

## Ottawa River (Lima Area) Watershed Draft TMDL Report

The Clean Water Act requires Ohio EPA to prepare a clean-up plan for watersheds that do not meet water quality goals. The clean-up 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 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 (<http://www.epa.ohio.gov/dsw/tmdl/MaumeeRiver.aspx>).
- Making water quality improvement depends on the participation of the watershed's residents.

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

### Where is the Ottawa River (Lima area) watershed?

The Ottawa River (Lima area) watershed is located in northwest Ohio in Allen, Putnam and Hardin counties. Small portions of the watershed extend into Hancock and Auglaize counties as well. The watershed drains 365 square miles and flows into the Auglaize River north of Lima, Ohio. The watershed is primarily cultivated cropland with 18.9 percent being developed.



The city of Lima obtains its drinking water from the Ottawa River and Lost Creek, providing drinking water to approximately 39,000 people. The river has a long history of industrial and municipal uses that have historically negatively affected the river. The maximum area negatively influenced by the Ottawa River in the first half of the 20th century extended downstream through the Auglaize River to include a portion of the Maumee River. Through early pollution abatement efforts, by the mid-1970s, impacts had contracted significantly to include only the Ottawa River, with recovery beginning to be evident near the mouth. Biological communities showed a trend of significant recovery in 2010. However, these data results also clearly delineated impacted areas (and corresponding recovery through time) relative to major pollution sources, stressors or limiting factors on the Ottawa River.

### 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 2010, 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 must be done to restore good stream habitat and water quality.

### What is the condition of the Ottawa River (Lima area) watershed?

Of the sites sampled, 68 percent fully met their biological goals; 23 percent met some of the goals; and 9 percent met none of the biological goals. Only 9 percent of all sites sampled met recreation-based (bacteriological) goals.

The reasons that biological goals are not met are natural conditions (flow or habitat), nutrients, total dissolved solids, organic enrichment, and direct habitat alterations. Sources of these problems include natural issues with flow or habitat, hydromodification (such as dams), sewage discharges and habitat modification. Sources of bacteria include agricultural land uses and failing home sewage treatment systems. More detail on these is shown on the next page.



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## How can the problems be fixed?

### 05

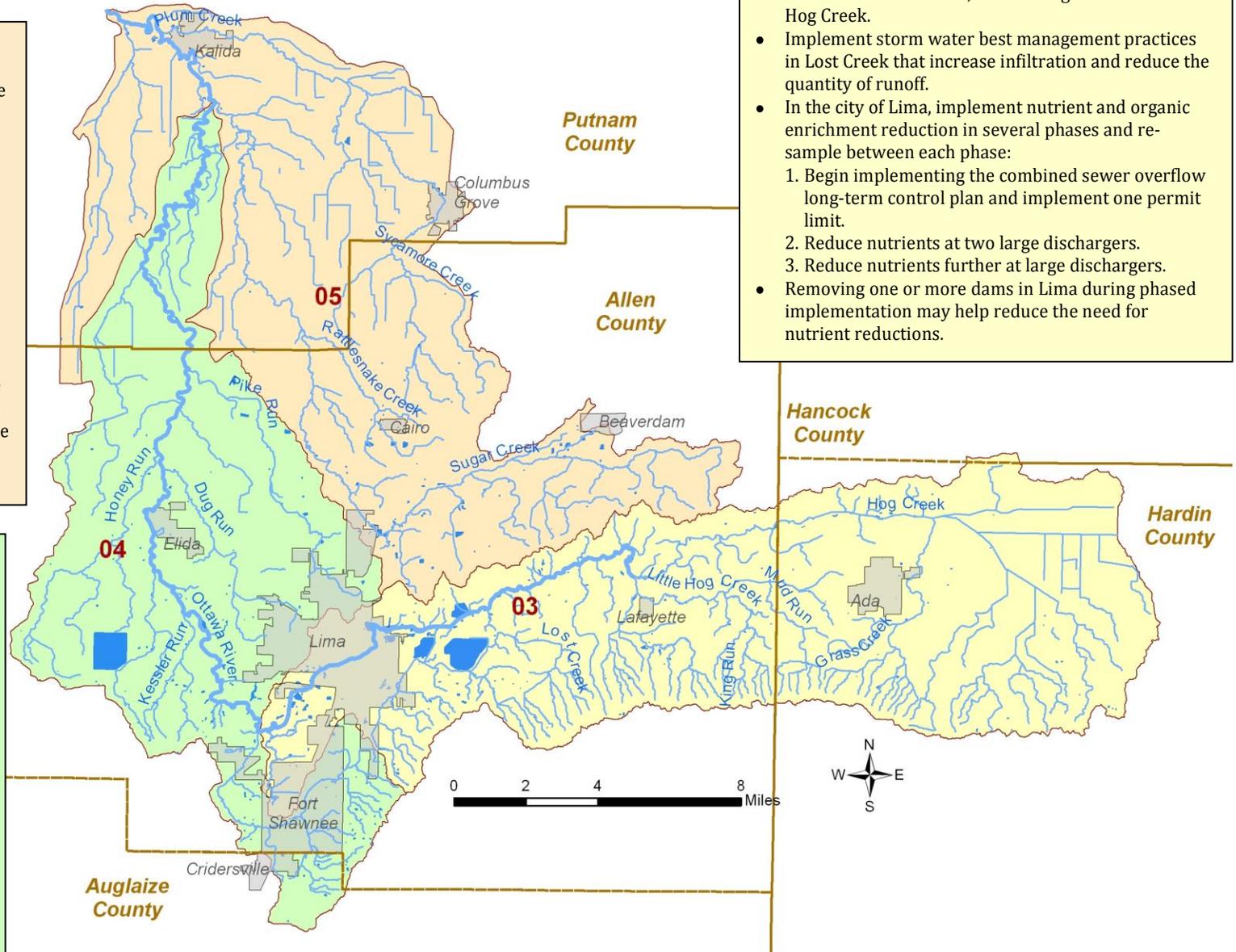
- Eliminate combined sewer overflows in Columbus Grove by complete sewer separation following the approved four-phase plan.
  - If impairment still exists following implementation, consider total phosphorus limits at the wastewater treatment plant.
- Consider the feasibility of connecting Vaughnsville to a sewer system.
- Implement agricultural best management practices in the Plum Creek subwatershed to reduce nutrients and improve habitat.

### 04

- Consider the feasibility of removing the Allentown dam.
- Implement agricultural best management practices in the Honey Run subwatershed to reduce nutrients and improve habitat.
- Implement total phosphorus limits at two wastewater treatment plants.
- Consider the feasibility of connecting Rimer and Gomer to a sewer system.
- Identify and fix failing home sewage treatment systems to reduce bacteria.

### 03

- Implement agricultural best management practices in the headwater streams, such as Hog Creek and Little Hog Creek.
- Implement storm water best management practices in Lost Creek that increase infiltration and reduce the quantity of runoff.
- In the city of Lima, implement nutrient and organic enrichment reduction in several phases and re-sample between each phase:
  1. Begin implementing the combined sewer overflow long-term control plan and implement one permit limit.
  2. Reduce nutrients at two large dischargers.
  3. Reduce nutrients further at large dischargers.
- Removing one or more dams in Lima during phased implementation may help reduce the need for nutrient reductions.



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

### ◆ Reduce nutrients and organic enrichment:

- Implement the combined sewer overflow long-term control plans in Lima and Columbus Grove.
- Implement agricultural best management practices such as effective hydraulic buffers.

### ◆ Restore natural habitat.

- Consider removing dams on the Ottawa River to improve habitat and flows during drier summer months.
- Implement agricultural best management practices to improve habitat, such as buffers with woody vegetation.

### ◆ Reduce bacteria entering streams.

- Implement the combined sewer overflow long-term control plans in Lima and Columbus Grove.
- Identify and fix failing home sewage treatment systems.
- Investigate the feasibility of connecting Rimer, Gomer and Vaughnsville to sewer systems.

## What actions are needed to improve water quality?

There are a variety of reasons why streams in the Ottawa River (Lima area) 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:

- Combined sewer overflows in Lima and Columbus Grove.
- Municipal and industrial dischargers contributing nutrients to impaired streams.
  - See phased implementation discussion on page 3 (yellow box).
- Agricultural areas that could reduce nutrient inputs and improve habitat along stream banks.

## 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 Ottawa River Coalition is an organization whose membership is comprised of “any firm, agency, organization, institution, corporation or governmental unit interested in promoting the wise management of the Ottawa River.” The Coalition has been an advocate for healthy water quality in the watershed for many years. The city of Lima has worked to improve water quality in the Ottawa River, implementing changes in point sources and combined sewer overflows. Additional funding may come available for agricultural conservation practices through provisions in the Farm Bill for effective hydraulic buffers, 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>.

## How can I comment on the draft report?

The Ottawa River (Lima area) watershed draft TMDL report will be available for public review from April 19 to May 20, 2013 at <http://www.epa.ohio.gov/dsw/tmdl/MaumeeRiver.aspx>. Comments should be mailed to the address at the right or emailed to [beth.risley@epa.ohio.gov](mailto:beth.risley@epa.ohio.gov).

After considering comments, Ohio EPA will submit a final document to U.S. EPA for approval.

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