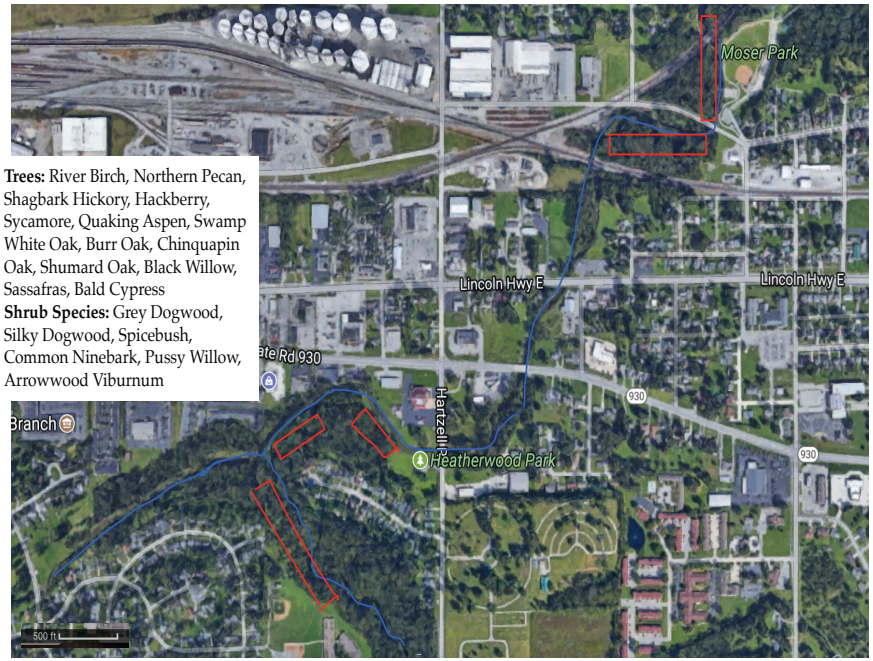
Trier Ditch Subwatershed

Largest Project Area Completed in April 2017
1,100 trees installed, including 19 native species

Save Maumee Riparian Buffer Initiative has installed over 2,800 linear feet of riparian buffers X 25 ft wide equating to 1.61 acres of increased riparian buffers. **Trier Ditch subwatershed is Priority 1 due to lack of riparian buffers, urban land-uses, CSO's, septic tank failures, Dissolved Reactive Phosphorus (DRP) and sediment.** In April 2017 alone, 209 different volunteers logged 1,387 hours to remove invasive species and plant native trees.



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

SAVE MAUMEE PROJECT AREAS ARE OUTLINED IN RED

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

Help to Plant 380 Trees in 2 days along The Maumee River & Rodenbeck Drain

~Saturday October 14, 2017~
~Sunday October 15, 2017~

Upcoming Save Maumee Events

October 7th, 12-4 PM
Seed Harvest at Eagle Marsh

October 14th & 15th 10:00 AM- 4:00 PM
Riparian Buffer Initiative Tree Planting
Deetz Nature Preserve in New Haven, IN

November 6th, 6:00- 8:00PM
3rd Annual Member Meeting, Don Hall's Gas House on Superior Street

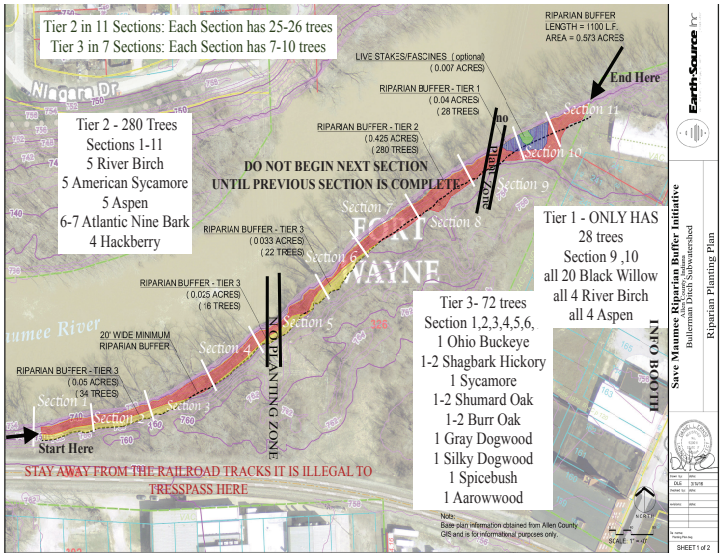
February 17th, 2018 5-10 PM
2nd Annual Fundraiser at TekVenture, 1550 Griffin Street in "River City"

LOCATION: Deetz Nature Preserve 7801-8499 Parrott Road Fort Wayne, IN 46803
(cross-street where East Parrott Rd. turns into Rose Ave. and T's at Hartzell Rd.)

SaveMaumee.Org/all-upcoming-events/

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 due to; lack of riparian buffers (Priority 3), urban land-uses, CSO's and septic tank failures (Priority 2). So far we have added 380 trees to this sub-watershed with the help of 268 volunteers, who have logged 700 hours of their time, to remove invasive species and plant trees in April 2017.



October 2017 the entire Bullerman project will add 2,000 linear feet of riparian buffers X 25 ft wide, to equate to 1.147 acres of increased riparian buffer that will:

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

*Upper Maumee Watershed Management Plan. September 2014: *6.3.2.1 Action Register*.

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.

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 reforesting 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.

SAVEMAUMEE.ORG RIPARIAN BUFFER INITIATIVE 2016-2019

Selectively remove only the Invasive Species

After speaking to many professionals and land managers, one problem is significant,
"We must remove the invasive species and then the native species will return."

Selectively removing invasive species is extremely important to the health of land and riparian areas. Please, before you plant anything, REMOVE: **Japanese (Asian) Honeysuckle, Autumn Olive, Tree of Heaven, Japanese Knotweed, Purple Loose Strife, Field Bindweed, Reed Canary Grass and Garlic Mustard** (among others) from an area selectively, so as not to remove any desirable species.

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

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.

WHY?

***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.**

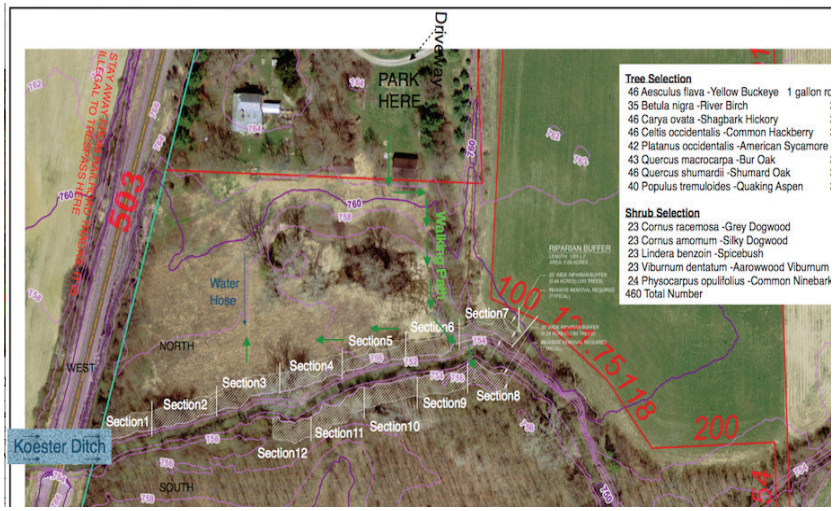
Six-Mile Creek Subwatershed

COMPLETED 1 of 2 project sites in October 2016

460 trees installed, including 13 tree species

Seeking next site scheduled for Earth Day 2018 planting

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. Priority 1 due to urban land-use, CSO's, septic tank failures, DRP and sediment. Priority 2 due to lack of riparian buffers. So far we have added 460 trees with the help of over 50 volunteers, who have logged 457 hours of their time, to remove invasive species and plant trees in 2016.



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 to capture 54,280 gallons / year (59 gallons/tree/year)
* Nitrogen load reduction for this watershed to yield 384 lb. / year.
* Phosphorus load reduction to yield 228 lb. / year.
* Sediment load reduction to yield 216 tons / year.

*Upper Maumee Watershed Management Plan. September 2014: *6.3.2.3 Action Register.*

How Trees and Plants Help to Improve Water Quality

Vegetation

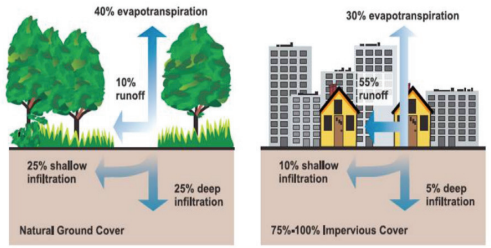


Image: EPA February 2003. Fact Sheet #841-F-03-003

- 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

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).

"Most of the forested corridor around the rivers have been removed."
- Plan-It Allen, Allen County's Comprehensive Plan 2007

Riparian Buffer Zones

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 fish.

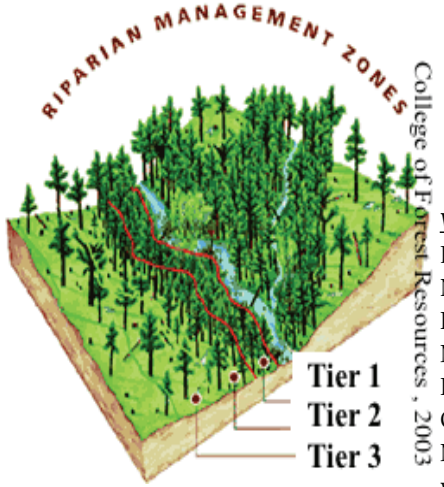
Tier 2 - Middle Zone - This is the zone that filters, slows down and absorbs runoff before it enters the stream. Wetlands or wooded forest capture and store sediment, nutrients and other pollutants.

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

Current reasons why trees are being removed:

- **Allen County Commissioners & Drainage Board** - indiscriminate removal of ALL vegetation on both sides of ditches for "maintenance"
- **Timber Value** - hardwood trees are a commodity to be bought and sold at high value
- **Development** - trees are cleared and replaced with concrete and rooftops
- **Disease** - due to the Emerald Ash Borer, 24% of Fort Wayne's tree canopy is slated for removal
- **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."-ACE
- **Wildlife** - beavers and deer no longer have wild grazing areas, so they feast on young trees wherever they can be found.



Who supports trees and plants next to waterways?
Environmental Protection Agency, USDA Forest Service, National Resources Conservation Service, Division of Forestry, Indiana Department of Environmental Management, Ohio EPA, 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.