

Scioto Brush Creek 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.

What are the essential facts?

- Ohio EPA studied the Scioto Brush Creek watershed and found water quality problems at several locations.
- Water quality improvements can be made with practical, economical actions.
- You may review the work to date.
- Making water quality improvement depends on the participation of the watershed's residents.

Where is the Scioto Brush Creek watershed?

Scioto Brush Creek is located in southern Ohio near the Ohio River in Scioto and Adams counties and has a drainage area of 273 square miles. Scioto Brush Creek is a direct tributary of the Scioto River entering just east of McDermott.

The dominant land use in the watershed is forest (73%). Pasture/hay is next most common (10%), followed by various stages of developed land and scrub/shrub land at 5% each.

There is one wastewater treatment plant in the



watershed (a school).

The mainstems of South Fork Scioto Brush Creek and Scioto Brush Creek are frequently used for recreational activities such as swimming, boating or fishing.

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.

Ohio EPA scientists collect comprehensive biological, chemical and physical data in watersheds. The results are 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.

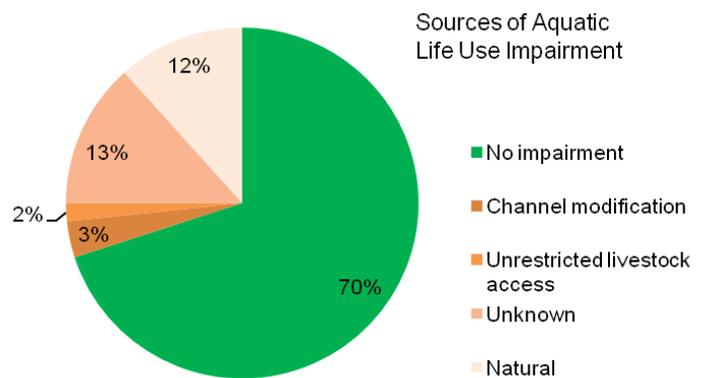
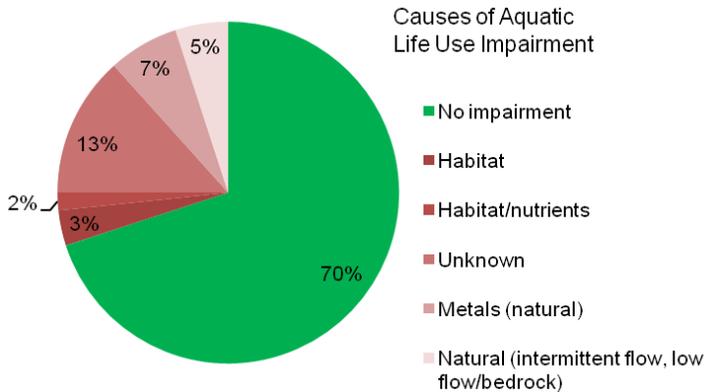
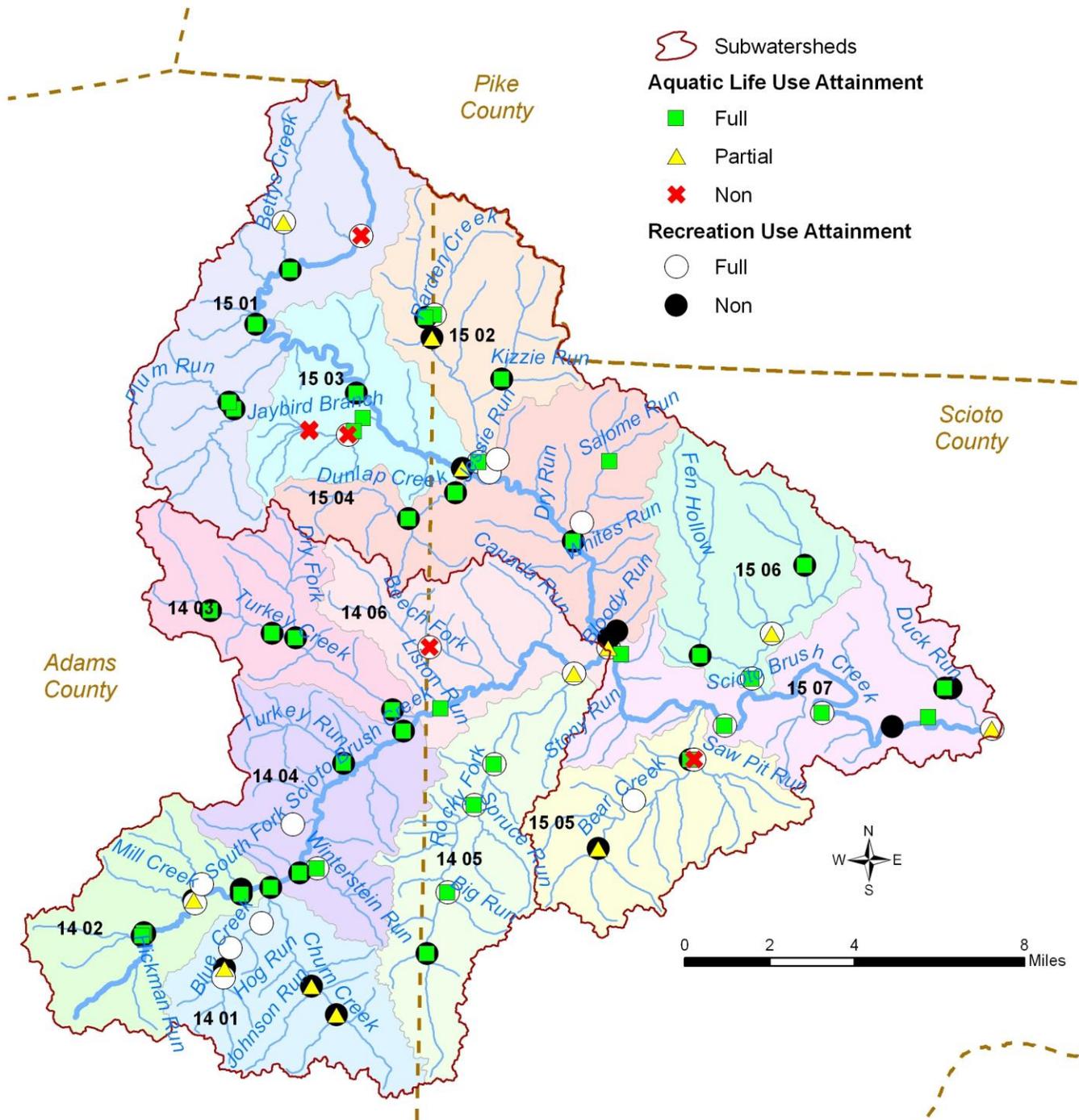
A watershed is the land area that drains into a body of water.

What is the condition of the Scioto Brush Creek watershed?

Ohio EPA performed a comprehensive water quality study in the Scioto Brush Creek watershed in 2006. Sixty sites were studied for biological health, sixty sites for water chemistry, sixty-eight sites for recreation use (including some additional sampling in 2007 and 2008), and no sites for human health (fish contaminants) use. An additional forty-six sites were studied for biological health by the Ohio Department of Natural Resources (ODNR) in 2001 and 2003. Where impairment was noted by ODNR, causes and sources were natural, so they did not affect the TMDL loading analysis. Not including the ODNR data, 70% of sites attained water quality standards, 20% partially attained and 10% did not attain. Including ODNR data, 60% of sites fully attained standards, 11% partially attained, and 29% did not attain.

Most of the biological impairment was caused by natural causes and sources, such as low flow or homogeneous (bedrock) substrates. There were some anthropogenic influences on biological attainment; in most cases these had to do with direct habitat alterations such as channelization and substrate disturbance (usually in the form of gravel mining).

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

◆ **Reduce bacteria entering the streams**

- *Fix or replace failing home sewage treatment systems.*
- *Fence livestock out of streams and provide alternative water supplies for them.*

◆ **Reduce impacts to in-stream and streambank habitat**

- *Aquatic life in streams needs diverse substrate and is healthiest when streams are not disturbed by heavy equipment. Gravel mining and straightening stream channels deteriorates the quality of aquatic life, which in turn can affect recreational activities such as sport fishing.*

What actions are needed to improve water quality?

There are several reasons why streams in the Scioto Brush Creek 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 be focused on making water quality improvements include:

- Identify and replace or repair failing home sewage treatment systems (HSTS). Failing HSTS were the predominant source of bacteria in the watershed. Addressing some of these failing HSTS could significantly reduce excesses of bacteria.
- Fence livestock out of streams. Unrestricted livestock access to the streams allows habitat degradation (trampling stream banks and increasing sediment inputs), direct input of nutrients (via defecation) and direct input of bacteria.
- Cease in-stream gravel mining operations and related channel modifications. Gravel mining introduces several issues for streams, including destroying habitat, inhibiting the ability of the stream to naturally process pollution and increasing the severity of flooding downstream.

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.

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.

The Friends of Scioto Brush Creek is an active watershed group that focuses on maintaining and improving the water quality of Scioto Brush Creek (www.friendsofsciotobrushcreek.org).

Additional funding may come available for agricultural conservation practices through provisions in the Farm Bill for streambank 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://www.epa.ohio.gov/dsw/tmdl/index.aspx>.

The Scioto Brush Creek watershed draft TMDL report was available for public review from April 26 through May 26, 2011. The final report was approved by U.S. EPA on September 30, 2011. It can be found at <http://www.epa.ohio.gov/dsw/tmdl/SciotoBrushCreekTMDL.aspx>.

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