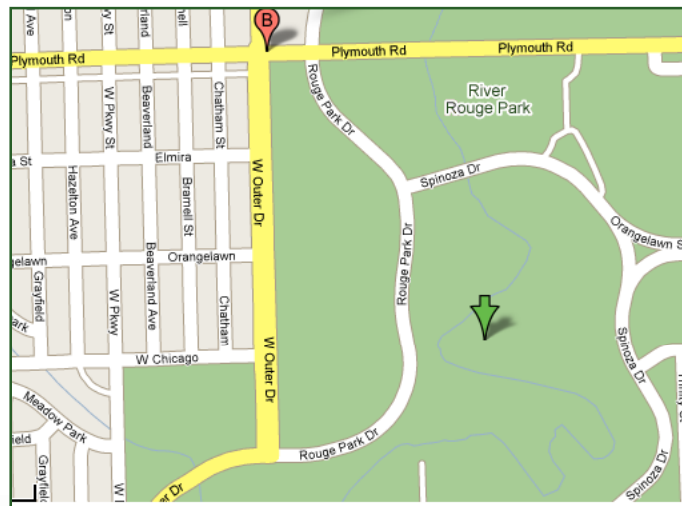


Meyers Tree Nursery

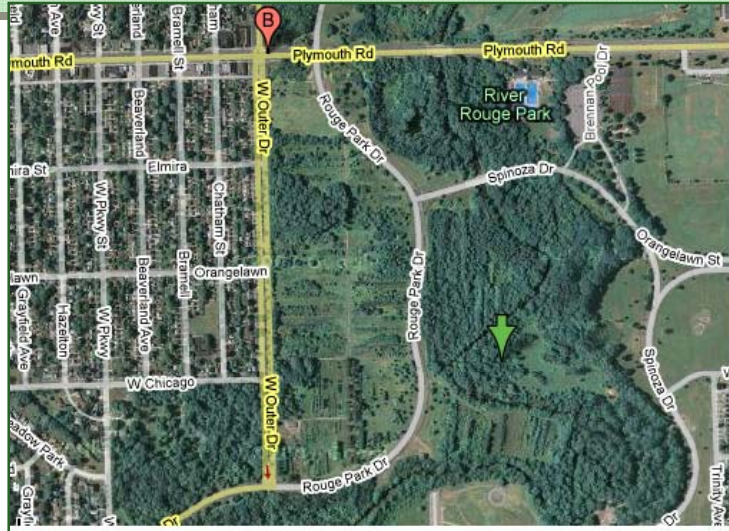
- Contains 125 acres
- Variety of tree species
- Wetlands, grasslands, forested parcels
- Within the City's Rouge Park



Meyers Tree Nursery



Meyers Tree Nursery

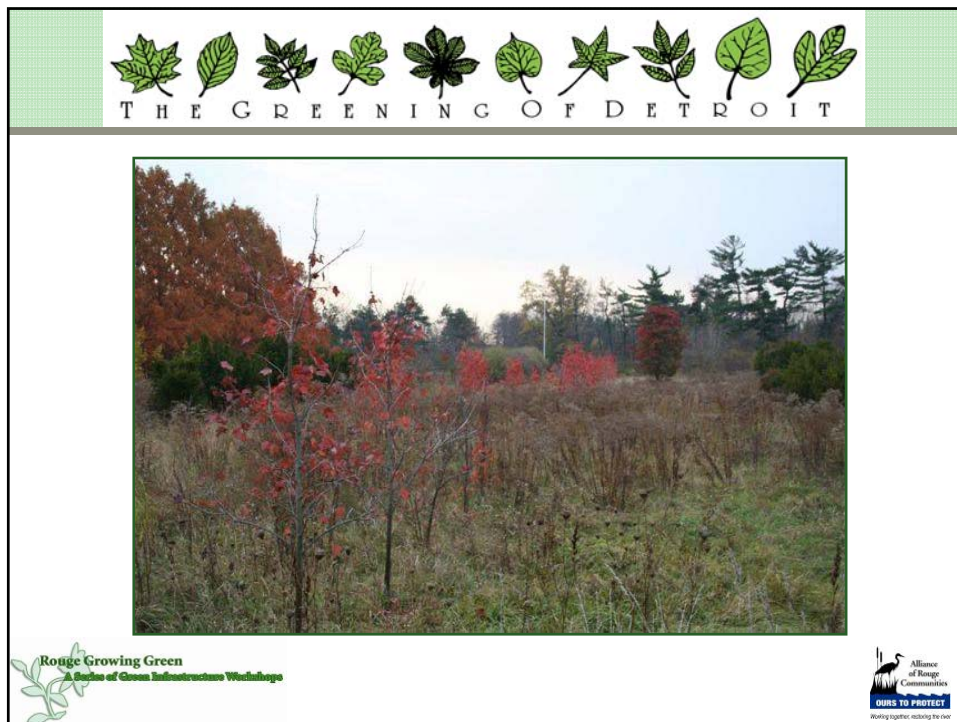


Rouge Growing Green
A Series of Green Infrastructure Workshops



Rouge Growing Green
A Series of Green Infrastructure Workshops





Goals of the nursery:

- Provide Detroiters with an efficient, cost effective means to reforest their city & a healthier environment
- Build awareness among residents about Detroit's urban ecosystem and the value of a healthy urban forest
- Expand EAB reforestation efforts
- Train Detroiters in nursery craft as a component of The Greening's green industries workforce development
- Plant 20,000 young trees in the first eight years, growing them for three to five years before out planting them into Detroit's public spaces
- Create a new venue for The Greenings environmental education and interpretive programming
- Provide a productive use for Detroit's Meyers Nursery



Maintenance



Rouge Growing Green
A Series of Green Infrastructure Workshops



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

Volunteerism



Rouge Growing Green
A Series of Green Infrastructure Workshops



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

School Plantings



Rouge Growing Green
A Series of Green Infrastructure Workshops



Rouge Growing Green
A Series of Green Infrastructure Workshops



Environmental Education Programs

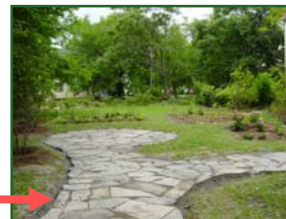


Each year, TreeKeepers Kids works with over 5,000 students and their teachers in 34 school yard habitats around the city



Community Planting Program

Greening works with 1,600 volunteers annually providing 4,800 hours of service





Advocacy

- Educate about the important role open space (green space) plays in a healthy environment and the economic impact of supporting green initiatives, all with the goal of gaining greater support for creating and sustaining Detroit's urban ecosystem.



Thank you!





Rouge Growing Green

A Series of Green Infrastructure Workshops

**Rouge Friendly Landscaping:
Native Plants for Better Water Quality**



Stewardship

Steve Ray

Dearborn Heights
Watershed Stewards
Commission



Dearborn Heights Watershed Stewards Commission



Resource for Watershed Information

10,000 Trees in 10 Years 

Water Quality Enhancement Projects



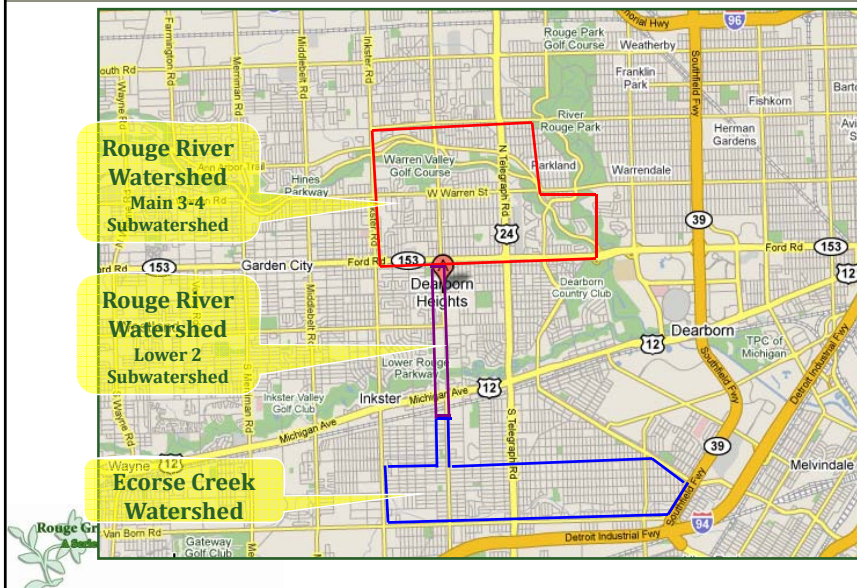
Ecorse Creek Cleanup



River Day/Rouge Rescue



Dearborn Heights is in Multiple Watersheds



Where does rainwater go (and all the stuff that's in it)?



Whatever is on YOUR driveway goes down the storm drain and ends up in the neighborhood detention pond



Central Park South,
Canton Township – 2009
Rouge River Bus Tour



Where does rainwater go (and all the stuff that's in it)?



Down your driveway and along the curb to the nearest catch basin...



...then through a pipe to the outfall where it dumps into the Rouge River...



Where does rainwater go (and all the stuff that's in it)?



...the Rouge River flows
through several
communities...

...and empties into the
Detroit River...



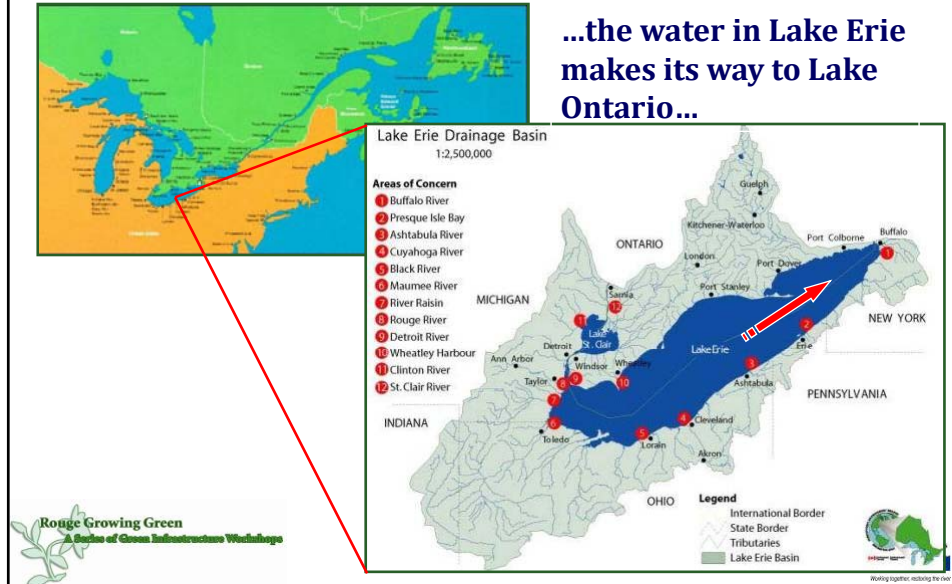
Where does rainwater go (and all the stuff that's in it)?

...from the Detroit River,
water flows into Lake Erie...



Where does rainwater go (and all the stuff that's in it)?

...the water in Lake Erie
makes its way to Lake
Ontario...



Where does rainwater go (and all the stuff that's in it)?

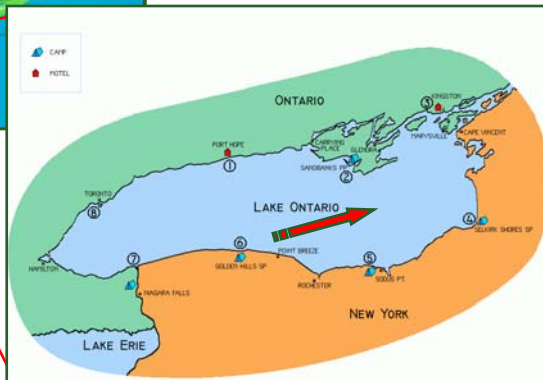
...first over Niagara
Falls then into Lake
Ontario...



Where does rainwater go (and all the stuff that's in it)?



...the water in Lake Ontario makes its way to the St. Lawrence River...



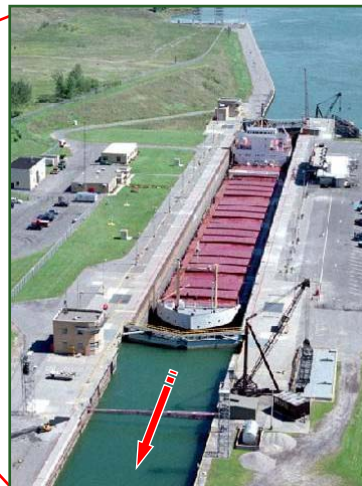
Rouge Growing Green
A Series of Green Infrastructure Workshops

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

Where does rainwater go (and all the stuff that's in it)?



...passing through the
St. Lawrence Seaway...



Rouge Growing Green
A Series of Green Infrastructure Workshops

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

Where does rainwater go (and all the stuff that's in it)?



...it finds its way from
the St. Lawrence River
into the Gulf of St.
Lawrence...

Rouge Growing Green
A Series of Green Infrastructure Workshops



Where does rainwater go (and all the stuff that's in it)?



...and finally from the
Gulf of St. Lawrence
into the Atlantic
Ocean.

Rouge Growing Green
A Series of Green Infrastructure Workshops



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

Where does rainwater go (and all the stuff that's in it)?



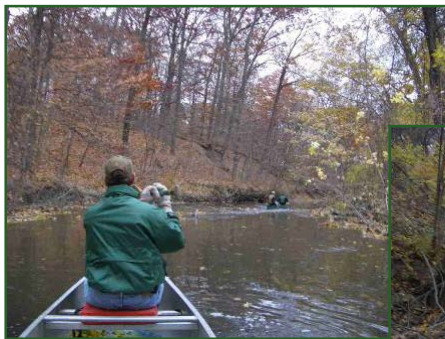
Whatever in on **YOUR**
driveway goes down the
storm drain and ends up in
THEIR backyard



 **Rogue Growing Green**
A Series of Green Infrastructure Workshops

 **Alliance of Rogue Communities**
OURS TO PROTECT
Working together, making the river

We want our River to more than just a drainage ditch



**Canoeing on the Rogue
River (Nov 2005)**



 **Rogue Growing Green**
A Series of Green Infrastructure Workshops

 **Alliance of Rogue Communities**
OURS TO PROTECT
Working together, making the river

Parkland Park Grow Zone 1 – Riparian Buffer



Rouge Growing Green
A Series of Green Infrastructure Workshops

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

Parkland Park Grow Zone 1 – Riparian Buffer



Rouge Growing Green
A Series of Green Infrastructure Workshops

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

Parkland Park Grow Zone 2 – Bio Swale



photo: steve ray 2007



2007 Rouge Rescue



2008 Rouge Recue

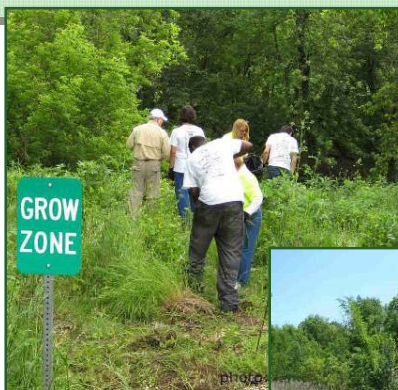


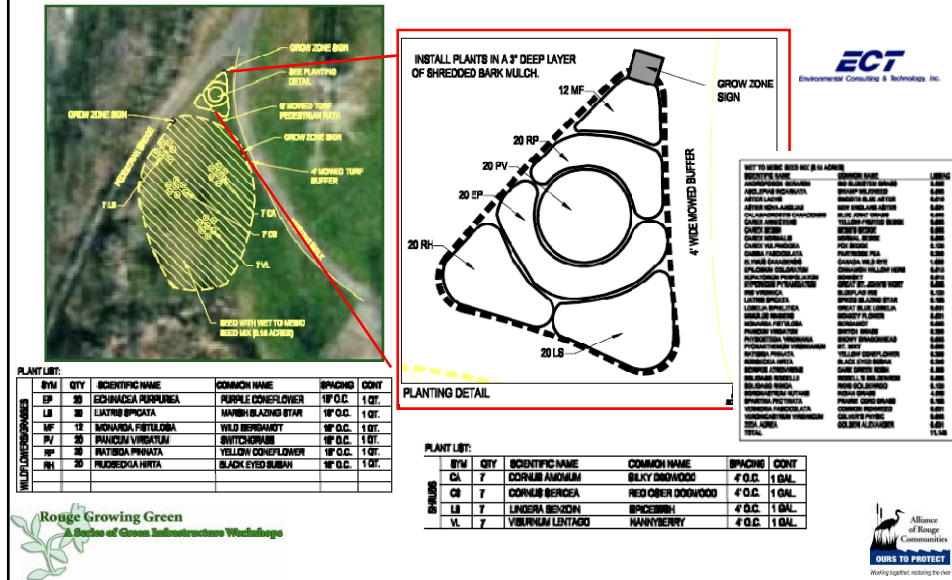
photo:



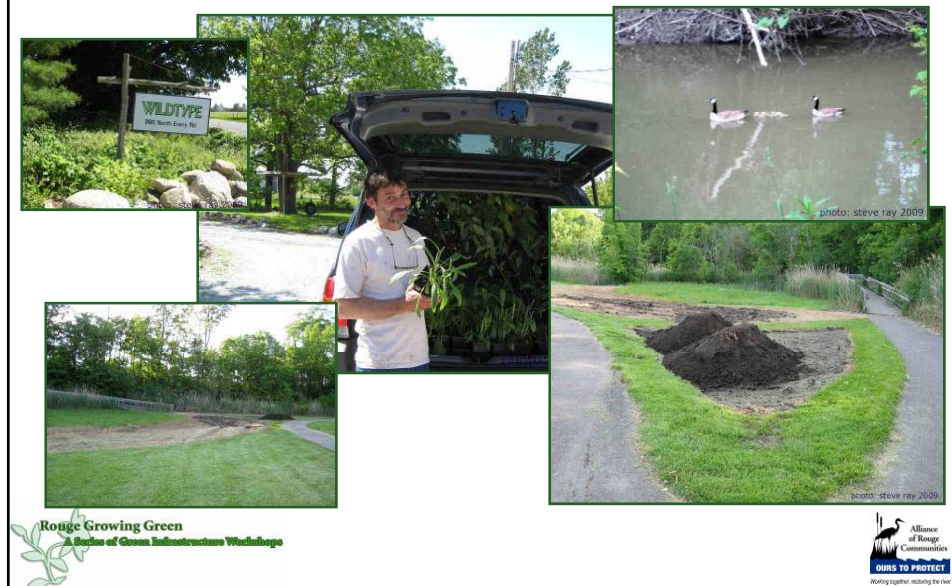
photo: steve ray 2008



Parkland Park Grow Zone 3 – Native Plant and Wildflower Garden



Parkland Park Grow Zone 3 – Native Plant and Wildflower Garden



Parkland Park Grow Zone 3 – Native Plant and Wildflower Garden

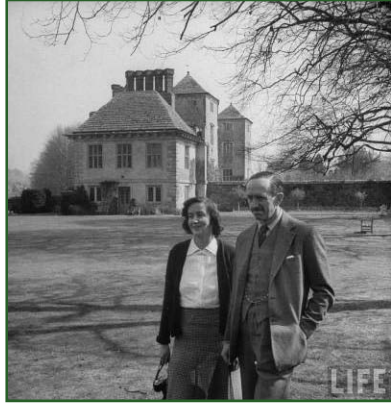


Stewardship

- Become a Watershed Steward
- Take personal responsibility for your stormwater
- Lead by example
- Focus on what you CAN do (not on what you can't)



We Need to Change the Definition of Beautiful



Lord and Lady Cranborne standing on the croquet lawn at the Cranborne manor in UK 1945 – Life Magazine



Lawn of the “Successful” American



My Raingarden

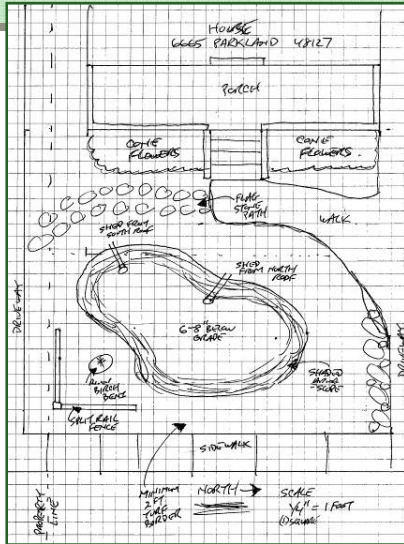


July 2006 – Bye, bye Ash Trees



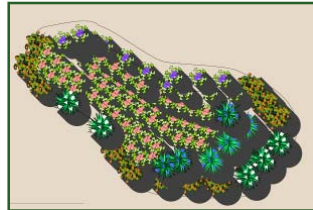
My Raingarden

Rain Gardens for the Rouge River (SOCWA)
A Citizen's Guide to Planning, Design, & Maintenance
for Small Site Rain Gardens



Rouge Growing Green
A Series of Green Infrastructure Workshops

~150 sq ft. clay
50/50 Sand & Compost



- Swamp Milkweed (Pink)
- Great Blue Lobelia (Blue)
- Black-Eyed Susan (Yellow)
- Calico Aster (White)
- Cardinal Flower (Red)



My Raingarden

Remove grass



Volunteer labor



Rouge Growing Green
A Series of Green Infrastructure Workshops



My Raingarden



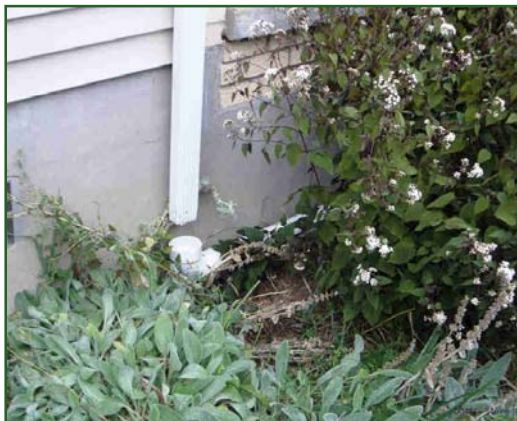
Dig the hole



Add the “sponge”



My Raingarden



Set up the plumbing



My Raingarden



Raingarden kit



Lay out the plants



My Raingarden



Add thick layer of mulch



**Water soaks in within
48 hours**



My Raingarden



Lot's of new friends



My Raingarden

Project Stats

- Established: September 2006
- Time: about 4 days (not including piping)
- Cost:
 - Sand & Mulch (delivered).....\$130
 - Compost (City of Taylor).....\$20
 - Plants (qty=100).....\$125
 - Labor.....Priceless



Plant Supplier

The Native Plant Nursery
Ann Arbor, Michigan
PH:734.677.3260

Retail sales conducted at:

Ann Arbor Farmer's Market
300 Detroit Street
Ann Arbor, Michigan

Saturdays, May through
July, and September
7:00 AM - 1:00 PM



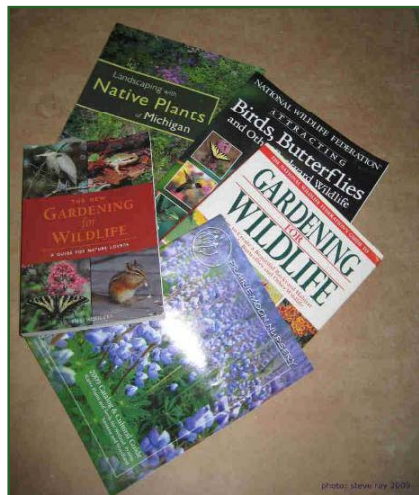
My Raingarden



6665 Parkland, 2007 – 1 year old



Research: Books



- Landscaping with Native Plants of Michigan
- Attracting Birds, Butterflies and Other Backyard Wildlife (NWF)
- Gardening for Wildlife (NWF)
- Prairie Moon Nursery Catalog
- The Native Plant Nursery Catalog



Research: Books



www.for-wild.org



www.nwf.org



*Saving the Great Lakes
One Rain Garden at a Time*

www.raingardens.org



www.socwa.org



www.wildflower.org



My Other Ongoing Native Plant Projects



Frontyard Woodland



Backyard Meadow



Backyard Wildlife Habitats

NWF Certification Criteria

- Provide elements from each of the following areas:
 - Food Sources - Native plants, seeds, fruits, nuts, berries, nectar
 - Water Sources - For example: Birdbath, pond, water garden, stream
 - Places for Cover - For example: Thicket, rockpile, birdhouse
 - Places to Raise Young - For example: Dense shrubs, vegetation, nesting box, pond
 - Sustainable Gardening - For example: Mulch, compost, rain garden, chemical-free fertilizer



Backyard Wildlife Habitats



Closing Comments

- Do some research: reading/surfing
- Keep it simple, start off slow
- Make it fun: Enjoy the process and the results



Shameless Plug for DH-WSC



Rain Barrels

\$75 donation

Get them while they last!



Rain Barrel Art



Thank you!



Email List:

<http://groups.yahoo.com/group/dhwatershed/>

Email Address: dhwatershed@yahoo.com



**Rouge Friendly Landscaping:
Native Plants for Better Water Quality**

