

July 2009

Blanchard River Watershed TMDL Report

What are the essential facts?

- Ohio EPA studied the Blanchard River watershed and found water quality problems at all of the locations measured.
- The watershed can make progress towards restoration with practical, economical actions.
- Improving the streams depends on the participation of the watershed's residents.

What is the significance of this report? The Blanchard River Watershed TMDL Report is a tool that will include local ideas from the endorsed watershed action plan to help improve and maintain water quality and habitat in the watershed.

What is a watershed? A watershed is the land area from which surface runoff drains into a specific body of water.

Where is the Blanchard River watershed?

The Blanchard River watershed is located in portions of Allen, Hancock, Hardin, Putnam and Wyandot counties in northwest Ohio. It is a sub-watershed of the Maumee River Basin that flows into the western Lake Erie basin and drains 771 square miles.

An estimated 91,266 citizens live in the Blanchard River watershed, with the most rapid growth in Hancock County, especially in the suburban Findlay area. Both the City of Findlay and Village of Ottawa pump drinking water from the river.

Overall, the land use in the Blanchard River watershed is 81 percent row crop, 10 percent developed urban/residential, 6 percent forest, 3 percent pasture and grasslands and less than 1 percent open water/wetlands.

How does Ohio EPA measure water quality?

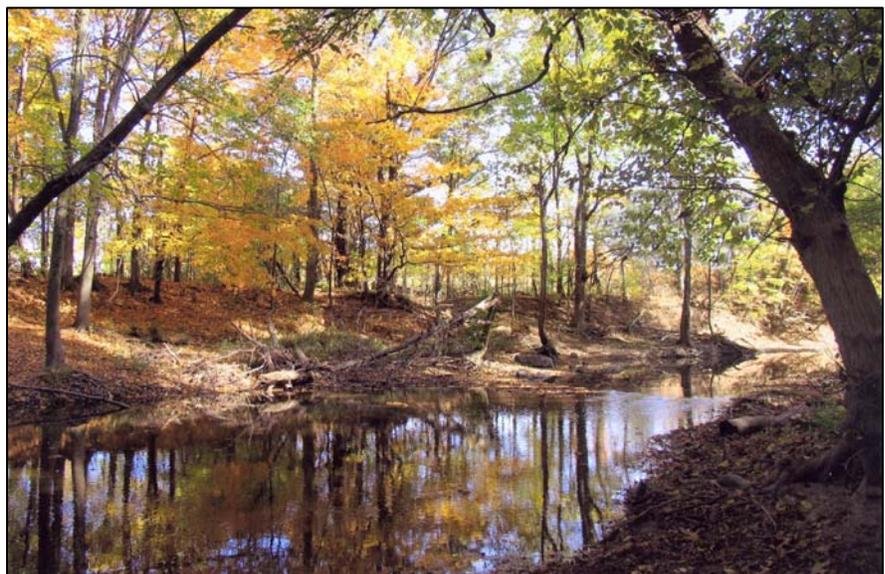
Ohio is one of the few states that measures the health of its streams by examining the number

and types of fish and aquatic insects in the water. An abundance of fish and insects that tolerate pollution indicates an unhealthy stream, while a large number that are sensitive to pollution indicates a healthy stream.

In 2005, Ohio EPA scientists collected comprehensive biological, chemical and physical data in the Blanchard River watershed (see map). Additional water chemistry and bacteria data were

collected in 2005 and 2006 to support a computer model that evaluates where the pollution comes from and where pollution reductions are needed.

The conditions of the watershed were compared with state water quality goals to determine which stream segments are impaired, and how much needs to be done to restore good stream habitat and water quality. A report was published in July 2007 that



Blanchard River at Riverbend Recreation Area, Hancock County (photo courtesy of Tim Powell, 2006)

Blanchard River Watershed TMDL Report

cultural drainage. Routine ditch clean-outs and removal of stream bank vegetation make it hard for pollutants to be treated by natural processes in these small streams. Unrestricted cattle access in Ottawa Creek contributes to bacteria, nutrients and erosion of stream banks.

Riley Creek (050), which includes the villages of Bluffton and Pandora, is impaired by nutrients, habitat/flow alteration and siltation. Several lowhead dams near Pandora impede the natural flow in Riley Creek, and cattle access leads to erosion, nutrient and bacteria problems. Lower Little Riley Creek has multiple point source discharges that degrade water quality and contribute to high bacteria. Lack of water in headwater streams, especially in summer, makes it difficult to support good aquatic life communities.

Cranberry Creek (060) has poor habitat along most of the tributary streams which have been extensively modified and put under county maintenance for agricultural drainage. A flood abatement project removed the trees and reconstructed the channel from Rockport to the mouth of Cranberry Creek in 2005. This sub-watershed had the highest level of bacteria impairment and high organic loads from inadequately treated wastewater.

The Blanchard River is meeting water quality standards as it flows west from Gilboa to join the Auglaize River in Dupont. However, excessive nutrient inputs from each sub-watershed and elevated sediment delivery from Riley and Cranberry creeks threaten to impact the health of the river mainstem and contribute to a high level of organic material that is expensive to remove from the raw drinking water supply for

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

◆ Eliminate pervasive bacteria problems

- *Reduce home sewage treatment system failures*
- *Ensure proper manure handling and management at livestock operations*

◆ Improve erosion and sediment control in all areas

- *Establish and protect riparian buffers and filter strips on all streams and ditches*
- *Use cover crops in non-growing season on farm fields*
- *Practice conservation tillage*
- *Adopt ditch maintenance that minimizes removal of vegetation along the banks and allows for floodplain development*

◆ Reduce the amount of nutrients getting into streams

- *Use nutrient management techniques on cropland including nitrogen and phosphorus testing indices*
- *Introduce flow control structures in subsurface drainage systems to limit tile flow in non-growing season*
- *Create or restore wetlands in low lying areas to store and clean polluted runoff*

Ottawa. The formation of trihalomethanes, a byproduct of disinfection for drinking water, is a human health concern. Additionally, several pesticides have been detected in the finished water.

How will water quality get better?

The Blanchard River watershed is included on Ohio's list of impaired waters. Under the Clean Water Act, a cleanup plan is required for each impaired watershed. This cleanup plan, known as a total maximum daily load (TMDL) report, calculates the maximum amount of pollutants a water body can receive and still meet standards (goals). The TMDL report specifies how much pollution must be reduced from various sources and recommends specific actions to achieve this.

The TMDL report will provide specific numeric goals for improving the stream habitat and

reducing pollutants, including pathogens, phosphorus and sediment. Ohio EPA can address some of the problems in the Blanchard watershed through regulatory actions, such as permits for wastewater and storm water dischargers. Other actions, such as committing to enhancing and protecting riparian areas, proper fertilizer management and reduced home sewage system failures, will be up to local residents.

What actions are needed to improve water quality?

Because there are many reasons why streams in the Blanchard River and its tributaries fail to meet water quality goals, several actions are required to improve the current condition and protect the watershed in the future. They should focus on reducing pollutants loads and/or increasing the streams' capacity to handle the remaining pollutant loads.

Blanchard River Watershed TMDL Report

Maintaining natural flow and establishing a connected and shaded riparian corridor is important for protecting water quality and aquatic biological communities. Likewise, stream buffers are appropriate for all land use types in the watershed. Other actions include the following:

- Improve wastewater treatment facilities in Arlington, Forest and Pandora to reduce ammonia, phosphorus and bacteria.
- Continue progress to treat or eliminate combined sewer overflows (CSOs) from Bluffton, Dunkirk, Findlay and Pandora.
- Address failing home sewage treatment systems in rural and developing areas.
- Develop source water protection plans with actions to minimize the impact of nutrients and pesticides in the Blanchard River, which provides drinking water to Findlay and Ottawa.
- Encourage greater voluntary adoption of agricultural management practices that reduce nonpoint source pollution.
- Plant trees along the river and tributaries to eliminate high water temperature and maintain a healthy dissolved oxygen level.
- Consider modification of the Riverside Park dam for flood storage and habitat restoration.
- Increase flood storage capacity with wetlands and two-stage or over-wide drainage ditches to abate damaging flows and increase stream capacity to treat nonpoint source pollution.



Poorly treated sewage entering Ottawa Creek from home septic system.

Who is responsible for taking action?

State and local partners, including the voluntary efforts of landowners, will implement the recommendations made in the TMDL report. Locally, actions to restore the watershed have been discussed by the diverse partners. The Blanchard River Watershed Partnership recently received funding for a watershed coordinator to develop and implement a watershed clean-up plan.

Are any actions already underway?

The Blanchard River Watershed Partnership and its partners in four counties are serving as community advocates for the watershed, and have become important forces to

maintain momentum and sponsor improvement efforts. More information about local planning and stakeholder outreach is available at <http://www.blanchardriver.com/>.

More recently, the Northwest Ohio Flood Mitigation Partnership has been formed to expedite the development of a flood plan to be implemented in coordination with public authorities in the Blanchard River watershed. More information can be found at <http://www.floodpartnership.org/>.

The Western Lake Erie Basin Partnership is a multi-state effort to improve land and water resource management. Visit the Web site to learn more about projects and funding opportunities at <http://www.wleb.org/>.

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/Home.aspx>.

The draft Blanchard River Watershed TMDL report was available for public review from January 28 through March 2, 2009. The final report was approved by U.S. EPA on July 2, 2009 and is currently available at <http://www.epa.ohio.gov/dsw/tmdl/BlanchardRiverTMDL.aspx>.

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