

Draft Biological and Water Quality Report for St. Marys River and Tributaries, 2015

In 2015, Ohio EPA conducted a biological and water quality survey in the St. Marys River watershed. This fact sheet summarizes the findings detailed in the biological and water quality report (BWQR).

Report Highlights

The results from the 2015 survey indicated an overall improvement in the watershed since the previous assessment in 1985. Fifty-eight sites were sampled throughout the St. Marys River watershed and designated or recommended aquatic life uses (ALU) fully met expectations at 34 sites. Compared to earlier investigations within the basin, the 59 percent ALU attainment demonstrated an improvement in overall condition and coincided with better wastewater treatment for the City of St. Marys and Village of New Bremen. Figure 1 shows the cumulative ALU attainment status for the St. Marys River watershed.

Remaining Impairments

Of the 41 percent of sites that were not meeting ALU expectations, excessive siltation/substrate embeddedness and habitat alteration were the most common causes of impairment. The associated primary sources of impairment were historical channelization and agricultural production. The second most common cause of impairment was organic enrichment, linked to both agricultural production (crop residue) and municipal point sources (nutrients resulting in algae growth/decay). Discharge of algae-rich water from the Miami and Erie Canal created unfavorable conditions in the St. Marys River for approximately three miles downstream.

Other Beneficial Uses

Human Health/Fish Consumption – Prior to the 2015 sampling of the St. Marys River, there were consumption advisories in place for three species—freshwater drum, northern pike, and saugeye—at the one meal per month advisory level due to mercury. As a result of the 2015 sampling, an advisory was posted in 2016 for largemouth bass, also at the one meal per month level for mercury, in addition to the already existing advisories for drum, pike and saugeye.

Recreation – Evaluation of *E. coli* bacteria results revealed all nine of the St. Marys River sites failed to meet the Primary Contact-A seasonal recreation criteria. Of the 17

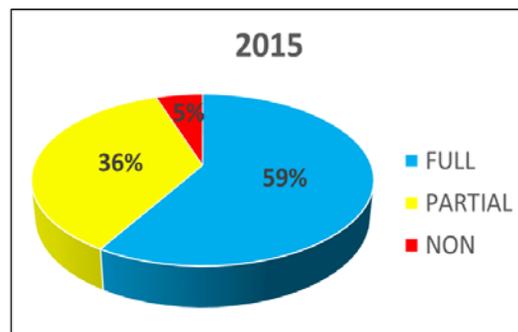


Figure 1. Cumulative aquatic life use attainment for all assessed waters contained within the St. Marys River watershed, 2015.

Stakeholder Input

The Agency is releasing the results from the St. Marys River watershed survey for review and comment and will accept feedback on any aspect of the report. The BWQR is the second step in the TMDL development process. The next step is the Loading Analysis Plan, which will additionally be available for review and comment.

Providing Feedback

Comments can be submitted by email to EPATMDL@epa.ohio.gov, faxed to (614) 644-2745 or sent by postal mail to:

TMDL Program
Ohio EPA, Division of Surface Water
P.O. Box 1049
Columbus, Ohio 43216-1049

All comments must be submitted to the Agency **no later than 5:00 p.m. on October 22, 2018**

Stay Involved

Subscribe to updates on TMDL projects at:
https://ohioepa.custhelp.com/app/utills/login_form/redirect/account%252Fprofile.

Contact Information

For more information, contact Joby Jackson at Joshua.Jackson@epa.ohio.gov or (937) 285-6029 or Dan Glomski at Daniel.Glomski@epa.ohio.gov or (419) 373-3023.

sites representing the 14 smaller streams in the Primary Contact-B recreational use designation, 15 did not meet the recreational use criterion. All four sites in the Secondary Contact recreational use category met the recreational criterion.¹

Public Water Supply – None of the streams in the St. Marys River watershed are assigned PWS.

Biological and Water Quality Surveys

A biological and water quality survey is a survey of the biological, chemical and physical properties of surface waters to determine the appropriate beneficial use designations (aquatic life, recreation, human health and water supply) assigned in Ohio Water Quality Standards, evaluate water quality trends and determine if the water body is meeting the goals of the federal Clean Water Act.

Each year, Ohio EPA conducts surveys in selected watersheds around the state. The results from each survey are detailed in biological and water quality reports (BWQR). These reports summarize major findings and provide results from individual sampling locations.



Figure 2. Photo of Miami-Erie canal discharge to the St. Marys River.



Figure 3. Location of St. Marys River watershed in Ohio.

The survey findings and conclusions may factor into regulatory actions taken by Ohio EPA. For example, adjustments to National Pollutant Discharge Elimination System (NPDES) permits, mitigation requirements in Section 401 Water Quality Certifications and revisions to Ohio Water Quality Standards rules [Ohio Administrative Code Chapter 3745-1]. The findings are eventually incorporated into State Water Quality Management Plans, the biennial Integrated Water Quality Monitoring and Assessment Report (305[b] and 303[d]) and Total Maximum Daily Loads (TMDLs).

St. Marys River Watershed Survey Specifics

The St. Marys River Watershed drains approximately 816.7 square miles of west-central Ohio and north-eastern Indiana. The portion of the St. Marys River contained within Ohio constitutes just over 56% (458 miles²) of the watershed. Here the river drains portions of Shelby, Auglaize, Mercer and Van Wert Counties. The location of the watershed within Ohio is shown in Figure 3. In 2015, Ohio EPA evaluated 24 streams in the St. Marys watershed for aquatic life, recreation and human health beneficial uses. Table 1 lists the sampling types and number of locations sampled in the watershed and Figure 4 shows aquatic life use attainment status of the biological samples.

Table 1. St. Marys River Survey Specifics—What was collected?

Sample Type	Number of Locations
Biological samples (fish, macroinvertebrates, habitat)	58
Water chemistry grab samples	57
Bacteria indicators (<i>Escherichia coli</i>)	29
Sediment chemistry samples	9
Fish tissue samples	6

¹ Water quality criteria were updated in 2016 as part of a routine OAC rule update. For this report, the streams were assessed using the criteria that were in place in 2015 at the time of the sampling.

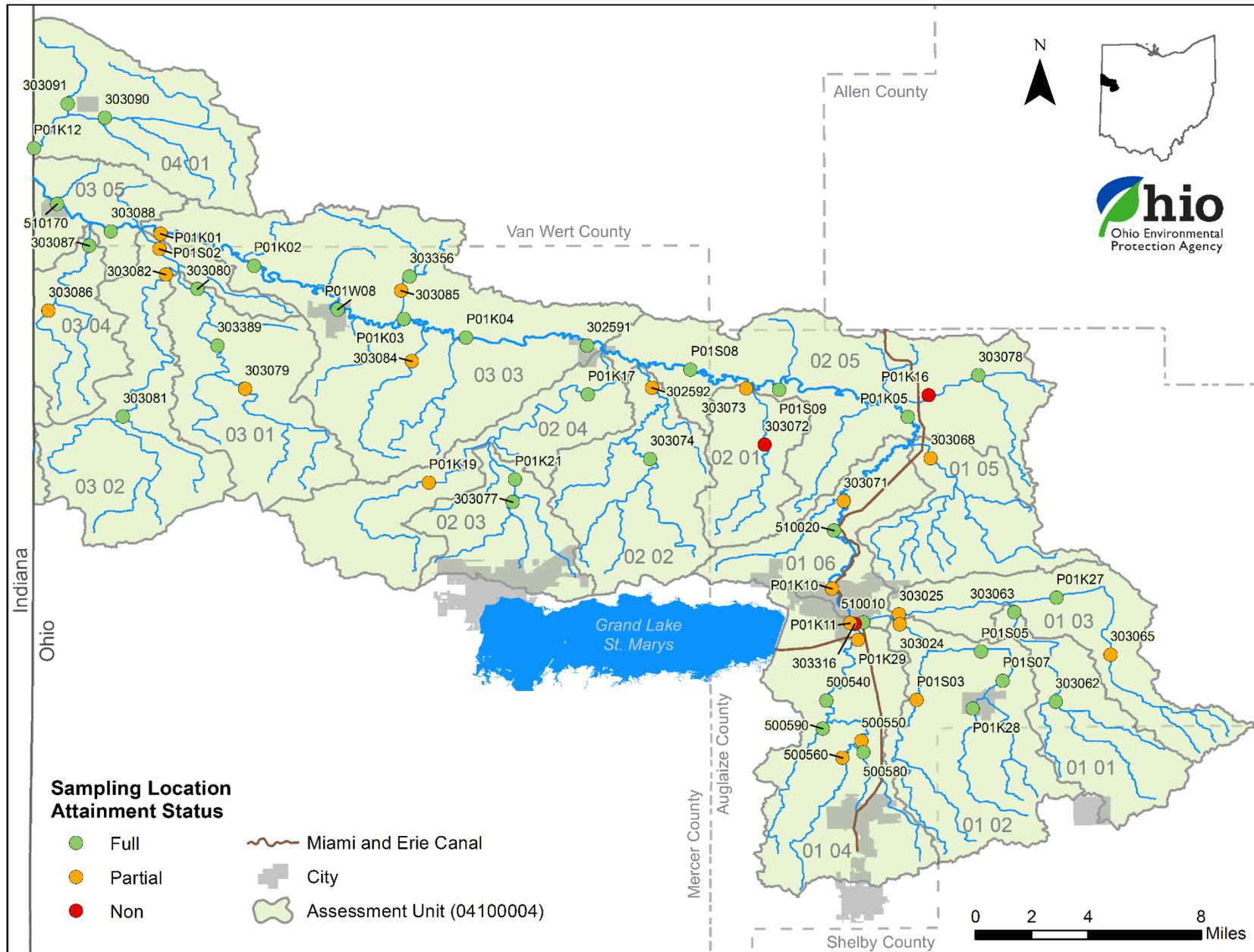


Figure 4. Map of sampling locations and ALU attainment statuses in the St. Marys River basin based on data collected June-October 2015.

Beneficial Use Designations and Recommendations

Eighteen streams in the study area were evaluated for unverified or undesignated aquatic life and recreation use status in 2015. Significant findings include:

- Verification of warmwater habitat for 13 streams, including: Little Black Creek; Town Run; Yankee Run; Twelvemile Creek; Eightmile Creek; Hussey Creek; Sixmile Creek; Fourmile Creek; the unnamed tributary to Kopp Creek (RM 5.41); Clear Creek; Center Branch; Carter Creek; and Muddy Creek.
- WWH use designation is recommended for three previously undesignated streams: Prairie Creek; East Branch; and the unnamed tributary to Twentyseven Mile Creek (RM 3.1).
- The Modified Warmwater Habitat use (MWH-C) is recommended for Prairie Creek and Duck Creek upstream from RM 2.97 (Winkler Rd.)
- The current designation of WWH for the lower reach of Duck Creek is recommended to remain WWH due to improved conditions as compared to upstream.
- All sampled streams currently designated for primary contact recreation should retain the use. Two streams, Kopp Creek and Wierth Ditch, are recommended to be changed to primary contact recreation (PCR). The agricultural water supply (AWS) and industrial water supply (IWS) uses apply to all the study area streams.

Where can I learn more?

- The full study report is available at epa.ohio.gov/dsw/wq.
- More information is available at epa.ohio.gov/dsw/tmdl/MaumeeRiver#119943141-st-marys-river.
- More information on Ohio EPA's TMDL Process is available at epa.ohio.gov/Portals/35/tmdl/TMDL_factsheet_newprocess_aug2017_final.pdf.
- For more information about biological, chemical and physical monitoring, please see the Water Quality Monitoring webpage at epa.ohio.gov/dsw/bioassess/ohstrat.aspx.