PROTECTING OUR GREAT LAKES FROM NUTRIENT POLLUTION AND TOXIC ALGAE

Throughout the Great Lakes Basin, we are witnessing an increase in water quality challenges resulting from agricultural and storm water runoff pollution, wastewater overflows, septic systems, and illicit discharges. In addition to the threat posed by E.coli in our water, excess phosphorus from these types of pollution fuels the growth of massive harmful, toxic algae blooms that pose a public health risk and endanger our environment. Toxic algae has contaminated drinking water supplies, led to beach closures, and fed an ecological "dead zone" in Lake Erie. As we work to improve the quality of our lakes, rivers, and streams, Michigan lawmakers must lead policy discussions aimed at solving these problems.

Unsafe to Swim, Unsafe to Drink

Nutrient pollution from agricultural runoff and sewer system overflows cause a host of problems for Michigan's waters, affecting drinking water sources and recreational beaches across the state.

- Neurotoxins from a massive algal bloom in Lake Erie made national headlines in 2014 after they contaminated the city of Toledo's drinking water sources, leaving over 400,000 Michiganders and Ohioans without water for several days. The neurotoxin, microcystin, is known to cause dizziness, rashes, numbness, fever and vomiting.
- In 2019, 74 beaches and lakeshores were closed in the State of Michigan due to E.coli concerns.[1]
- 24 billion gallons of combined untreated sewage and stormwater is dumped into the Great Lakes each year.[2]

Agricultural Runoff as the Driver of Toxic Algae

According to the University of Michigan Water Center, approximately 85 percent of the phosphorus entering Lake Erie from the Maumee River comes from farm manure and fertilizers. In order to minimize toxic algae growth in Lake Erie, we need to reduce phosphorus loading into its western basin by at least 40 percent. Based on modeling done by the U of M Water Center, meeting this reduction target will require increased data monitoring and widespread use of scientifically verified nutrient-management practices on farms. The reduction in total number and density of CAFO-managed animals and the conversion of cropland back to natural space must be instituted to start reversing this trend.[3]

Septic Systems and Sewers as the Driver of Bacterial Pollution

Michigan is the only state in the country without uniform standards that govern how on-site sewage treatment systems are designed, built, installed, inspected, and maintained. For years, Michigan's elected officials have been debating the need for a statewide, uniform septic code. Still, despite the fact that nearly 130,000 septic systems are currently failing in the State of Michigan, the Legislature has failed to adopt effective, commonsense safeguards. As of 2020, 11 of Michigan's 83 counties have enacted programs designed to detect and repair failed septic systems. With these types of policies, places like Benzie County have been able to significantly reduce their septic failure rate within a few years of adopting septic ordinances.

Actions Needed To Keep Nutrient Pollution Out Of Our Waters

- Increase funding for water quality monitoring, including implementing the use of advanced technology and boots-on-the-ground expert staff.
- Ban manure, biosolid, and fertilizer application on frozen, snow covered, and phosphorus saturated ground without loopholes and take particular precautions for agricultural fields that are tile-drained.
- Require all proposed CAFOs to undergo a comprehensive environmental impact study to ensure that CAFOs are not built in ecologically sensitive areas and watersheds
- Establish statewide standards for septic systems, including baseline protections requiring owners to maintain septic systems and conduct robust inspections at regular intervals.
- Enact legislation that enables municipalities to develop storm water utilities to reduce the flow of harmful bacteria and nutrients into our waters from urban and suburban sources, especially as climate change increases the frequency and severity of storms and flooding.
- Increase awareness of illicit connections and discharges to municipal storm water systems through a comprehensive public education program.

1 https://www.egle.state.mi.us/beach/SearchResults.aspxinstatepark=False&beachtype=Public&wbtype=ALL&advisoryclosurefrom=1%2f1%2f2019+12%3a00%3a00+AM&advisoryclosureto=1%2f1%2f2020+12%3a00%3a00+AM
2 https://greatlakes.org/campaigns/sewage-overflows/
3 http://ns.umich.edu/new/multimedia/videos/23620-lake-erie-phosphorus-reduction-targets-challenging-but-achievable

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