
Nutrient Management Initiatives in Ohio

Ohio is aggressively tackling issues of water quality, particularly harmful algal blooms (HABs). A multi-faceted, multi-year approach to reduce the discharges and runoff of nutrients is vital to protect public health, the environment and our valuable water resources. Ohio's approach uses both broad and targeted projects and partnerships on the local, state, national and international levels. Some of these are highlighted below.

On-the-Ground Practices

- The Ohio Department of Natural Resources (ODNR), Ohio Department of Agriculture (ODA) and Ohio Environmental Protection Agency (Ohio EPA) have worked collaboratively to improve the health of **Grand Lake St. Marys** and its watershed. With the assistance of numerous local, state and federal partners, Ohio has implemented multiple practices including: increased dredging to improve boater safety and water quality; rough fish removal; constructed wetland and treatment train installation; improved aeration efforts; alum treatments and the installation of more than 700 conservation practices in the watershed.
- Through the **Ohio Clean Lakes Initiative**, the Ohio Legislature -- led by State Sen. Randy Gardner -- appropriated more than \$3.55 million for the installation of best management practices (BMPs) to reduce nutrient runoff in the Western Lake Erie Basin. State and local partners worked with more than 350 farmers to implement BMPs on more than 40,000 acres. Additional stream monitoring stations have also been installed to measure the effectiveness of these practices.
- The Ohio Legislature appropriated \$10 million to the **Healthy Lake Erie Initiative** to be used to reduce the open lake placement of dredge material into Lake Erie. The funds will identify or develop alternate uses for this material and identify additional disposal locations.
- Ohio EPA used funds from the **Great Lakes Restoration Initiative** to award grants to local and state organizations for projects to protect or improve Lake Erie water quality, including storm water projects, home septic system replacement/improvements and stream restoration projects.
- The Ohio Natural Resources Conservation Service is part of the **National Water Quality Initiative**, an effort to improve conservation practice delivery. Ohio EPA is assisting in this effort to help farmers implement conservation systems.

Strategies, Research, Partnerships and Legislative Updates

- In 2011, the directors of Ohio EPA, ODNR and ODA called together the **Directors' Agricultural Nutrients and Water Quality Working Group** of research scientists, agribusiness leaders and environmentalists to discuss how agricultural practices may affect conditions in Lake Erie and develop recommendations on how the state can partner with the agricultural community to promote nutrient stewardship statewide. The agencies also reconvened the **Ohio Lake Erie Phosphorus Task Force**. The group issued a new report that further analyzed the latest research on how nutrients are entering our water systems and made recommendations for both private sector and public policy initiatives to reduce the amount of nutrient loading in Lake Erie.
- Ohio EPA, coordinating with ODA and ODNR, developed **Ohio's Nutrient Reduction Strategy**, a comprehensive plan to manage point and non-point sources of nutrients and reduce their impact on Ohio's surface waters. The strategy recommends regulatory initiatives and voluntary practices that can reduce nutrients throughout the state. The agencies are also working to implement the Great Lakes Water Quality Agreement, a binational effort to develop phosphorus targets and allocations for the near shore and open waters of Lake Erie by 2016 and domestic action plans for achieving those targets by 2018.
- Ohio EPA is developing Nutrient **Water Quality Standards** targeting phosphorus and nitrogen in response to U.S. EPA's national nutrient criteria recommendations and the Clean Water Act. In 2013, Ohio EPA asked for public comments from various stakeholder groups. A nutrient technical advisory group will advise Ohio EPA as it moves forward with the next steps in developing nutrient standards.

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- In 2014, Governor John Kasich signed into law **Senate Bill 150**, an update of Ohio's regulatory structure specifically geared to improving water quality. The bill requires fertilizer applicators to undergo education and certification by ODA; encourages producers to adopt nutrient management plans; allows ODA to better track the sales and distribution of fertilizer throughout the state; and provides ODNR the authority to repurpose existing funding for additional BMP installation.
- Ohio EPA works with local communities to develop, implement and fund long-term control plans to reduce overflows of nutrient-rich sewage into streams and lakes following heavy storms and snow melt. Since 2010, Ohio EPA has awarded more than \$292 million in low-interest and interest-free loans from the Water Pollution Control Loan Fund for 138 projects in the Western Lake Erie watershed.

Monitoring

- Ohio EPA's **water quality monitoring programs** are nationally recognized and essential to the state's nutrient management efforts. Ohio EPA staff annually surveys several watersheds across the state for water and sediment chemistry, biological health, diversity and habitat. These monitoring and sampling efforts include the inland lakes and Lake Erie near shore monitoring programs. Ohio EPA has formed partnerships with universities and other organizations to create a Lake Erie-specific monitoring network.
- Ohio EPA, ODNR and the Ohio Department of Health developed protocol for **monitoring public waters** where HABs exist or are suspected. Ohio is one of the first states to establish protocols for issuing advisories when algal toxins are present at or above threshold levels. For more information, go to ohioalgaefinfo.com.
- Ohio EPA developed a **Public Water System Harmful Algal Bloom Response Strategy** to assist the agency and Ohio's public water systems prepare for and react to HABs in public water system source waters.
- Ohio EPA partnered with the National Oceanic and Atmospheric Administration (NOAA) to be the first state to use **NOAA satellite data** to remotely detect HABs on inland lakes and Lake Erie. This helped focus sampling efforts on areas where HABs had not been previously reported.

For More Information

- Ohio's Nutrient Strategy and Nutrient Water Quality Standards — epa.ohio.gov/dsw/wqs/NutrientReduction.aspx
- Ohio Clean Lakes Initiative — cleanlakes.ohiodnr.gov
- Directors' Agricultural Nutrients and Water Quality Working Group — <http://agri.ohio.gov/topnews/waterquality/>
- Point Source and Urban Runoff Nutrient Workgroup — epa.ohio.gov/portals/35/documents/point_source_workgroup_report.pdf
- Water Quality Trading Program — epa.ohio.gov/dsw/WQ_trading/index.aspx
- Great Lakes Restoration Initiative — greatlakesrestoration.us
- Public water systems — epa.ohio.gov/ddagw/HAB.aspx