

watershed strategic plan

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Overview

The Maumee State Scenic River supports a healthy forested corridor and a thriving aquatic community including walleye, white bass, and northern pike prized by sport fishermen. Numerous public facilities in the Maumee River watershed provide many recreational opportunities for local residents and visitors to enjoy the River.

In addition to its historic, cultural, economic, and recreational significance, the Maumee River is part of the lifeblood for Defiance as the primary drinking water supply for the City. The importance of water quality to this valued resource became headline news in 2014, when the City of Toledo issued a drinking water advisory and again in 2016 when harmful algal blooms occurred in the Maumee River right here in Defiance County.

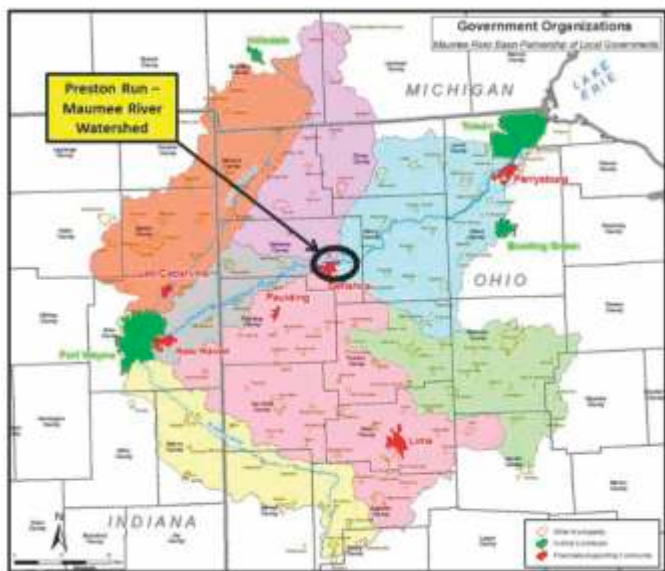


The City of Defiance recently prepared a plan* for the Preston Run watershed. This plan was created to complement the array of water quality management activities being conducted in the Defiance area and is intended to support community efforts to manage limited resources while maximizing environmental benefits. The City of Defiance received a grant from the Ohio EPA, funded by the U.S. EPA, to prepare this "9-Element Watershed Plan" with technical assistance and guidance from Bruce Cleland of Tetra Tech. The U.S. EPA has just recently started to require this type of watershed plan be developed to ensure a consistent level of planning efforts and prioritization have taken place for projects that are funded with federal dollars.

The City's integrated approach includes infrastructure capital requirements, combined sewer overflow (CSO) compliance, stormwater management, and drinking water supply/distribution plus recognizes the over-arching need to align transportation planning with watershed management activities. The plan is also designed to help guide strategic implementation of agricultural management practices as more than half the drainage area in the Preston Run watershed consists of cultivated crops and pasture. The urban/agricultural land use mix requires that the full range of available management measures be considered on identifying viable solutions to address water quality problems and concerns; the same practices that will be incorporated into Domestic Action Plans needed to achieve the recommended 40 percent phosphorus reduction target.

* **The Nonpoint Source Implementation Strategic (NPS-IS) Plan**

for the Preston Run – Maumee River HUC-12 (04100009 02 01) is referred to throughout this 4-page overview as the "plan" or the "watershed plan" or the "Preston-Run Watershed Plan" and it can be found in its entirety at: <http://landtolake.com/resources-2/>.



Defiance is located in the heart of the Maumee River Basin and is uniquely positioned to play a key role in addressing the water quality concerns in Lake Erie. The Preston Run Watershed is a small fraction of the light blue area designated as the "Lower Maumee Watershed".

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The genesis of this plan stems, in part, from a “Community Revitalization” vision developed by the City of Defiance focused on four themes:

- 1) green infrastructure
- 2) ecological restoration
- 3) underutilized land
- 4) trails and connectivity

In addition, this plan builds on the efforts of local organizations that actively provide technical expertise, promote public outreach and education, pursue funding opportunities, and conduct water quality monitoring efforts.

Watershed Characterization

Stream habitat and aquatic biology in the Preston Run – Maumee River watershed reflect an extremely unique situation. Conditions are driven by land use within the watershed itself **and** by land use in the large drainage area upstream of Defiance. The Preston Run-Maumee River watershed has a diverse mix of land use including developed, urban, rural, industrial, commercial, forested and agricultural areas. While over half of the watershed is cultivated crops, consistent with the agricultural nature of northwest Ohio,



*Defiance has a vested interest in water quality across the Maumee watershed; the River serves as our **primary drinking water** supply and provides recreational opportunities to the community.*



*As part of its **integrated planning** approach, Defiance continues to incorporate **green infrastructure** into the City's public works projects.*

more than 30 percent of the watershed is developed land; a disproportionate amount compared to adjacent watersheds.

Defiance has a vested interest in water quality management across the Maumee watershed; the River serves as its primary drinking water supply and provides recreational opportunities to the community. Both the City and the Defiance Soil & Water Conservation District participated in development of the Upper Maumee River Watershed Management Plan; a very similar watershed planning effort for the land area between Ft. Wayne, IN and Defiance (*shown in a grey color on the map, previous page*). Management strategies intended to address problems within the Preston Run-Maumee River Watershed also considers flows and pollutant loads that originate in the Upper Maumee; a reason why implementation of practices that will improve this watershed will also **contribute to the 40 percent** load reduction goals for Lake Erie.

Critical Areas and Restoration Strategies

An important aspect of addressing water quality problems and concerns is to ensure the plan recognizes two key parts for successful implementation: stewardship and critical areas. In urban portions of the watershed, stewardship is reflected through the commitment by the City in taking a proactive



role to solve water quality problems through a focused and coordinated approach. In rural areas, stewardship involves agricultural producers, retailers, service providers, and other certified professionals adopting proven BMPs in a comprehensive manner through conservation systems.

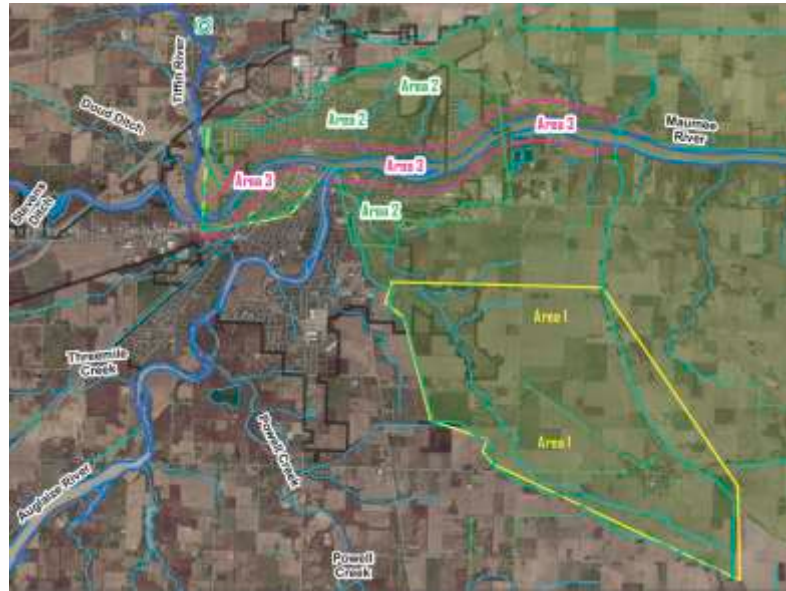
Critical areas in the Preston Run – Maumee River watershed cover a wide range of nonpoint source issues and concerns. Each critical area identified aligns with one of four strategies identified in Ohio’s Non-Point Source (NPS) Management Plan, namely: 1) urban sediment and nutrient reduction; 2) altered stream and habitat restoration; 3) agricultural NPS reduction; and 4) high quality waters protection. Each strategy plays a key role in determining the potential management tools needed to address location specific problems.

Based on available information, the Preston Run Plan includes all known critical areas; some critical areas have implementation projects associated with specific locations, while others simply have conceptual ideas intended to address flooding/erosion complaints or other residential concerns. **Critical areas** have been identified as three distinct locations, generally classified as follows:

- 1) Agricultural,**
- 2) Urban**
- 3) Riparian**



*This strategic plan, in part, is designed to help guide implementation of agricultural practices, as **over half** of the Preston Run watershed consists of cultivated crops.*



*Critical areas of the Preston Run watershed have been identified as three distinct locations, generally classified as **1-Agricultural, 2-Urban, and 3-Riparian.***

Agricultural Land—Critical Area 1

This critical area corresponds with the direct drainage into Preston Run, which includes predominantly agricultural fields as well as the small unincorporated area of Ayersville. Several of the direct tributaries are roadside ditches that are part of the Defiance County Ditch Maintenance Program in conjunction with the Defiance SWCD. For agricultural parts of the watershed, the plan recognizes that the success of the NPS reduction strategy depends on voluntary participation of the producers, particularly those farming in critical areas. Expanding the use of whole farm conservation planning and installing conservation systems in the project area represents the foundation of this strategy. Not only does this approach ensure that agricultural conservation practices are located where they will provide the most benefit; it is consistent with the goal of promoting sustainable agriculture and farm profitability.

Urban Portions -- Critical Area 2

This critical area is the urban stormwater area; portions of the watershed that have sanitary, storm and combined sewer infrastructure systems and are either regulated by the

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One of the City's best investments is in **public outreach and education** with a goal to foster stewardship and active public involvement in the region's water resources.

Municipal Separate Storm Sewer System (MS4) or City's Long Term Control Plan (LTCP) for addressing the problem of CSOs. Critical Area 2 is where the City of Defiance has financially invested the most over the last 10 to 15 years, as the implementation of the LTCP is a distinct priority for the health, welfare and safety of City residents and the surrounding region. One of the City's best investments is in public outreach and education with a goal to foster stewardship and active public involvement in the region's water resources.

Critical Area 2 is also a priority of the City moving forward with implementation of Capital Improvement Projects (CIP). As part of the integrated planning approach, the City continues to incorporate green Infrastructure into public works projects. East High Street is a good example— incorporating water line replacement, combined sewer overflows relief, improvements to safety by correcting traffic patterns at the intersection, and coordination between essential utilities and urban forestry by replanting street trees as a part of the project.

Green Infrastructure projects that make use of parks and other green space to manage stormwater, similar to the bioretention/urban forestry project at Diehl Park, will allow the City to mitigate the challenges associated with increased runoff and pollution caused by impervious surfaces. Many communities are facing this situation as a result of expanding development and it requires collaboration and planning for innovative solutions going forward. Although business and industry may be regulated as permitted facilities, there are many ways to incentivize responsible business practices and sustainable, low-impact development.

Riparian Corridor -- Critical Area 3

This critical area is the riparian corridor of the mainstem of the Maumee River, which is designated as a scenic corridor. Numerous benefits will be realized from a stabilization of erosive banks, restoration and/or reforestation of riparian zones and construction of wetlands in strategic locations for the interception of sediment and nutrients entering directly into the mainstem. Three of these projects include the development of a wetland for the purposes of nutrient reduction. The highest priority, although still a medium-term project would be a linear project extending along the same project boundary as the improvements planned for East River Drive, to create a safer pedestrian/bicycling experience from Pontiac Park in Defiance to Independence Dam State Park. The City is also currently implementing a Streambank Stabilization project in Pontiac Park, using bioengineering that will serve as a demonstration of best practices.



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