



Draft Biological and Water Quality Report for the Minor Great Black Swamp Tributaries Watershed, 2015-2016

In 2015 and 2016, Ohio EPA conducted a biological and water quality survey in the Minor Great Black Swamp Tributaries. This fact sheet summarizes the findings detailed in the biological and water quality report (BWQR).

Report Highlights

Biological assemblages fully met designated or recommended aquatic life uses (ALU) at 79 of 90 (88 percent) sites in 2015. All sampling locations were determined to be in full or partial attainment of the designated use, with none of the sites in non-attainment. The results from the 2015 survey indicated an overall improvement in the watershed compared to historical assessments. Figure 1 shows the cumulative ALU attainment status for the watershed in 2015.

Remaining Impairments

Of the 11 (12 percent) sites that were not meeting ALU expectations, nutrient enrichment and siltation were the most common causes of impairment. The associated sources of impairment were row crop agriculture, channelization, manure application, municipal point sources, and unsewered areas. Nutrient enrichment signatures were common throughout the survey area and excessive nutrient inputs to streams with deficient habitat caused biological impairment in several areas.

Other Beneficial Uses

Human Health/Fish Consumption – Prior to the 2015 sampling, there were no consumption advisories in place for any species other than the statewide advisory for mercury. Based on 2015 sampling results, four less restrictive fish consumption advisories were issued in 2016, due to low levels of mercury in fish at these locations. Channel catfish from Bad Creek and North Turkeyfoot Creek can be eaten twice per week, common carp in North Turkeyfoot Creek has unrestricted consumption, and yellow bullhead in South Turkeyfoot Creek can be eaten twice per week.

Recreation – Evaluation of *Escherichia coli* (*E. coli*) bacteria results revealed all 47 of the Maumee River tributary sites failed to meet the Primary Contact-B seasonal recreation criteria. All nine of the 12 sites in the Secondary Contact recreational use category met the recreational criterion. Overall, four of 40 assessment units met the recreation criteria.¹

Stakeholder Input

The comment period for the Minor Great Black Swamp Tributaries watershed biological and water quality report (BWQR) ended on June 29, 2020. 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.

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 Dan Glomski at
Daniel.Glomski@epa.ohio.gov or (419) 373-3023.

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.

Public Water Supply – There are two public water systems (Delta and Wauseon) served by surface water sources within the study area. Lower Bad Creek around the Delta water intake is listed as impaired due to elevated nitrates. North Turkeyfoot Creek near the Wauseon water intake will remain on the watch list for nitrates concentrations.

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.



Figure 2. Location of the selected tributaries to the Maumee River watershed in Ohio.

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.

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).

Survey Specifics – Minor Great Black Swamp Tributaries

The survey area drains approximately 1,040 square miles in Northwestern Ohio. The tributaries drain portions of Defiance Fulton, Hancock, Henry, Paulding, Putnam, and Wood Counties. The location of the watershed within Ohio is shown in Figure 2. In 2015, Ohio EPA evaluated 50 streams in the watershed for aquatic life, recreation, public water supply and human health beneficial uses. Table 1 lists the sampling types and number of locations sampled in the watershed and Figure 3 shows aquatic life use attainment status of the biological samples.

Table 1. Survey Specifics—What was collected?

Sample Type	Number of Locations
Biological samples (fish, macroinvertebrates, habitat)	90
Water chemistry grab samples	98
Bacteria indicators (<i>Escherichia coli</i>)	59
Sediment chemistry samples	5
Fish tissue samples	7

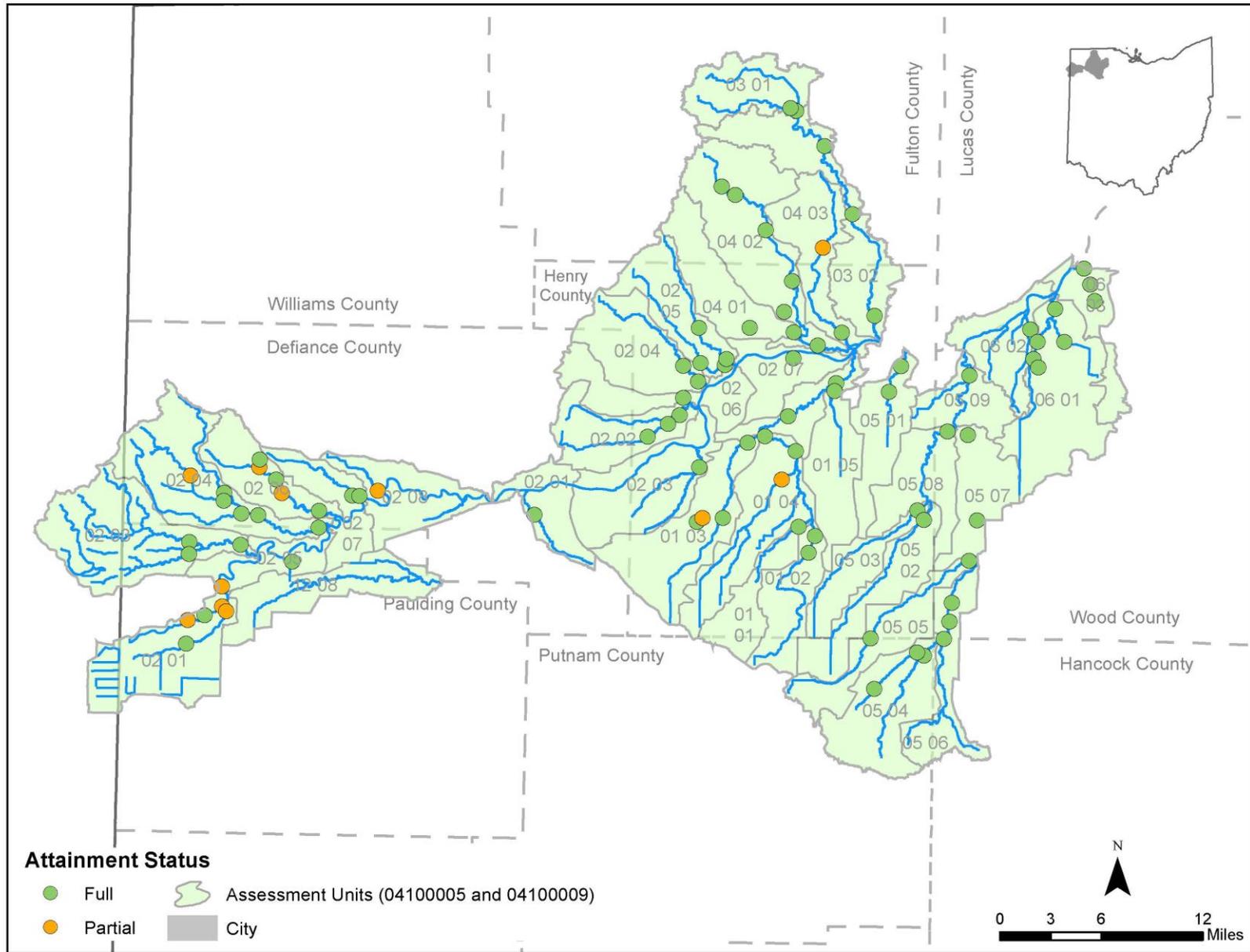


Figure 3. Map of sampling locations and ALU attainment statuses in the Minor Great Black Swamp tributaries watershed based on data collected June-October 2015.

Beneficial Use Designations and Recommendations

Fifty streams in the study area were sampled to verify the appropriateness of aquatic life, recreation, and water supply beneficial use designations in 2015. Many streams had beneficial uses that were formerly unverified using standard field sampling techniques, while some streams were not listed (undesigned) in the Ohio Water Quality Standards. Significant findings from the survey include:

- Verification of warmwater habitat (WWH) for four streams, including: North Turkeyfoot Creek, Bad Creek, South Branch Bad Creek, and Brush Creek.
- WWH use designation was confirmed for 24 previously unverified streams.
- Seven previously undesigned streams evaluated during the 2015 survey supported biological communities consistent with the Huron Erie Lake Plains (HELP) WWH expectations. It is recommended that these seven streams be assigned the WWH aquatic life use.
- WWH use is recommended for Zuber Cutoff, a formerly undesigned waterbody.
- The modified warmwater habitat use due to channelization (MWH-C) is recommended for the following: North Creek from the headwaters to Twp. Rd. 61 (River Mile [RM] 0.3); South Creek from the headwaters to Gasser Rd. (RM 3.65); Platter Creek from the headwaters to the unnamed tributary at RM 7.66 and the unnamed tributary (RM 7.66); West Branch Tontogany Creek from its headwaters to RM 3.2; upper Liberty Hi Rd. Ditch and the entirety of Haskins Rd. Ditch. Lower Liberty Hi Rd. Ditch is recommended WWH.
- The WWH use designation should be confirmed for the following: North Creek from RM 0.3 to the mouth; South Creek from RM 3.65 to the confluence with Zuber Cutoff; Platter Creek from RM 7.66 to the mouth; Dry Creek from RM 7.48 to the mouth.
- It is recommended the following stream or stream segments be upgraded from MWH-C to WWH: Gordon Creek and the North, Middle and South Forks; Konzen Ditch and Yellow Creek.
- It is recommended that Little Yellow Creek retain the Limited Resource Waters (LRW) use designation from its source to RM 4.6 and be assigned the WWH aquatic life use from RM 4.6 to its confluence with Yellow Creek.
- Streams or stream segments previously designated Secondary Contact Recreation (SCR), including Middle Fork Gordon Creek, North Turkeyfoot Creek, Konzen Ditch, Bad Creek from the headwaters to RM 6.2, Bad Creek at RM 17.0, South Branch Bad Creek, Brush Creek, Yellow Creek and Little Yellow Creek from RM 4.6 to the mouth are recommended re-designated as Primary Contact Recreation (PCR).

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#119943144-maumee-river-basin-select-tributaries.
- 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.