



# LAND TO LAKE

**magazine** issue 10 | spring 2019 | [landtolake.com](http://landtolake.com)

Local Conservation News & Events

Upper Maumee Watershed Partnership

MS4: Urban Stormwater

The Nature Conservancy: Water is Key



# Source Water PROTECTION

# COMMUNITY EVENTS | NEWS

## Spring/Summer 2019

### Clean Up Your Park Day

April 6, 9:30-11:30 am

See **Spring Clean-up Events** page 6

### Earth Day: April 22

Learn more at: [www.earthday.org](http://www.earthday.org)



### Arbor Day: April 26

Discover ways to celebrate at:

[www.arborday.org/celebrate](http://www.arborday.org/celebrate)



### Hicksville Beautification Committee Plant Sale

May 10, 8 am - 6pm, May 11, 9 am - 1 pm., Hicksville Township Bldg

### Lilac Festival & Street Fair

May 11, 10:00 am - 4:00 pm.

Downtown Defiance

[visitdefianceohio.com/events/](http://visitdefianceohio.com/events/)

### N.W. Ohio Maumee Valley Tri-Adventure Race

May 18, 7:30 am

Independence Dam State Park

[maumeetriadventurerace.net](http://maumeetriadventurerace.net)

### Defiance County Master Gardeners' Annual Plant Sale

May 18, 8:00 am - Noon (or sold out), Eric's Ice Cream, N Clinton

### Ohio Chatauqua

June 4-8, Live history performances and workshops. [ohiohumanities.org/ohio-chatauqua](http://ohiohumanities.org/ohio-chatauqua)

### Art in the Park

June 30, 10:30 am - 4:00 pm

Friends of the Library Used Book Sale at Defiance Public Library and Fort Grounds. [friendsofdpl.org](http://friendsofdpl.org)

### RiverFest

July 20, Noon - 8:00 pm

Celebrate Our Water Resources!

See **Back Cover** for Event Details.

### Youth Summer Camps:

June 3-6: **Kid's Outdoor Science Camp**, at Camp Palmer, for grades 3-8. Scholarships available.

June 11-13, 9:00 am - 11:30 am: **Outdoor Conservation Camp** at Penney Nature Center, grades K-2.

More info: [defianceswcd.org](http://defianceswcd.org)



### Independence Dam State Park Summer 2019

#### No Motor Tuesday

Tuesdays, June-August, 6:00-8:00 pm

#### Shoreline Fishing Tournament

June 1, 7:30 am-Noon

#### 424 Yard Sale

June 6-8, 8:00 am-5:00 pm

#### Nature Night Hike

June 15, 9:00-10:30 pm

#### Summer Fest & Car Cruise-In

July 14, 1:00-4:00 pm

More information on Facebook:  
[Friends of Independence Dam State Park](https://www.facebook.com/FriendsOfIndependenceDamStatePark)

### **BSBA** Black Swamp Beekeepers Association



Please LIKE & SHARE  
our Facebook pages:

Black Swamp Beekeepers Association  
Pollinator Sanctuary & Training Facility  
of Defiance County

### RIVERVIEW NATIVE NURSERY

- Explore plants we offer. Discover more reasons to use natives
  - Locate events and markets
  - Plant a stunning garden
- [riverviewnativenursery.com](http://riverviewnativenursery.com)



LANDtoLAKE  
magazine

Published to provide the community with information on protecting the water resources of the Maumee River Watershed throughout Defiance County.

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DEFIANCE  
*a great place to live*

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issues at [landtolake.com](http://landtolake.com)



[facebook.com/Land-to-Lake](https://facebook.com/Land-to-Lake)

WATCH FOR  
OUR NEXT ISSUE



Autumn 2019



# Upper Maumee Watershed Partnership



Scenic view of the Maumee River between the Cecil Bridge and The Ohio DNR Bend Road boating access.

The Upper Maumee Watershed Partnership (UMWP) is a locally-led group of concerned citizens and organizations whose primary goal is the improvement of water quality throughout the Upper Maumee River Watershed and the Western Lake Erie Basin.

The group works to protect and restore the watershed through public education and planning, with the goal of improving water quality, increasing habitat quality, promoting sustainable land use practices and providing recreational opportunities.

### The Upper Maumee Watershed

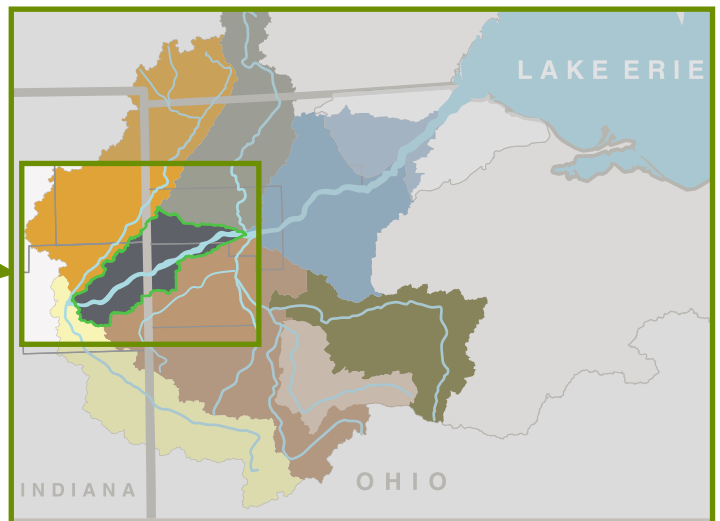
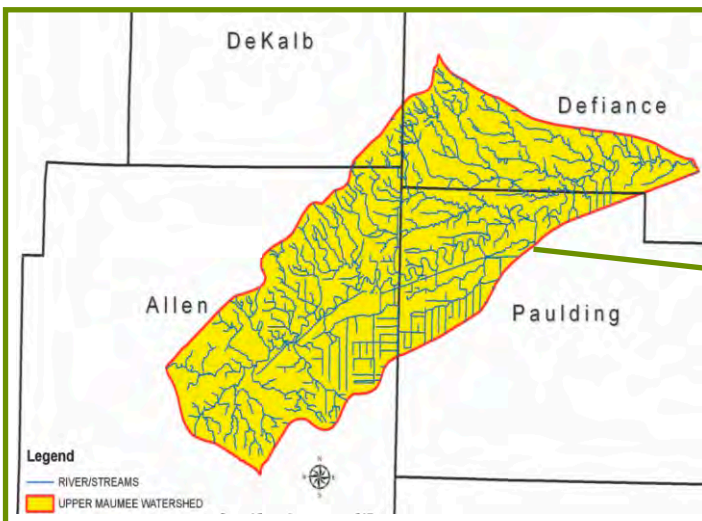
is comprised of four counties including Defiance and Paulding in Ohio and Allen and DeKalb in Indiana.

The Maumee River originates in Fort Wayne and flows northeasterly through the City of Defiance, on to Toledo and eventually into Lake Erie.

### Upper Maumee Watershed Facts

- The Upper Maumee is a sub-watershed of the Western Lake Erie Basin Watershed
- Watershed Area of 392 square miles
- Includes approximately 434 miles of tributary perennial streams
- Activities within the watershed have a significant impact on Lake Erie
- Approximately 350,000 people live in the Upper Maumee River Watershed
- The largest cities in the watershed are Fort Wayne, Indiana and Defiance, Ohio
- Over 80% of the land-use within the watershed is agricultural. 10% of the land is considered urban.

*The sole source of drinking water for the City of Defiance is the Upper Maumee River.*



# SOURCE WATER P

4

## Source Water Protection is:

- Mapping sources of drinking water
- Protecting healthy watersheds
- Critical to land use planning
- Protecting sources of drinking water
- Keeping your farm healthy
- Happening near you

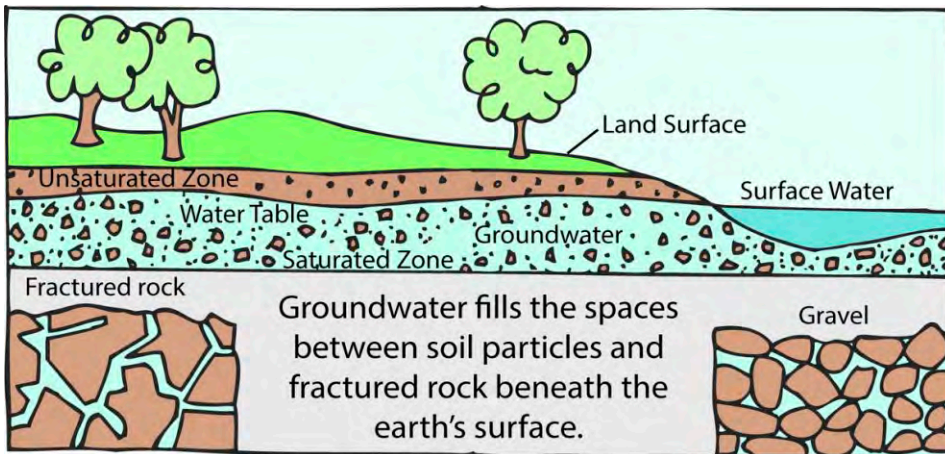
[sourcewatercollaborative.org](http://sourcewatercollaborative.org)

The City of Defiance is in the process of developing a *Source Water Protection Plan* along with a number of Municipal Water Treatment Plant systems that use the Maumee River as their sole source of drinking water.

Ohio EPA provides resources and information for each of the municipal communities including Napoleon, Wauseon, and Bowling Green that will be needed to complete an endorsed *Source Water Protection Plan*.

Ohio's Source Water Assessment and Protection (SWAP) program assists communities with protecting their sources of drinking water from contamination. The SWAP program addresses over 4,500 public water systems in Ohio and does not address private residential water systems.

Although Ohio's public water systems treat their drinking water to meet health-based standards, treatment is expensive and may not address every kind of contaminant. By taking steps to avoid chemical spills in the areas surrounding a well field or upstream from a surface water intake, a community can help reduce the costs of their water and better ensure a safe and high-quality supply of drinking water.



[groundwater.org](http://groundwater.org)

The Great Lakes provide drinking water for more than 48 million people.



### Sources of Drinking Water

Drinking water comes from ground water (aquifers), or surface water (streams, rivers, and lakes).

Protecting these drinking water sources is key to sustaining safe drinking water supplies.



Maumee River



Reservoir

# ROTECTION



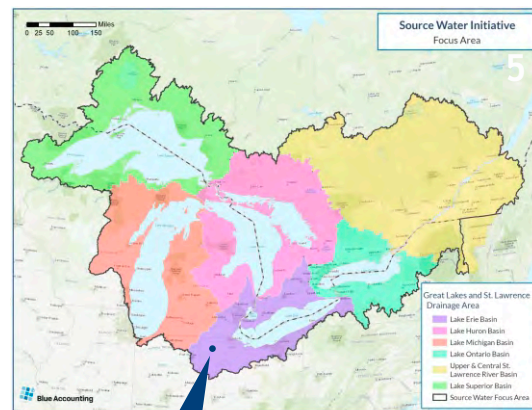
**“..continually working to improve the quality of our drinking water.”**

**T**he Upper Maumee River is the sole source of drinking water for the City of Defiance. (see p. 3) Water is drawn from the Maumee River to replenish the City’s 74-acre upground reservoir which acts as a pre-treatment basin. Water is then pulled from the reservoir to into the Water Treatment Plant (WTP) to ensure a more consistent water supply.

Primary concerns with our surface water supply are an abundance of nutrients and the potential for harmful algal blooms (HABS). Nutrients include nitrates, ammonia, and phosphorus. Growth of algae is often caused by excess nutrient loading and can be problematic for both treatment of drinking water and for managing the reservoir’s water supply.

The City is continually working to improve the quality of our drinking water. The City’s reservoir was built in 2007 to address nitrate concerns and violations. This solution has worked to improve water treatment, but it is not adequate. The next phase is to implement a Granular Activated Carbon (GAC) treatment process. This will provide solutions for many of the current water quality issues that the City is experiencing due to the quality of water in the Maumee River.

Although the City continues to invest in improvements at the WTP, the ultimate long-term, sustainable solution is to protect drinking water at the source. The only effective way to accomplish this is through collaborative efforts between governmental agencies, non-profit groups and individual landowners.

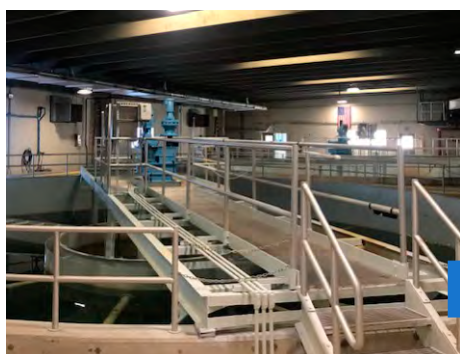


## DEFIANCE



### Blue Accounting

Blue Accounting’s Source Water Initiative recently launched visual tools that illustrate work to protect source water in the Great Lakes Basin. The visual tools measure progress toward four goals: protecting drinking water from nutrient impacts; ensuring all public water supply systems are guided by up-to-date protection strategies; taking action on contaminants of emerging concern; and building binational consensus on strategies for source water protection across the Great Lakes Basin.



Water Treatment Facility



Drinking Water

## MS4: Urban Stormwater

# Tips For A Cleaner Spring

## Managing Nutrients, Trash & Litter Makes For Cleaner Waterways

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The City of Defiance Stormwater Division is responsible for implementing a Storm Water Management Program (SWMP) in accordance with Ohio EPA NPDES Small MS4 General Permit.

The plan covers all publicly-owned systems for conveying storm water and includes City infrastructure as well as natural drainage.



**24th Annual Neighborhood  
CLEAN UP YOUR PARK DAY**  
**Saturday, April 6, 9:30-11:30 am**  
Bronson, Diehl, Fort Grounds,  
Kingsbury, Latty's Grove,  
Pontiac Park, the Reservoir,  
and Riverside.  
Bring rakes, shovels, brooms,  
gloves, boots and a friend!  
LUNCH PROVIDED @ DIEHL 11:30

**SPRING CLEANUP DISPOSAL**  
Defiance City Residents Only  
(photo ID and current utility bill required)  
**Saturday, April 27, 8:30-11:30 am**  
Werlor Dumpsters Located at:  
Bronson Park, Diehl Park,  
Kingsbury Park, and Latty's Grove  
No Tires, Batteries, Household Hazardous Waste,  
Liquid Waste or Yard Waste  
419-782-5442 or 419-782-1946  
City of Defiance • Werlor Waste Control • Omnिसource  
and Defiance County Environmental Services

### CLEAN UP YOUR RIVERS



The Rotary Club of Defiance presents:  
**Confluence Clean-Up**  
**June 8, July 13, August 10**  
**8:00 am - Noon**

Check the Community Calendar for more details:  
[www.visitdefianceohio.com/events/](http://www.visitdefianceohio.com/events/)



### Fertilize With Care

Over-application of nutrients not only may impair plant growth, it can also contaminate groundwater by leaching through the soil and pollute waterways through run-off. A soil test kit, available at most hardware stores, will identify what nutrients you may need to help your lawn and other plants be healthy and grow their best.



### Plant Natives

Pollinators and beneficial insects rely on native plants for food and shelter. Natives are also smart choices for low-maintenance landscaping. Since they are adapted to local conditions, pesticides, fertilizers and other amendments are rarely required once the plants are established.  
[landtolake.com/make-a-difference/](http://landtolake.com/make-a-difference/)



### Keep Clippings Away From Drains

Grass clippings contain phosphorus that will get carried into a waterway through storm drains. One bushel of fresh grass clippings can produce 30-50 pounds of algae growth in a lake or river. Grass clippings left in the street also pose a hazardous threat to motorcyclists. Leave clippings on the lawn, or compost them for safer, cleaner streets and rivers.



### Compost

Composting at home is a great way to keep grass clippings, leaves, yard waste and kitchen scraps out of our waterways and create nutrient-rich garden soil. For more info, see our *Home Composting Guide*:  
[landtolake.com/composting-guide](http://landtolake.com/composting-guide)  
The City Compost Site is a great alternative to get rid of yard waste:  
[cityofdefiance.com/divisions/compost-site](http://cityofdefiance.com/divisions/compost-site)

# Water is Key

by Stephanie Singer, The Nature Conservancy

**F**or a healthy Lake Erie, we need to reduce phosphorus by 40%. That's about one-quarter of a pound of phosphorus per acre over 5 million acres!

Farmers in the Western Lake Erie Basin (WLEB) are becoming more mindful of applying fertilizer only where and when they need it with consideration of the next predicted rain. These actions alone may not be enough. Heavy storms carry the majority of nutrients to the Lake, and we are having more intense rain events. So, do we have a nutrient problem or water problem? The short answer is both. Focusing on nutrient AND water management can help meet our water quality goals.

People have managed water in this area since early settlers drained the Great Black Swamp. Our efforts focused on getting water away from our land quickly with subsurface drainage and a vast network of drainage ditches. As a result, there isn't enough time for nutrients to be taken up naturally—by soil, plants, animals—before reaching waterways.

How can we manage water so there is less nutrient-rich water entering Lake Erie?

**1. In the field.** Healthy soils have the capacity to hold a large amount of water because they contain organic matter which comes from dead and

decaying plants.

A 1% increase in organic matter

equals the ability to hold 1 inch of rain or 25,000 gallons per acre. Improving soil health is different in each field but the main components include life—live roots, earthworms, and microorganisms.

**2. At the edge of a field.** As nutrient-rich water leaves fields it's harder to remove excess nutrients. At the field edge we still have an opportunity to reduce nutrients before they enter the nearest waterway. There are multiple methods of reducing nutrient runoff such as filters, water control structures, and water storage areas. Placing more of these in the landscape can capture, store and treat water on many acres. Ongoing research is focused on placing these practices to maximize their effectiveness.

**3. In the Stream or Ditch.** Once nutrient-rich water leaves the field, it becomes part of a common water system. Many traditional ditches are designed for quick water transport. With that design, most of the natural characteristics that give the stream the ability to process nutrients, like curves, floodplains, variability in depth, and different types of vegetation, are removed. How can our current ditch/stream system be improved to



help process nutrients? There are opportunities to study the systems and pinpoint critical areas to restore some of the natural infrastructure to process nutrients in our waterways.

Looking at the entire system, we can systematically move the needle on nutrient pollution keeping in mind that one of the most effective and low-tech solution is the use of plants. Adding plants in the field (such as a cover crop), at the edge of the field (in the form of a buffer), and in the stream (restoring wetlands, floodplains and/or natural stream function) used in combination will produce healthier rivers and lakes.

The Nature Conservancy 

Stephanie Singer is the Outreach Education Specialist at the Western Lake Erie Basin Agriculture project office of The Nature Conservancy. She welcomes visitors at: 210 Clinton Street, Defiance, OH or feedback at 419-782-0652 [stephanie.singer@tnc.org](mailto:stephanie.singer@tnc.org)

*The mission of The Nature Conservancy is to protect the land and waters on which all life depends.*

Join our Facebook Group: [facebook.com/groups/OhioTNCagriculture/](https://facebook.com/groups/OhioTNCagriculture/)

# RIVER FEST

*Celebrating Our Water Resources*  
Live Music • Food Vendors • Boating • Kids Activities  
@ Pontiac Park — 12:00 - 8:00 pm

**SAT  
JULY 20  
2019**

- **Noon to 8:00 pm:**  
**FREE Kayak and Pontoon Rides**
- **Noon to 4:00:**  
**River Passport** — Outdoor Education Activities for All Ages.
- **4:00 to 8:00:**  
**Family Fun Fest** — Entertainment, Kids Activities, Sheriff's Office, Police and Fire Departments, and MORE!

**FREE COMMUNITY EVENT!**

SPONSORED BY:



[visitdefianceohio.com](http://visitdefianceohio.com)