



Sandusky River (lower) and Bay Tributaries Watershed TMDL Report

The Clean Water Act requires Ohio EPA to prepare a cleanup plan for watersheds that do not meet water quality goals. The cleanup plan, known as a total maximum daily load (TMDL) report, specifies how much pollution must be reduced from various sources and recommends specific actions to achieve these reductions.

*A **watershed** is the land area that drains into a body of water.*

What are the essential facts?

- Ohio EPA studied the watershed and found water quality problems at several locations.
- Water quality improvements can be made with practical, economical actions.
- Making water quality improvement depends on the participation of the watershed's residents.

Where is the lower Sandusky River and Bay tributaries watershed?

The lower Sandusky River and Bay tributaries watershed drains to Lake Erie and is located in northern Ohio in Seneca, Sandusky, Erie, Ottawa, and Wood counties. This 870-square-mile watershed is home to more than 162,000 people and encompasses all or part of 23 municipalities. The watershed is primarily cropland with about fourteen percent being developed. Topography is generally flat and soils poorly drained. Subsurface drainage is widely used.



Surface water is the source of drinking water for Bellevue, Clyde, and Fremont serving a combined population of approximately 35,000 people. The combined capacity for water treatment is nearly 16 million gallons per day (MGD); however, average production is only 6.5 MGD. About two thirds of these totals come from the Sandusky River serving Fremont, while Clyde and Bellevue are served by Beaver Creek and Snyder's Ditch, respectively.

There are 120 wastewater facilities with individual permits for municipal and industrial discharges throughout the entire Sandusky River and Bay Tributaries watersheds. These facilities have a combined design discharge capacity exceeding 95 million gallons per day.

How does Ohio EPA measure water quality?

Ohio is one of the few states to measure the health of its streams by examining the number and types of fish and aquatic insects in the water. An abundance of fish and insects that tolerate pollution is an indicator of an unhealthy stream. A large number of insects and

fish that are sensitive to pollution indicate a healthy stream.

In 2009, comprehensive biological, chemical, and physical data were collected in the watershed by Ohio EPA scientists. The watershed's conditions were compared with state water quality goals to determine which streams are impaired, and how much needs to be done to restore good stream habitat and water quality.

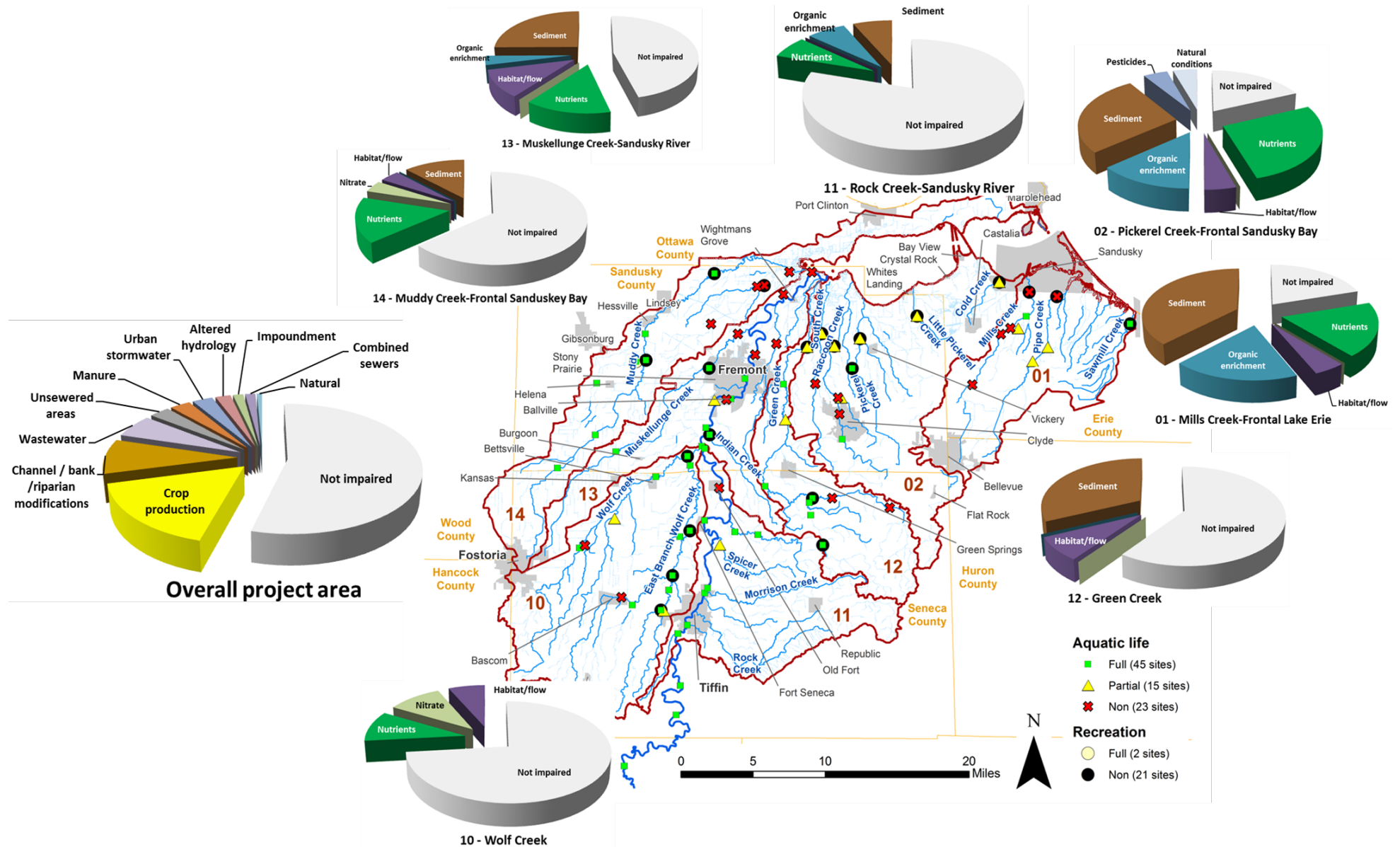
What is the condition of the lower Sandusky River and Bay tributaries watershed?

Eighty-three sites were surveyed to evaluate aquatic life use in which 54 percent met all of the biological criteria, 18 percent only met some of the criteria and 28 percent met none. Only nine percent of the sites evaluated for recreation uses met criteria.

High bacteria concentrations from sources such as improperly functioning septic systems and manure were most responsible for the impaired recreation uses. Excessive amounts of fine sediment on the streambeds, elevated concentrations of nutrients and organic substances, and poor habitat were the primary causes of aquatic life use impairments. Sources of these stressors were mostly drainage from agricultural lands, including channel maintenance, and wastewater collection and treatment systems.

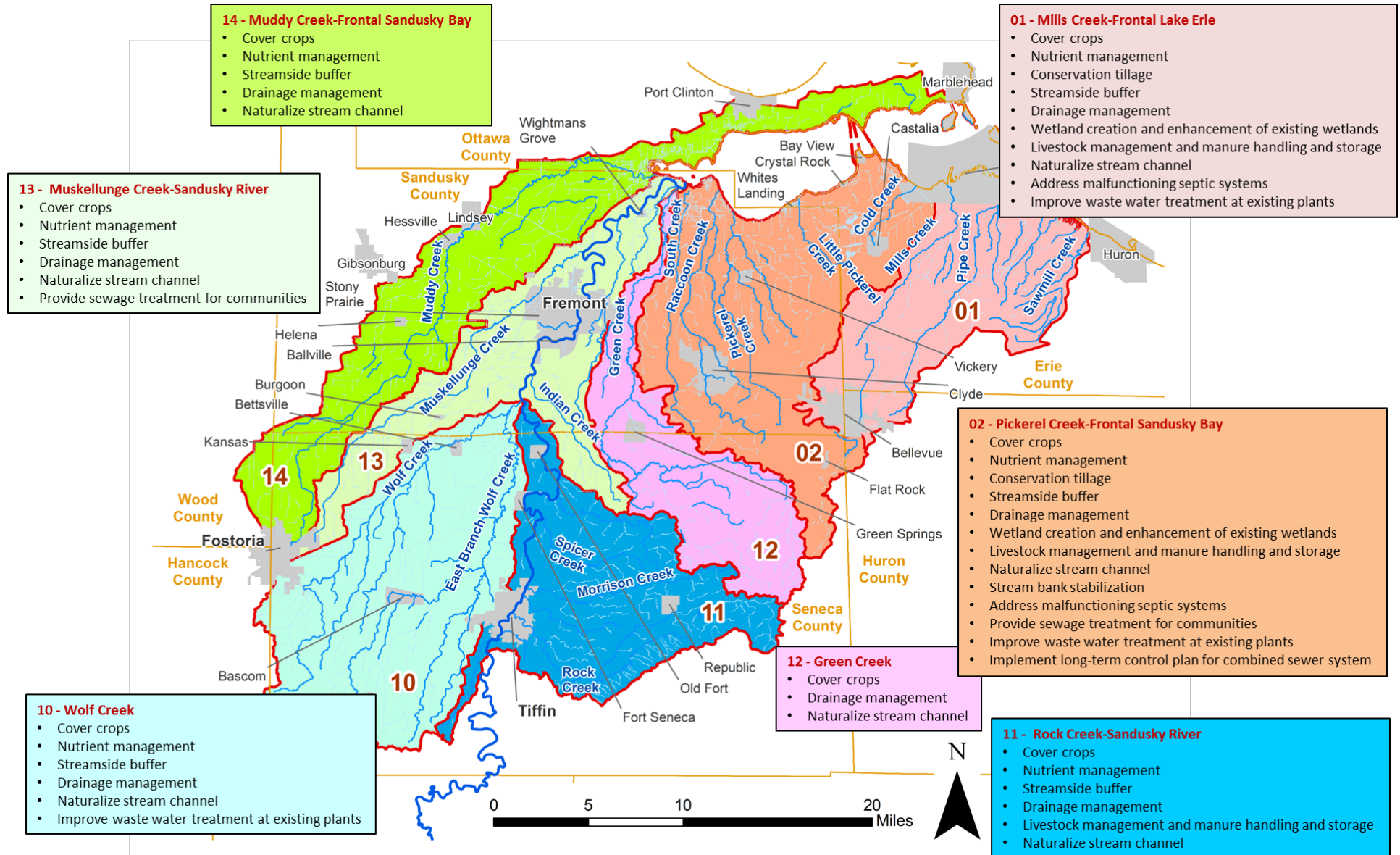
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What are the problems?



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How can the problems be fixed?



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What are the most important “fixes” in the watershed?

- ◆ **Reduce pollutant loading from waste water treatment systems**
 - Improve the quality of waste water effluent through increased treatment
 - Implement plans to reduce or eliminate overflows from waste water collection systems
- ◆ **Reduce pollutant loading from cropland drainage**
 - Use cover cropping and reduced tillage to protect soil surfaces and bind pollutants
 - Manage fertilization, manure handling, and drainage practices to minimize loss of pollutants
- ◆ **Reduce bacteria, nutrient and organic loading from poorly functioning septic systems**
 - Identify systems that are in need of improvement through inspection and/or monitoring
 - Provide needed education and assistance to system owners

What actions are needed to improve water quality?

There are a variety of reasons why streams in the lower Sandusky River and Bay tributaries watershed fail to meet water quality goals, so several types of actions are needed to improve and protect the watershed.

The recommendations focus on reducing pollutant loads and/or increasing the capacity of the streams to better handle the remaining pollutant loads. Sources of water quality problems that should receive focus for water quality improvements include:

- Waste water collection and treatment systems
- Cropland drainage
- Home septic systems

Who can improve the situation?

Implementation of this report’s recommendations will be accomplished by federal, state and local partners, including the voluntary efforts of landowners.

Ohio EPA will issue permits to point source dischargers that are consistent with the findings of this TMDL report. Likewise, the combined sewer system in the City of Clyde will be improved to substantially reduce the amount of sewage overflows by following a state approved control plan.

The Ohio Department of Natural Resources has programs dedicated to abating pollution from certain agricultural practices; promoting soil, water, and wildlife conservation; and dealing with storm water and floodplain protection. County agencies often work with state and federal partners in administering federal and state assistance programs to people in their counties. Several such programs are available to address home septic system upgrades and agricultural and urban conservation practices.

A watershed action plan was developed collaboratively between local conservation and health agencies, governments and citizens aimed at addressing water quality issues within the Honey Creek (a tributary to the Sandusky River) watershed. Additional funding may come available for agricultural conservation practices through provisions in the Farm Bill for buffer strips, wetlands and other land conservation practices.

Where can I learn more?

The Ohio EPA report containing the findings of the watershed survey, as well as general information on TMDLs, water quality standards, 208 planning, permitting and other Ohio EPA programs, is available at <http://epa.ohio.gov/dsw/tmdl/index.aspx>. The final TMDL report was approved by U.S. EPA on August 11, 2014.

Contact

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