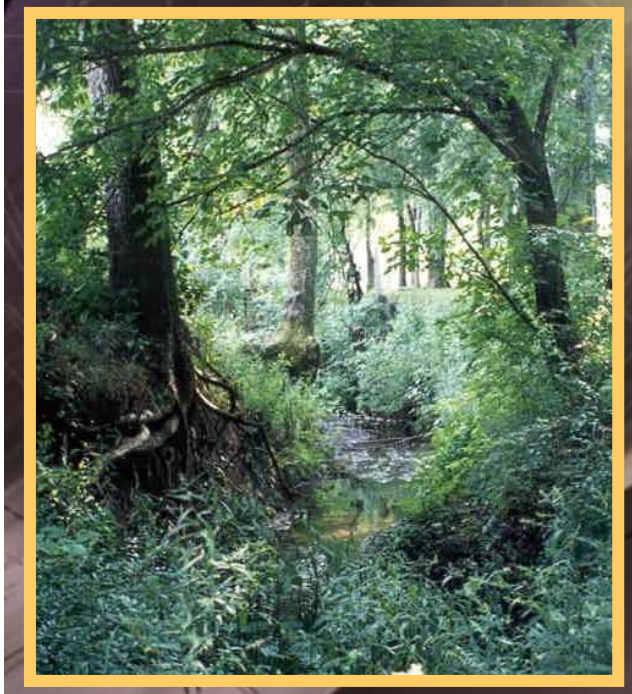

Going Native

The Importance of Native Plants in a Suburban Ecosystem

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Watershed Management Division
Wayne County
Department of Environment

Riparian Corridor Management
Technical Advisory Committee

Department Of Environment
Robert A. Ficano
County Executive
"Protecting and Restoring Our Environment"

Everything we do on the land has an impact on the water quality in our rivers, lakes and streams

Why be concerned?

- The leading source of pollution is storm water runoff – the source….US
  - Our everyday activities impact the quality of water in our lakes and streams

What can you do to prevent water pollution?

- Use slow release, low phosphorus fertilizer on your lawn or do not use fertilizer at all
- Keep fertilizers off paved surfaces and out of drainage paths
- Wash your car at a car wash or on the lawn
- Properly dispose of all household hazardous waste and never dump into a storm drain
- Pick up pet waste before it rains

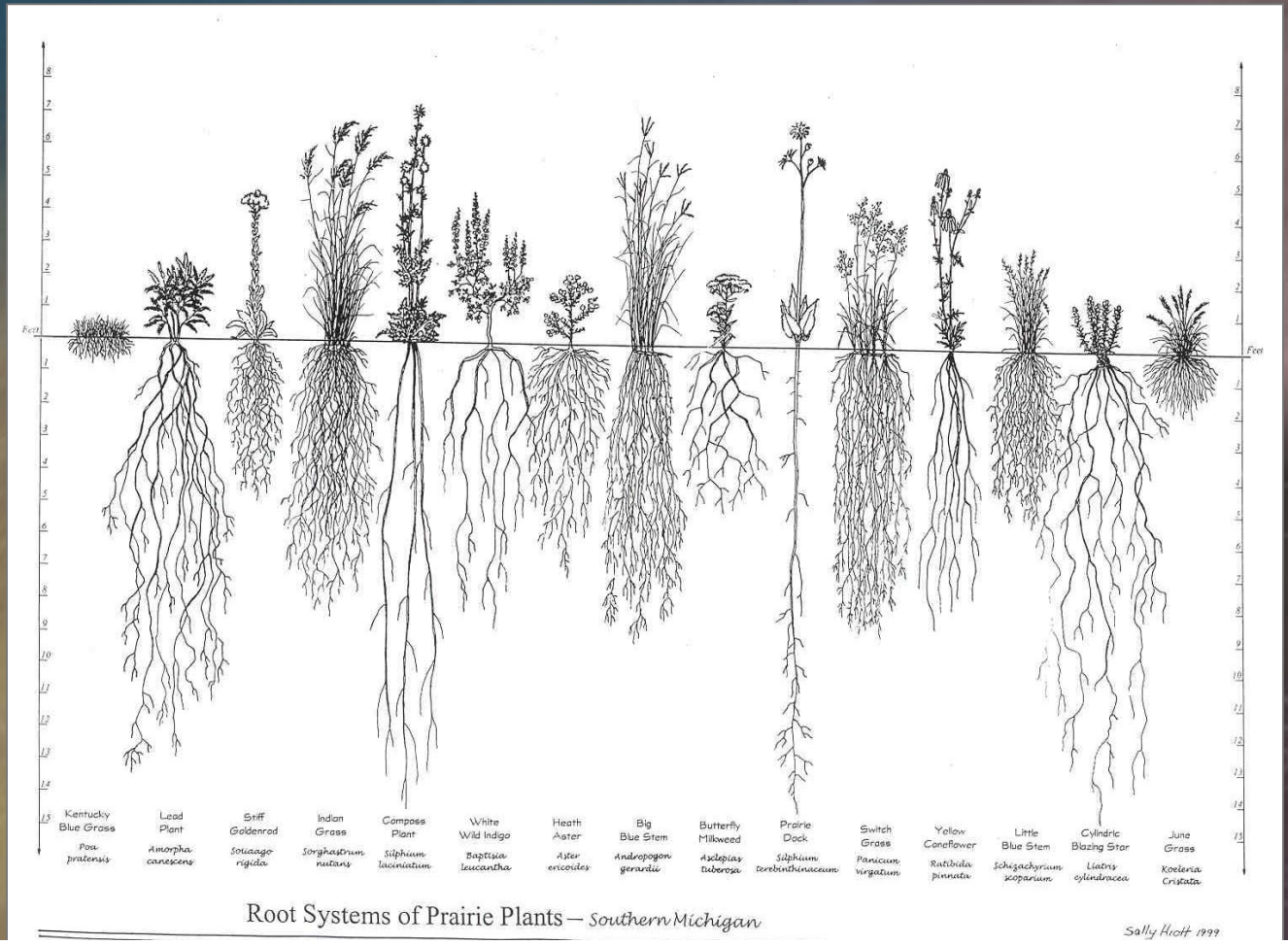
Simple changes in our behavior can have a big impact on aquatic ecosystems

What can you do to help improve water quality?

- Minimize paved surfaces on your property
- Reduce lawn size
- Restore native habitat
- Direct your downspout to a vegetated area
- Never fertilize lawn or other plants near streams or lakes
- Maintain a buffer of native plants along streams, lakes and wetlands

Root Systems make it Work

Native wildflowers and grasses have extensive root structures that provide channels for air and water to move into the soil.



Reduce flood and storm water effects

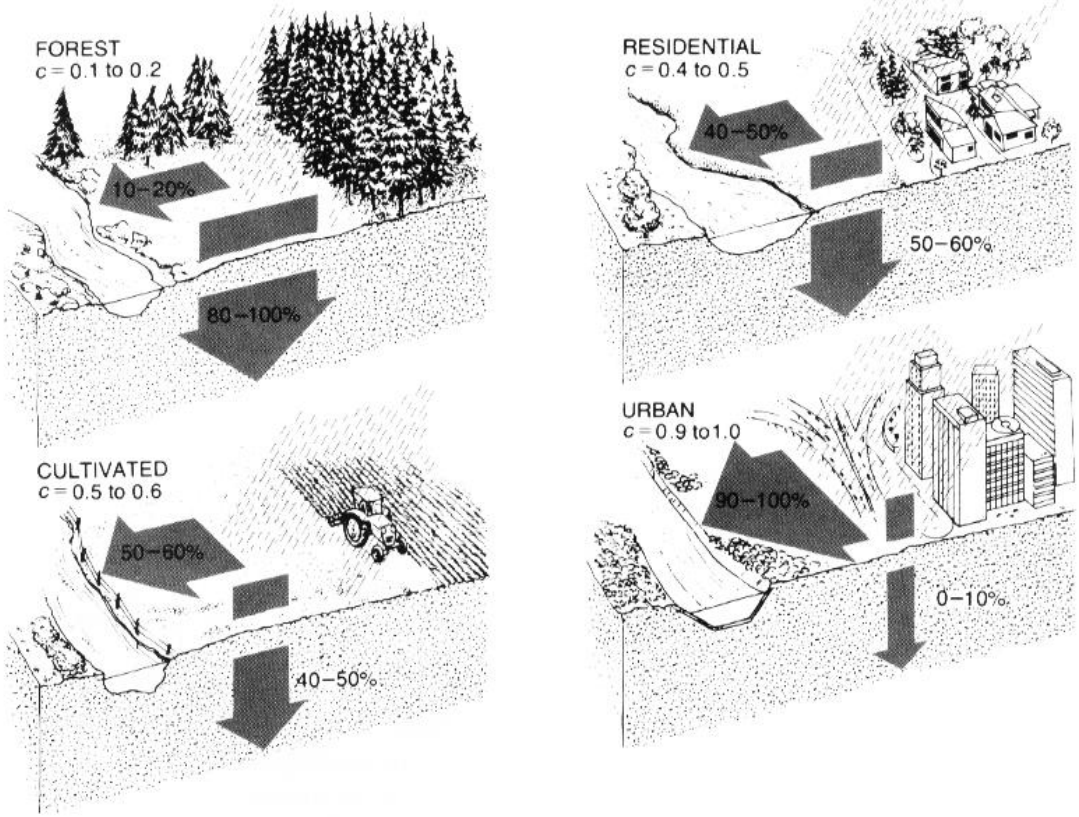


Fig. 8.7 Changes in the coefficient of runoff with land use and land cover.

- Storm water permeates into the ground rather than into the river as runoff
- Water is stored in the root systems of plants
- Peak flows are reduced

Protect water quality

- Urban runoff is reduced
- Plants uptake excess nitrogen, phosphorous, and other pollutants
- Sediment is filtered out
- Velocity of sheet flow is reduced

Provide wildlife habitat

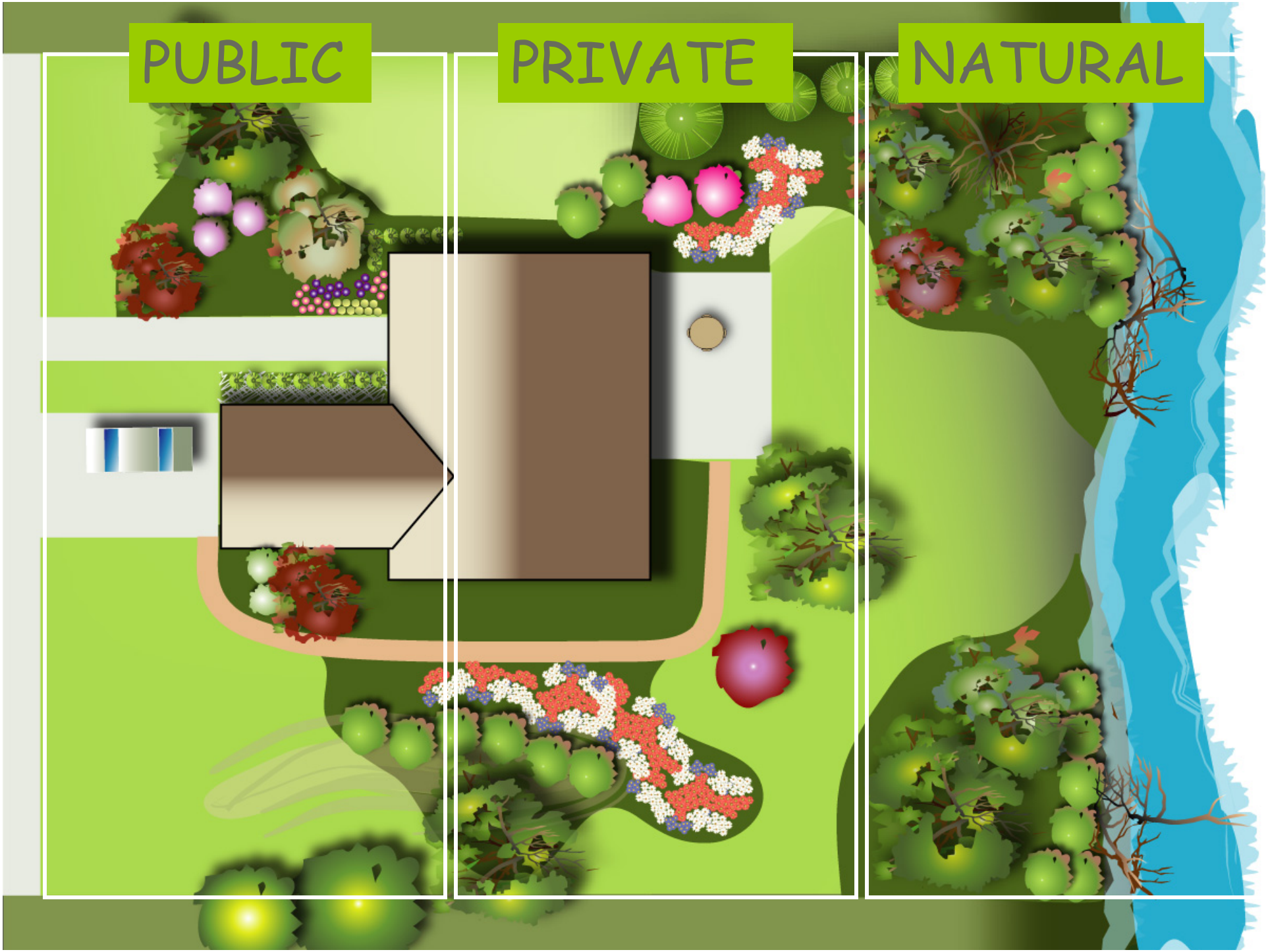
Many native plants, like this June Berry, provide wildlife with…

- Food
- Cover
- Places to raise young

What to do with your property?

- Stop mowing it
  - Let planned areas grow.
- Remove invasive vegetation
- Plant a variety of native trees, shrubs, grasses, and wildflowers
- Extend existing garden areas
- *ENJOY IT!*


PUBLIC
PRIVATE
NATURAL
RIPARIAN BUFFER
•Protect Water Quality
•Control Erosion
•Create habitat
•Use Native Plants
•Restrict Chemical use
CURB APPEAL
•Create a Formal Appearance
•Use Native Plants & Non-invasive Exotics
•Minimize Chemicals
OUTDOOR LIVING
•Create Interest
•Use Native Plants
•Encourage Birds, Butterflies & Bats

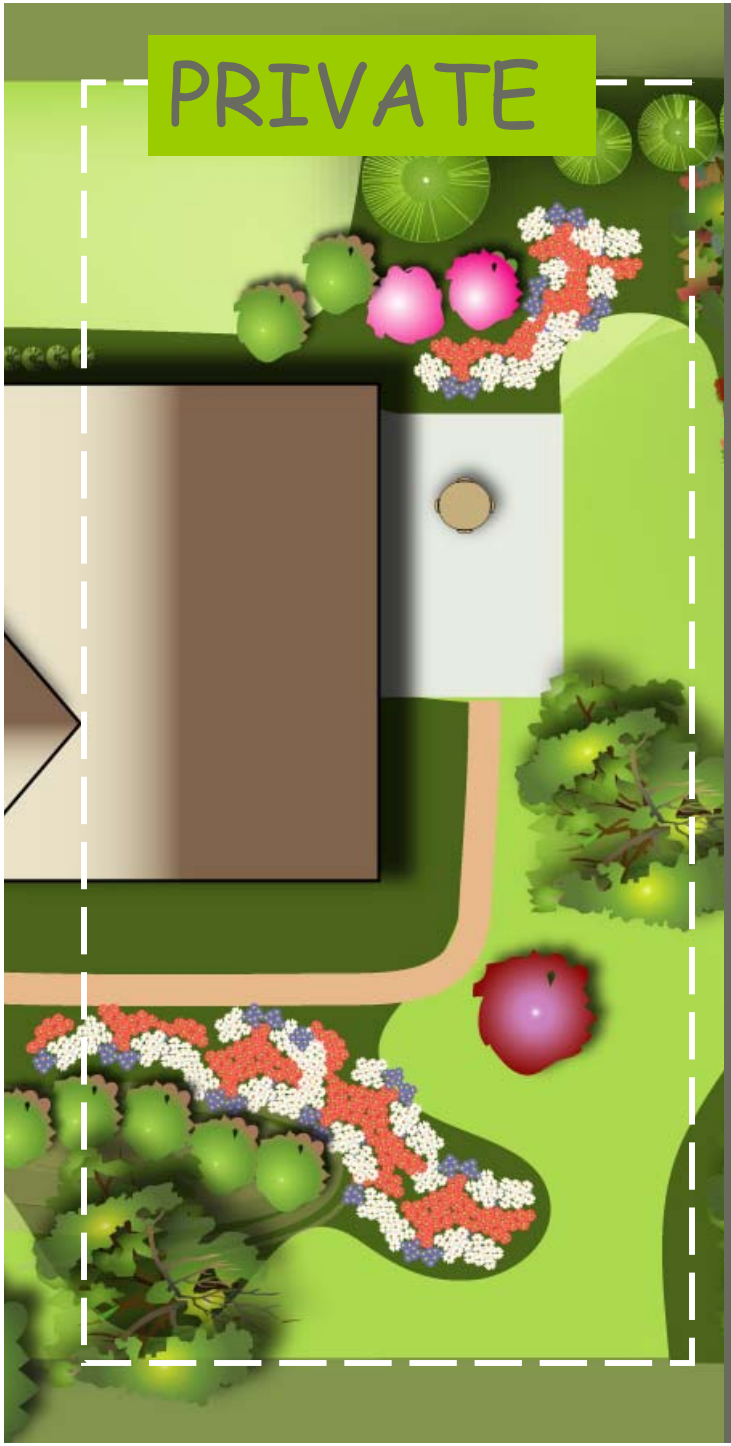

PUBLIC
PRIVATE
NATURAL

Front Garden

For Curb Appeal:

- Create a Formal Appearance
- Use Native Plants & Non-invasive Exotics
- Minimize Chemicals

Red Maple
White Oak
Bur Oak
Japanese Maple
River Birch
Serviceberry
Flowering Dogwood
Pagoda Dogwood
Witchhazel
Yew
Boxwood
Viburnums
Hosta
Wild Ginger
Wild Geranium



Patio Garden

For Outdoor Living Area:

- Create Interest
- Use Native Plants
- Encourage Birds, Butterflies & Bats

Red Maple
White Oak
Bur Oak
Japanese Maple
River Birch
Serviceberry
Flowering Dogwood
Pagoda Dogwood
Witchhazel
Yew
Boxwood
Viburnums
Hosta
Wild Ginger
Wild Geranium

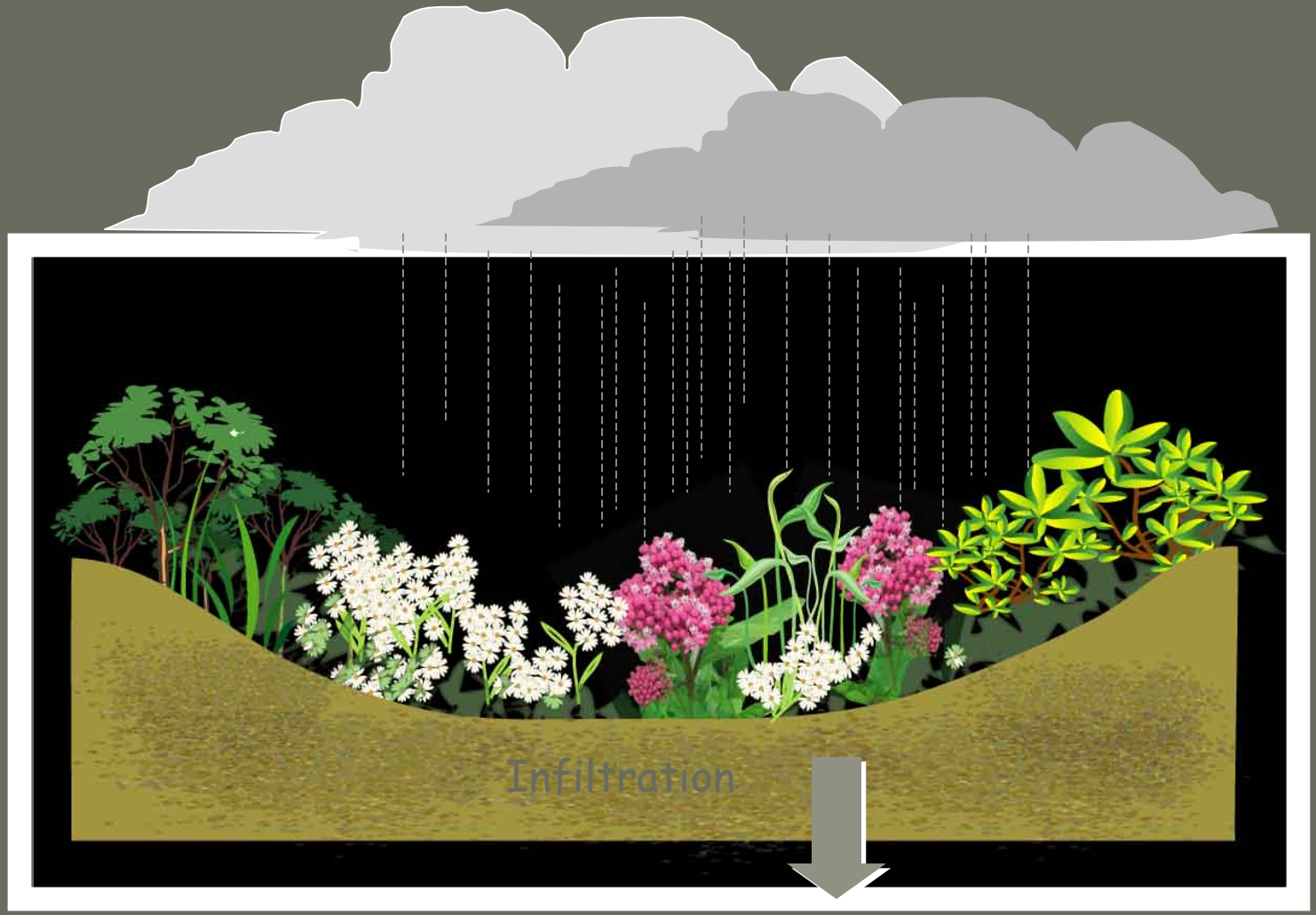
Rain Garden Plants

Meadow Blazingstar
Prairie Blazingstar
Turk's-cap Lily
Cardinal Flower
Blue Lobelia
Tufted Loosestrife
Sensitive Fern
Royal Fern
Obedient Plant
Bracken Fern
Mountain Mint
Brown-eyed Susan
Mad-dog Skullcap
Cup Plant
Short's Goldenrod
Tall Meadowrue
Ironweed
Culver's Root

Serviceberry
Black Chokeberry
Buttonbush
High Bush Cranberry
Red-osier Dogwood
Winterberry
Giant Hyssop
Canada Anemone
Angelica
Marsh Milkweed
New England Aster
Red-stemmed Aster
Boltonia
Turtlehead
Horsetail
Joe-Pye Weed
Boneset
Bottle Gentian
Sneezeweed
Blueflag

Collect & Direct Your Rainwater:

- Save $
- Use Native Waterside Plants
- Encourage Birds, Butterflies & Bats



- Moisture tolerant species at bottom
- Edge plant species tolerant of changing water levels

2 foot depth soil filtering mix:

Equal parts topsoil, compost, sand

Waterside Habitat Gardens

For Riparian buffer:

- Protect Water Quality
- Control Erosion
- Create habitat
- Use Native Plants
- Restrict Chemical use

Silver Maple
Tupelo
Buttonbush
Silky Dogwood
Red Osier Dogwood
Common Ninebark
Northern Arrowwood
Highbush Cranberry
Wild Raisin
Nannyberry
Willows
Shadbush
Speckled Alder
Spicebush
Winterberry
American Black Currant
Meadowsweet
Sweet Gale

Why use native plants?

- Improve biodiversity
  - A diverse landscape will support a larger number of species
- Reduce pollution
- Require less care than traditional ornamental plants
- Preserve our natural history and provide a 'sense of place'
- Save homeowners time and money

Native plant misconceptions

- Look unappealing and unplanned
- Annoy allergies
- Attract pests
- Offer gardeners a limited selection of plants

Native Shrubs and Trees

Nannyberry
(Viburnum lentago)

Red-osier dogwood
(Cornus stolonifera)

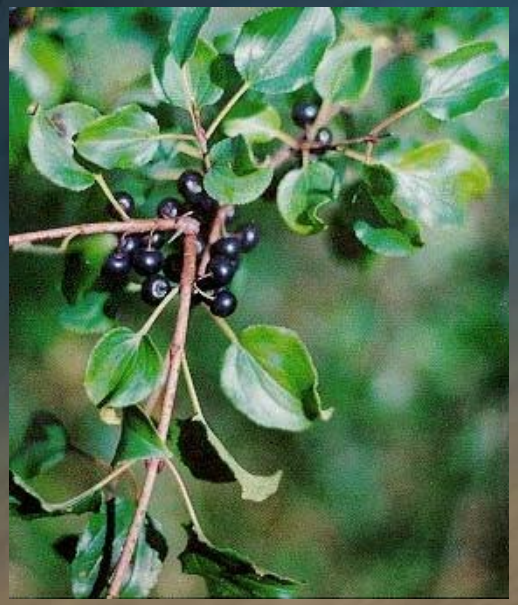
Mapleleaf Viburnum
(Viburnum acerifolium)

Common Ninebark
(Physocarpus opulifolius)

Winterberry *(Ilex verticillata)*

Native wildflowers & grasses

Exotic invasive plants



buckthorn

garlic mustard

Purple loosestrife

Grow Zones

A green path to sustainability

What is a Grow Zone?

A grow zone is a vegetated area with the purpose of improving water quality and wildlife habitat.

Grow Zones can be...

Rain Gardens
Native Plant Gardens
Bioswales
River Friendly Lawns
Wildflower Gardens
Riparian Buffers
Wet Meadows
Green Roofs
Prairies
Schoolyard Habitats
No-Mow Areas
Butterfly Gardens
Streambank Stabilization

Benefits of the Grow Zone Project

- Reduce stream bank erosion, sedimentation and nutrient pollution.
- Increase floodwater storage capacity and increase the rate that floodwaters recede along Hines Drive.
- Increase the diversity and types of habitats and natural areas for wildlife.
- Provide more active and passive recreational opportunities
- To reduce annual maintenance costs for Wayne County Parks by reducing the area of park land that is mowed intensively.
- To comply with Storm Water Permit (MIG619000) and to assist the local communities in compliance with their storm water permits

Existing Turf Grass vs. New Natural Area from Seed

Per Acre Cost Comparison

Existing Turf Grass

	Year 1	Year 5	Year 10	Year 20
Mowing	$3,500	$3,824.54	$4,433.70	$5,958.52
Fertilizer	$525	$573.68	$665.05	$893.78
Overseeding & Aeration			$1,075	$1,250
Annual per acre expense	$4,025	$4,398.22	$6,173.75	$8,102.29
Cumulative per acre expense	$4,025	$22,691.10	$48,767.40	$112,572.40

New Prairie, Savanna or Wetland from Seed

	Year 1	Year 5	Year 10	Year 20
Installation	$3,500			
Herbicide	$330			
Weed Control	$2,000			
Burn Management		$546.36	$633.39	$851.22
Annual per acre expense	$5,830	$546.36	$633.39	$851.22
Cumulative per acre expense	$5,830	$13,187.31	$16,175.05	$23,653.93
Per Acre Savings	($1,805)	$9,503.79	$32,592.35	$88,918.46
Percentage Savings	-44.80%	41.90%	66.80%	79%

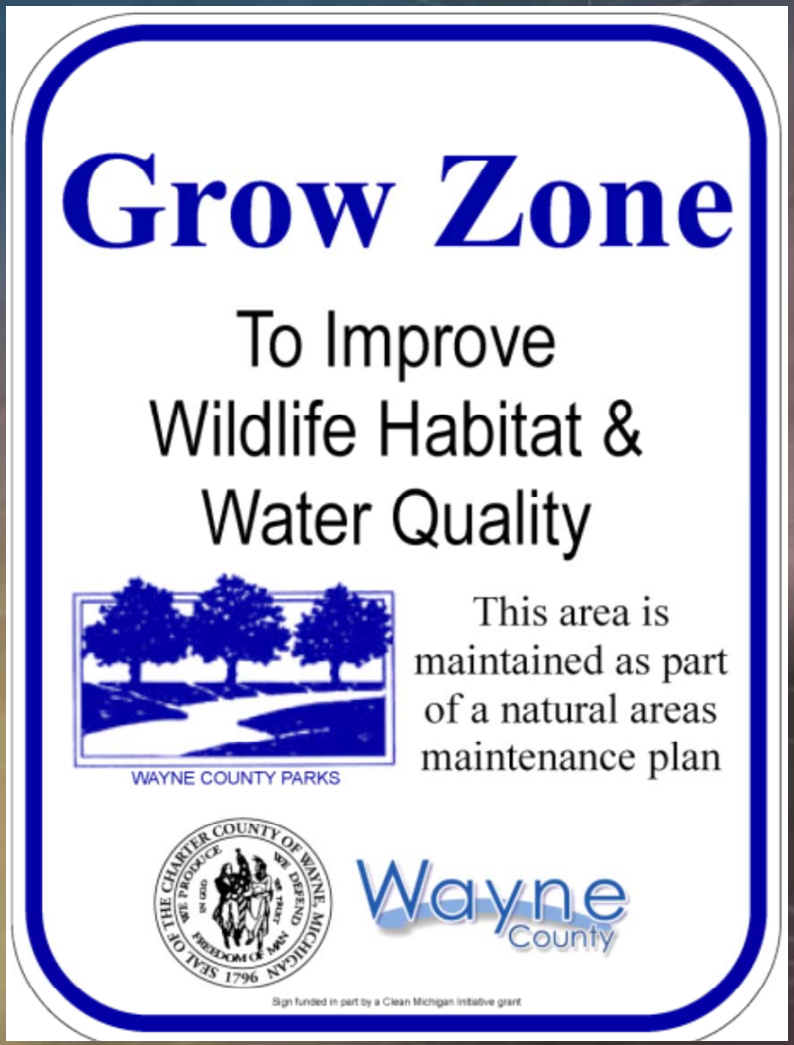
Assumptions: Project area is greater than one acre. Rate of inflation is 3

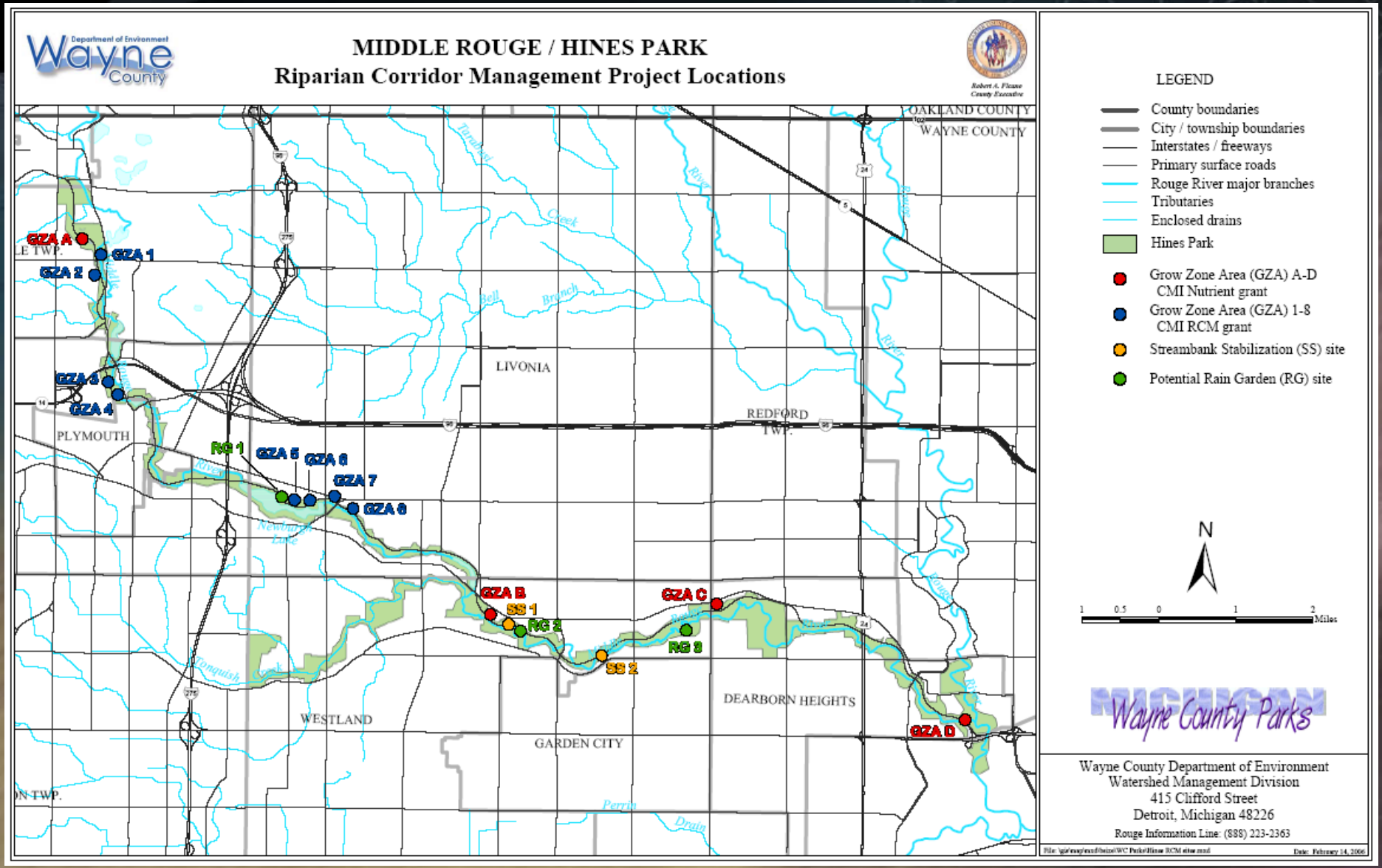
Lawn is maintained by a professional landscape maintenance company.

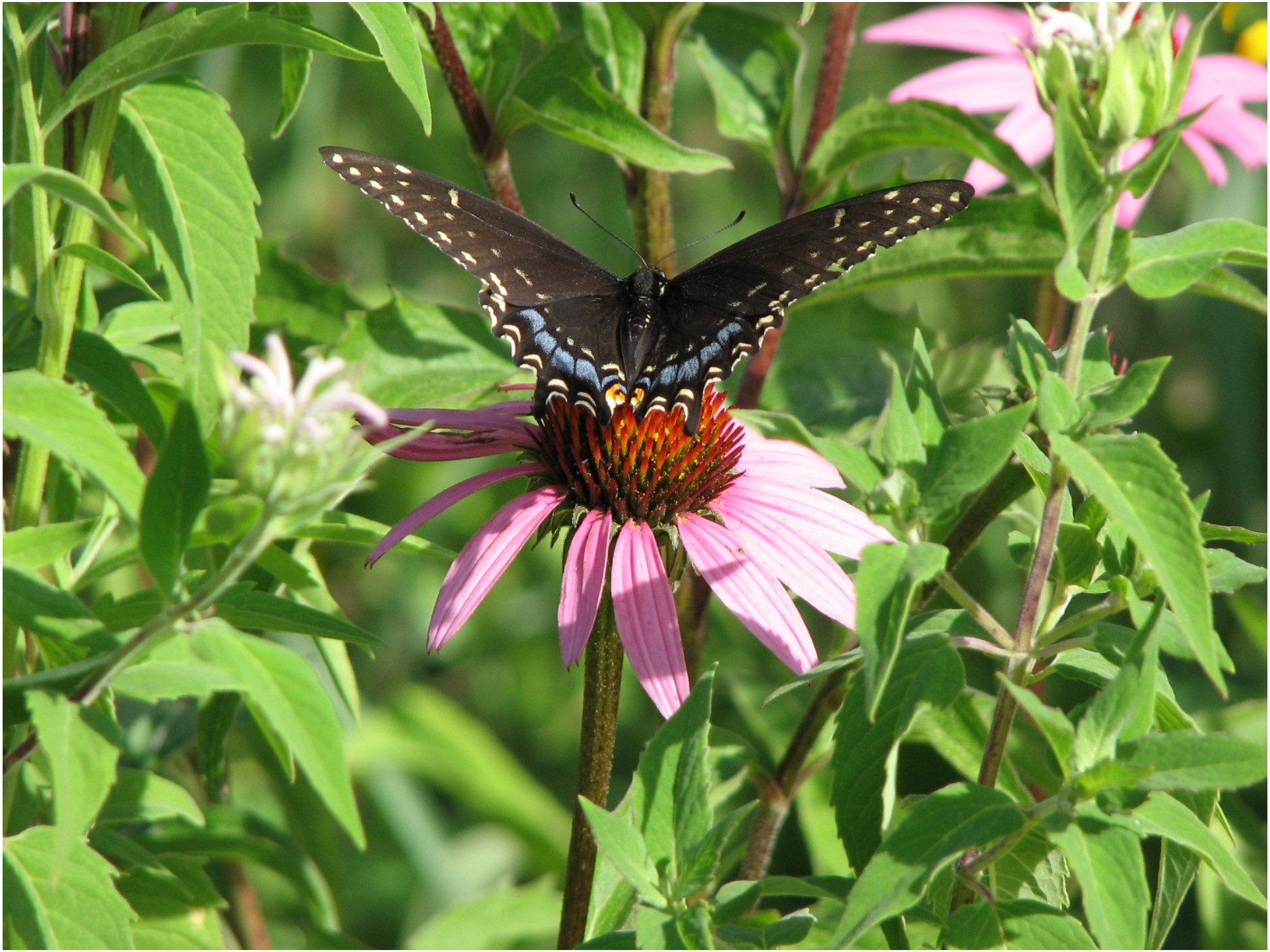
Public Education is Key

Grow Zone Public Relations Strategy

- Press Releases
- Public Information Documents
- Signage
- Active Public Participation




Department of Environment
Wayne County
MIDDLE ROUGE / HINES PARK
Riparian Corridor Management Project Locations
Robert A. Ficano
County Executive
OAKLAND COUNTY
WAYNE COUNTY
LIVONIA
REDFORD TWP.
PLYMOUTH
WESTLAND
GARDEN CITY
DEARBORN HEIGHTS
GZA A
GZA 1
GZA 2
GZA 3
GZA 4
RG 1
GZA 5
GZA 6
GZA 7
GZA 8
GZA B
SS 1
RG 2
SS 2
GZA C
RG 3
GZA D
Tarabusi Creek
Rouge River
Bell Branch
Newburgh Lake
Tonquish Creek
Perrin Drain
LEGEND
County boundaries
City / township boundaries
Interstates / freeways
Primary surface roads
Rouge River major branches
Tributaries
Enclosed drains
Hines Park
Grow Zone Area (GZA) A-D
CMI Nutrient grant
Grow Zone Area (GZA) 1-8
CMI RCM grant
Streambank Stabilization (SS) site
Potential Rain Garden (RG) site
N
1 0.5 0 1 2 Miles
MICHIGAN
Wayne County Parks
Wayne County Department of Environment
Watershed Management Division
415 Clifford Street
Detroit, Michigan 48226
Rouge Information Line: (888) 223-2363




Grow Zone
To Improve
Wildlife Habitat &
Water Quality
Wayne


Grow Zone
To Improve
Wildlife Habitat &
Water Quality
This area is
maintained as part
of a natural areas
maintenance plan
Wayne


Grow Zone
Buffers Improve
Wildlife Habitat &
Water Quality

The Challenge

This group can make a huge difference in the success of the Grow Zone Effort.

Contacting Wayne County and other partners and letting them know what you think of the Grow Zones.

Becoming a steward of an existing, install a new one on make your own at home.

Use them (Photography, nature walks, outdoor classrooms, taxonomy, bird watching.)