

## Selective Invasive Removal

After speaking to many professionals and land managers, one problem is significant, **"WE MUST REMOVE THE INVASIVE SPECIES!"**



Removing invasive species is extremely important to the health of our riparian areas. Please, before you plant anything, remove Asian Honeysuckle, Purple Loose Strife, Tree of Heaven and Garlic Mustard from the area selectively, so as not to remove any desirable species.

Save Maumee's restoration sites are prolifically covered in Asian Honeysuckle and we would like you to **IDENTIFY IT PROPERLY** and **REMOVE IT WHEREVER YOU SEE IT ~ ALL THE WAY OUT**

\*Competitive advantage over native plants for sunlight, moisture, space and nutrients in the soil.

\* Spreads by roots and seed, resulting in ability to further dominate an area. Competes with native plants for pollinators, resulting in fewer seeds set on native species.

\*Suspected that honeysuckles may produce allelopathic chemicals that enter the soil and inhibit the growth of other plants.



## WHY?

Exotic plants like these are not from this area, so they are not suitable to our local adapted wildlife. The fruit is carbohydrate-rich and does not provide migrating birds the high-fat content needed for long flights. So native species of birds can starve to death with a full belly. It would be comparable to humans eating lawn-grass. We cannot metabolize lawn-grass for vitamins and nutrients our bodies need.

# Save Maumee Grassroots Organization Riparian Buffer Initiative

Protecting desirable trees next to ditches and making streams healthy!



## Project Totals:

Adding 2,780 trees

Replanting 1.36 linear mile will = 4.13 acres of increased riparian buffer

164,020 gallons of untreated urban runoff captured/year

1,130 pounds of nitrogen load reduced/year

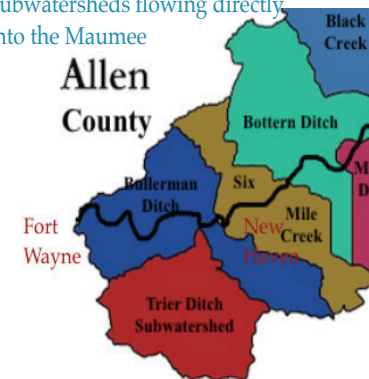
671 pounds of phosphorus load reduced/year

659 TONS of sediment load reduced / year

Grant recipients of the U.S. Forest Service have responsibilities to conduct their programs according to USDA's nondiscrimination policy. Save Maumee and the USDA are equal opportunity providers, employers, and lenders.

Our three project areas are **within the most critical areas** of the Upper Maumee River. **Bullerman Ditch, Six-Mile Creek and Trier Ditch** remain on the federal 303 (d) list of **impaired waterways**, as reported by IDEM and the Upper Maumee Watershed Management Plan.

Subwatersheds flowing directly into the Maumee



**You are part of the solution.**

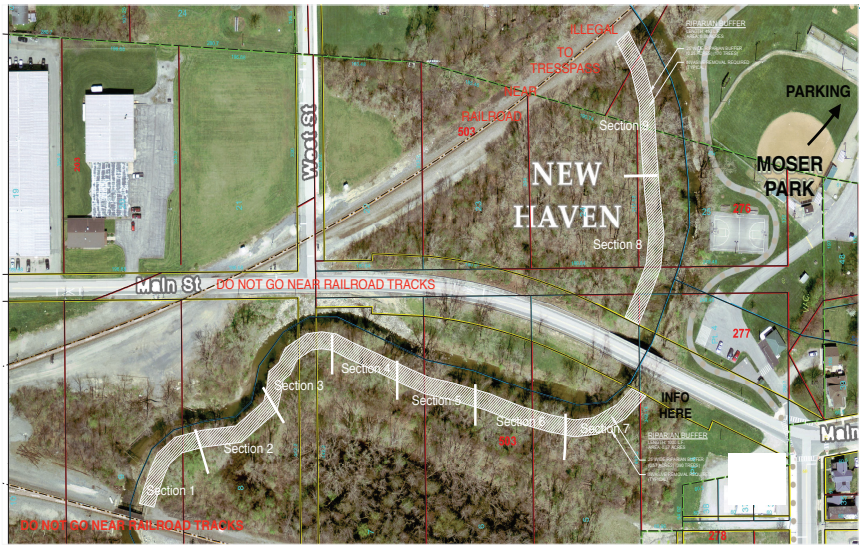
Our locations for the *Riparian Buffer Initiative* are on "violent" streams that are *flashy*. The water will rise quickly when it rains and then drop quickly to average stream-height after a few days. When the water rises and the trees are able to withstand the streams' velocity, it shows our restoration efforts are working.

Our reforestation efforts are looking for you to **help protect native species of trees and plants that lie next to perennial streams** and remove only the invasives!

**Research for *Save Maumee's Riparian Buffer Initiative* was conducted in cooperation with the USDA Forest Service through Great Lakes Restoration Initiative (GLRI) federal funding.**



LOCATION: SATURDAY APRIL 22, 2017



Moser Park: 601 W. Main Street New Haven, 46774 11am-5pm

SPECIES

**Trees:** River Birch, Northern Pecan, Shagbark Hickory, Hackberry, Sycamore, Quaking Aspen, Swamp White Oak, Burr Oak, Chinquapin Oak, Shumard Oak, Black Willow, Sassafras, Bald Cypress  
**Shrub Species:** Grey Dogwood, Silky Dogwood, Spicebush, Common Ninebark, Pussy Willow, Arrowwood Viburnum

LOCATION: FRIDAY APRIL 21 & SUNDAY APRIL 23



Heatherwood Park: 1000 Hartzell Rd. New Haven, 46774 11am-4pm

## How Trees and Plants Help to Improve Water Quality

### Vegetation

- holds soil in place during rain and flooding so it does not float down the river or stream
- slows water down, by filtering it deep into the soil through the roots, naturally eliminating runoff, retaining the water for a longer period of time, so the sediment / silt settles instead of eroding and causing sedimentation
- absorbs fertilizers and waste materials, removing excess nitrogen, nutrients, phosphorous, organic waste and toxins
- produce enzymes which break down toxic chemicals and also “eat” bacteria; improving water quality by using or retaining nutrients before it passes downstream which cause excessive algae blooms and bacterial growth
- alleviates flooding since vegetation & trees capture, store and slowly release water, all while slowing destructive energy from fast moving, rising water, protecting stream banks and shore lines
- recharges groundwater, potentially reducing water shortages during dry spells
- reduces pools of standing, stagnant water that create breeding grounds for mosquitos to carry disease and viruses to humans
- creates habitat for wildlife, providing food, breeding grounds and resting areas
- increases opportunities for recreation equating to economic dollars—bird watching, waterfowl hunting, fishing, photography—and outdoor education

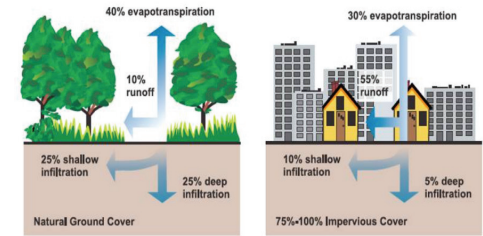


Image: EPA February 2003. Fact Sheet #841-F-03-003

*Mowing these areas would be inappropriate. Native plants are adapted to climate & soil, while the animals in the region are adapted to those plants; Natives meaning previous to European decent.*

**SEDIMENTATION** remains the #1 pollutant in *surface waters* (i.e. rivers, tributaries, streams).



## Riparian Buffer Zones

The term **riparian** applies to any land surrounding or abutting surface waters.

Save Maumee is working to increase necessary vegetation along rivers and streams, which will increase the health of the Maumee River and its shared waters, while providing many attributes, like filtering out a significant portion of potentially harmful pollutants with reforestation.

### WHY ARE TREES BEING REMOVED?

- ♦ **Allen County Drainage Board** - approve indiscriminate removal for "ditch maintenance"
- ♦ **Timber Value** - hardwood trees are a commodity to be bought and sold at high value
- ♦ **Disease** - due to the Emerald Ash Borer, 24% of Fort Wayne's tree canopy is slated for removal

♦ **Development** - trees are cleared and replaced with concrete and rooftops

♦ **Energy Easements & Eminent Domain** - "Trees pose a potential threat to power lines and are to be removed." - AEP 2011

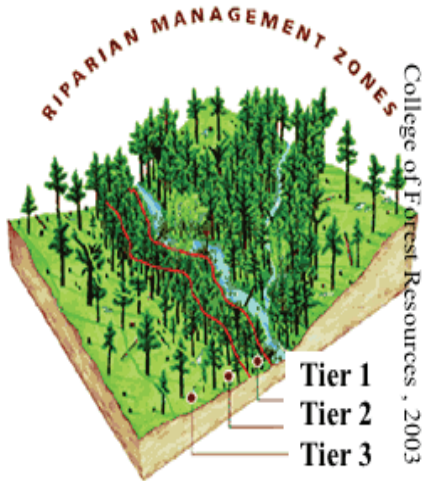
♦ **Invasive Species** - compete with native trees and plants for water, space, sunlight and soil nutrients and will change the face of our landscape if not eradicated.

♦ **Levees** - "vegetation must be removed 15 feet on either side of all levees." - Army Corps of Eng.

♦ **Wildlife** - beavers and deer no longer have wild grazing areas, so they feast on young trees wherever habitat can be found.

### Who supports trees and plants next to waterways?

Environmental Protection Agency (EPA), USDA Forest Service, Department of Natural Resources (DNR), National Resources Conservation Service (NRCS), Division of Forestry, Ohio EPA, Indiana Department of Environmental Management (IDEM), Maumee River Basin Commission, Purdue Extension Office, Watershed Leadership Academy, Citizens Action Coalition, Sierra Club, Plan-It Allen, Upper Maumee Watershed Management Plan and corresponding watershed management plans and peer reviewed research.



"Most of the forested corridor around the rivers have been removed."

- Plan-It Allen (Comprehensive Plan, 2007)

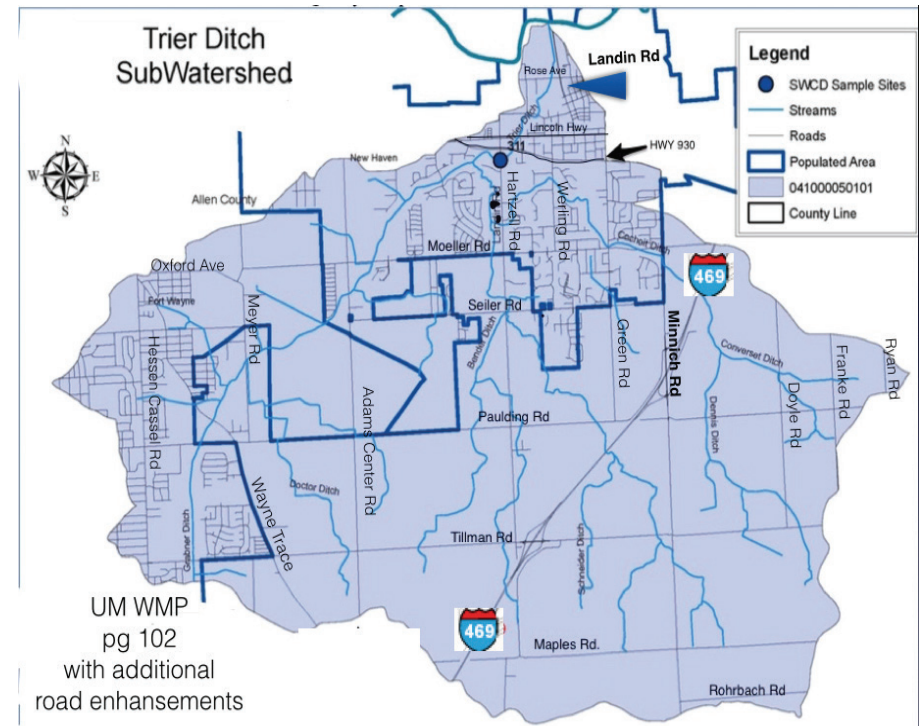
**Tier 1 - Stream Side Zone** - This is the closest zone to the stream. The trees and other types of plants physically protect the stream from runoff & erosion, and provide shade to the cool the water keeping it rich in dissolved oxygen (DO). A mature wooded forest and dense shrubs are preferred to hold the soil together and provide suitable habitat for sporting & native fish.

**Tier 2 - Middle Zone** - This is the zone that filters, slows down and absorbs runoff before it enters the stream. Wetlands or wooded forest capture and store sediment, nutrients and other pollutants.

**Tier 3 - Outer Zone** - This is the "buffer" of the buffer. It is the farthest zone from the stream and the closest to roads, farmland and towns. Trees, shrubs and even grass will absorb and filter surface runoff into the soil.

## Save Maumee's 12th Annual Earth Days ~ April 21, 22, April 23, 2017 Trier Ditch will be the largest area for restoration Planting 1,100 trees, including 19 native species

Save Maumee and its dedicated volunteers will install 2,800 linear feet of riparian buffers X 25 ft wide = 1.61 acre. Degraded status: Priority 1 due to: lack of riparian buffers, urban land-uses, CSO's, septic tank failures, Dissolved Reactive Phosphorus (DRP) and sediment.



- Adding 1,100 total trees would capture 64,900 gallons/year (59 gallons/tree).
- Nitrogen load reduction for this watershed would yield 426.66 lb. / year.
- Phosphorus load reduction would yield 253.32 lb. / year.
- Sediment load reduction would yield 253.34 tons / year.
- Partnerships with New Haven Parks and Recreation Dept. & East Allen Community Schools, to serve the public in this watershed & all downstream.

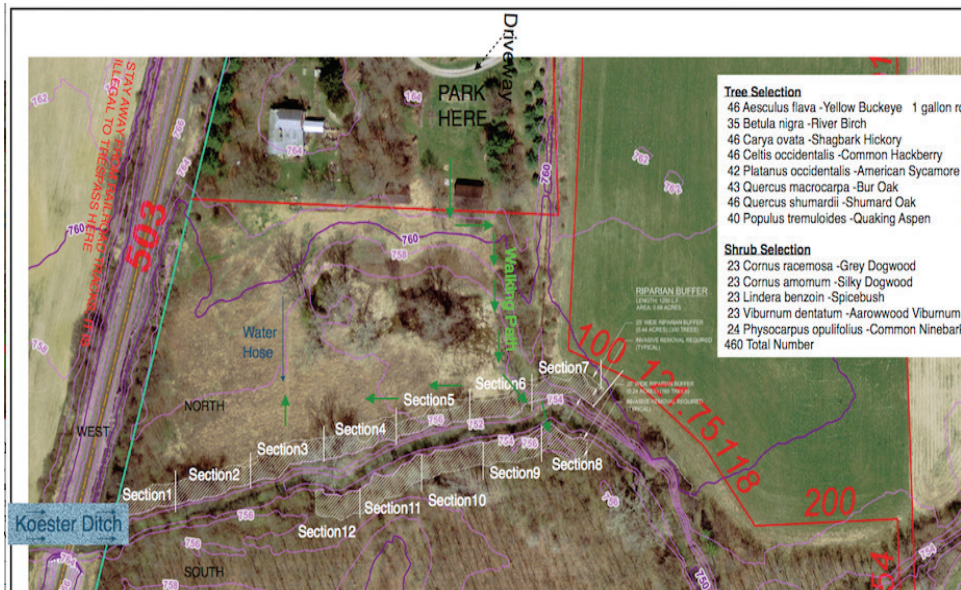


## Six-Mile Creek Subwatershed

### Completed 1 of 2 project sites in October 2016

460 trees installed, including 13 tree species

So far Save Maumee has installed 1,200 linear feet of riparian buffer X 25 feet wide, yielding approximately .68 acre of added forest along one of the (three) most degraded sub-watersheds to the Upper Maumee River. This is a priority area due to: **lack of riverbank buffers**, urban land-use, CSO's, septic tank failures, DRP, sediment and exceeding Total Suspended Solids 100% of the time. So far we have added 460 trees with the help of over 50 volunteers donating 457 hours of their time in 2016 to this site.



When completed, Save Maumee will install 2,400 linear feet of riparian buffers X 25 ft wide will equate to 1.33 acres of increased riparian buffer that will:

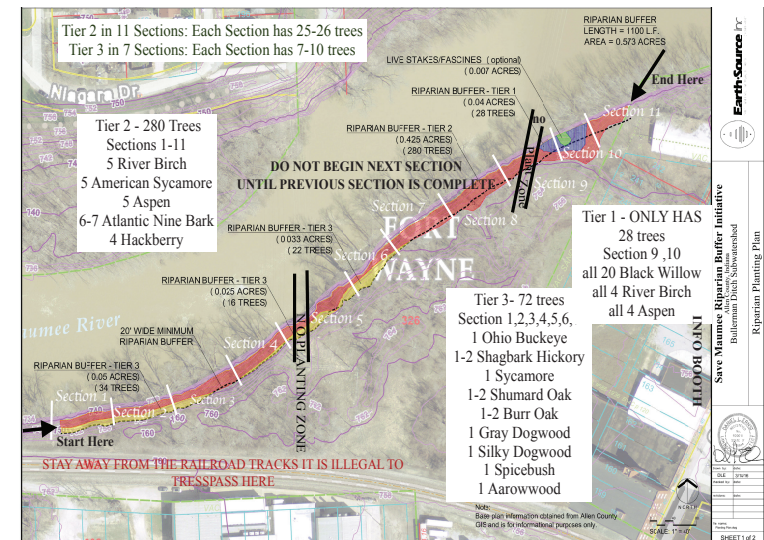
- \* Add 920 trees would capture 54,280 gallons / year (59 gallons/tree)
- \* Nitrogen load reduction for this watershed will yield 384 lb. / year.
- \* Phosphorus load reduction will yield 228 lb. / year.
- \* Sediment load reduction will yield 216 tons / year.

## Bullerman Ditch Subwatershed Project Area

### COMPLETED 1 of 2 Projects sites on April 17, 2016

380 Trees installed, including 13 tree species

So far Save Maumee has installed over 1,000 linear feet of riparian buffer X 25 feet wide, yielding approximately .573 acre of added forest along one of the (three) most critical areas of the Upper Maumee River's sub-watersheds due to: **lack of riparian buffers**, urban land-uses, CSO's and septic tank failures. So far we have added 380 trees to this sub-watershed with the help of 268 volunteers that have logged 700 hours to remove invasive species and plant trees.



When completed, Save Maumee will install 2,000 linear feet of riparian buffers X 25 ft wide will equate to 1.147 acres of increased riparian buffer that will:

- Add 760 trees to capture 44,848 gallons per year (59 gallons/tree)
- Nitrogen load reduction for this sub-watershed will yield 320 lb. / year.
- Phosphorus load reduction will yield 190 lb. / year
- Sediment load reduction will yield 190 tons / year