

# 1 EXECUTIVE SUMMARY

## 1.1 Water Quality Concerns

Michiganders have the privilege of living in a state with 11,000 inland lakes, 76,000 miles of rivers – a state that borders four of the five Great Lakes with 3,200 miles of coastline in the largest freshwater supply in the world. The provision of clean, safe water in our homes, schools, workplaces and business establishments is something many of us have taken for granted. Not anymore. The ongoing water tragedy in Flint, the 2014 ban on drinking water in Toledo and parts of Monroe County due to the toxic algal bloom in the western basin of Lake Erie, and the presence of dangerous chemicals in our water supply are powerful reminders that the right to clean water is something markets cannot guarantee because water is not a commodity. Surrounded by and bound to this remarkable water commons, we are called to be stewards of the lands and waters of the Great Lakes and restore water as a common good. The S.S. Lapointe Drain Watershed Management Project is an example of committed citizens doing just that.

The River Raisin Institute (RRI) received a grant in 2014 from the Michigan Department of Environmental Quality (MDEQ) Nonpoint Source Program to write a watershed management plan for the S.S. Lapointe Drain, an impaired body of water. A small “orphan” watershed in Monroe County, the S.S. Lapointe Drain feeds directly into Lake Erie and is one of the contributors to the phosphorus and algae problems that have plagued the Western Lake Erie Basin (WLEB) since the 1990s. On November 10, 2016 the MDEQ designated the western basin of Lake Erie as impaired due to extensive algal blooms caused by excessive levels of phosphorous. (Figure 1) The impact on aquatic life and other wildlife, a designated use of Lake Erie under state water quality standards, required the state to take this course of action under the federal Clean Water Act. Michigan’s portion of Lake Erie is small, less than 2 percent. However, by making this determination the MDEQ communicates the importance of concerted action to limit the incidences of severe algal blooms in the WLEB.

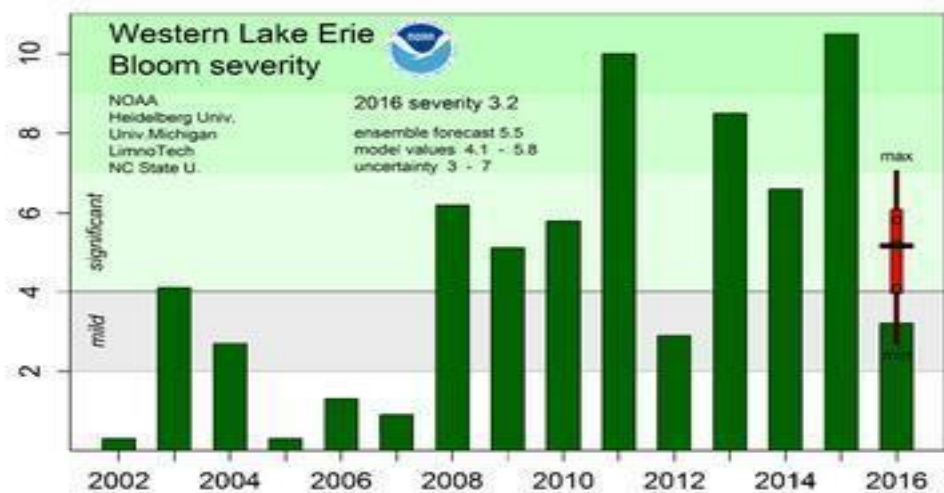


Figure 1 Western Lake Erie Bloom Severity 2016

Lake Erie Luna Pier Beach, also a part of the S.S. Lapointe Drain Watershed, is impaired due to the presence of elevated levels of *E.coli* resulting in beach closures during the summer. S.S. Lapointe Drain is listed on the State's nonattainment list for water quality impairment due to dissolved oxygen, nuisance algae and phosphorus. Lake Erie Luna Pier Beach is listed as impaired for recreational body contact due to *E.coli* contamination. This watershed plan addresses S.S. Lapointe Drain and Lake Erie Luna Pier Beach, both on the nonattainment list, as well as tributaries to western Lake Erie, including Muddy Creek and Sulphur Creek, as these are potential sources due to the regional transportation of pollution by the lake currents. While other lake-wide sources may have the potential to contribute fecal contamination to Luna Pier, such as wastewater and combined sewage overflow (CSO) discharges from the cities of Detroit, MI and Toledo, OH, controlling these potential sources are outside the scope of this plan.

A broad and diverse group of stakeholders came together over a two year period to systematically identify problems. A public opinion survey of several hundred farmers and residential landowners (Appendices G and H) provided feedback on land management practices that benefit farmers and help keep our water clean. Water sampling and stream assessment teams conducted testing at twelve sites in the watershed. Scent-trained canines and their handlers conducted field investigations to identify if human sewage was present at the twelve monitoring stations.

## 1.2 Goals and Objectives

The overall goal of this project is to create a watershed plan that contains the Nine Minimum Elements as defined by the United State Environmental Protection Agency (USEPA) and sets the agenda for eventually de-listing the water quality impairments. The watershed management plan fosters better stakeholder coordination, communication and cooperation, provides ideas and momentum, prioritizes problems and opportunities and qualifies the watershed for additional funding sources.

The project scope includes the S.S. Lapointe Drain and Lake Erie Luna Pier Beach, both on the Section 303(d) list as well as Muddy Creek and Sulphur Creek. Taking a comprehensive approach to achieving the total maximum daily load (TMDL) objectives we looked at these nearby tributaries to the WLEB because they are close to the TMDL reaches.

The plan focuses on five main objectives:

1. Develop a 319 Nine Element approvable plan for the S.S. Lapointe Drain Watershed
2. Establish the S.S. Lapointe Drain Watershed Implementation Group to oversee implementation and ongoing evaluation of the watershed management plan
  - a. Facilitate stakeholder coordination
  - b. Disseminate information to support resource planning and watershed improvement efforts
3. Address identified watershed-wide priorities, targeting the improvement of impairments, both 303D listed and TMDL reaches
4. Facilitate the public education and public involvement process
5. Qualify the watershed for implementation grant funding

### **1.2.1 Develop a 319 Nine Element Approvable Plan for the S.S. Lapointe Drain Watershed**

The S.S. Lapointe Drain (SSLD) Watershed Management Plan (WMP) provides a framework of realistic implementation activities and measurable goals that address the priorities based on the results of the project. A long-term monitoring plan along with interim measurable milestones is included to judge improvement success. The plan calls for adaptive management to provide flexibility for changing the implementation activities and, if necessary, changing the goals themselves.

### **1.2.2 Establish the S.S. Lapointe Drain Watershed Management Plan Implementation Group**

A S.S. Lapointe Drain Watershed Management Plan Implementation Group has been established to oversee the implementation and ongoing evaluation of the watershed management plan. Stakeholder data sharing will occur through a centralized “clearinghouse” of data and resources at the River Raisin Institute. As part of the project, a resource library will aid in the dissemination of information. The resource library will include all previous significant data-gathering efforts, as well as the data and results of the analyses developed during this project. Coordination will be enhanced with the use of an updated S.S. Lapointe Drain Watershed website that includes a watershed directory and calendar of activities.

### **1.2.3 Address Identified Watershed-wide Priorities**

The water quality evaluation included water quality surveys that documented relative conditions and systematically identified problems. Sampling occurred at the mouths of Sulphur Creek, Muddy Creek, and S.S. Lapointe Drain as well as several locations in Lake Erie including the Luna Pier Beach and north and south of the beach. Scent-trained dogs were deployed to pinpoint human *E.coli* sources.

### **1.2.4 Facilitate the Public Information and Education Process**

The public information and education process is designed to inform and engage the public on the watershed issues, why they are important and how their input can help address these issues.

A social survey was sent to selected non-farming landowners (Appendix G) and a separate survey was sent to farmers (Appendix H) in the watershed to assess their awareness and attitudes regarding nonpoint source pollution in the S.S. Lapointe Drain Watershed. The Information and Education component of the watershed plan incorporates the results of the survey and are discussed in more detail in the Information and Education (I/E) Plan (Appendix I).

### **1.2.5 Qualify the Watershed for Implementation Funding**

The S.S. Lapointe Drain Watershed Management Plan addresses all the elements of the MDEQ Clean Michigan Initiative and USEPA-required elements for a watershed management plan. These are a broad range of project elements that will make the plan eligible for funding both from the state of Michigan and the federal government.

## **1.3 Recommendations**

The goal of the SSLD WMP is the restoration of all of the designated uses of the watershed.

The specific implementation objectives to achieve the goal are:

1. Achieve phosphorus TMDL and reduce total phosphorus loads
2. Achieve dissolved oxygen TMDL and increased DO
3. Achieve Luna Pier pathogen TMDL
4. Reduce sedimentation and hydrologic variability
5. Build River Raisin Institute capacity
6. Increase public awareness and involvement

Utilization of existing programs to broaden and deepen stakeholder commitment to watershed restoration, an Information and Education Plan that facilitates changes in long standing attitudes and behavior and the widespread adoption of best management practices (BMP) are strategies to achieve this goal.