DOW SUSTAINABILITY FELLOWS
UNIVERSITY OF MICHIGAN

Western Lake Erie Basin Nutrient Reduction Projects Public Facing Database

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In partnership with Alison Bressler, University of Michigan Water Center

Dow Sustainability Fellows Final Report

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Executive Summary

Excess phosphorus pollution in the Western Lake Erie Basin (WLEB) continues to drive harmful algal blooms (HABs), which pose significant risks to the ecosystem, regional economy, and drinking water supply. Numerous nutrient reduction projects are already underway across the watershed. There is great potential to enhance these projects' impact and engage the public through better information sharing and collaboration. To realize this potential, a team of 2025-2026 Dow Sustainability Fellows—five University of Michigan graduate students—built on the survey and findings from the previous cohort, consolidating project data into a comprehensive directory. This new digital tool strengthens connections among stakeholders and makes project information more accessible, supporting more coordinated and effective nutrient management in the WLEB.

Learn more about the problem of nutrient pollution in Lake Erie.
Read the previous report and visit the Water Center website.

Introduction and Background

Why Create A Directory?

The WLEB Advisory Group brings together diverse perspectives from agriculture, local government, and nonprofits to support phosphorus reduction in Lake Erie. This group originally identified the need for a project directory, citing inadequate communication among the parties involved in this work and highlighting the opportunity for clearer communication about current projects, funding, and avenues for collaboration. The Advisory Group suggested that the Water Center create a publicly available compilation of information about nutrient reduction projects in the WLEB. Based on interviews with Advisory Group members over the past year, the Dow Fellows determined that an online dashboard—with a map overview and detailed tables—would best present this information.

Figure 1: Dow team members with the Western Lake Erie Basin Advisory Group

Value and Vision

The WLEB Nutrient Reduction Project Directory provides users with an improved and up to date understanding of nutrient reduction activities taking place in Michigan's portion of the WLEB. Users can access project contacts and gain insights into funding strategies by exploring the sources behind active projects.

This work is continually evolving in partnership with the WLEB Community Advisory Group, the University of Michigan Water Center, and state government. The dashboard tool is designed for long term use, and will be managed in collaboration with the Water Center. As more projects are added, the dashboard's value will grow, fostering a larger collaborative network and strengthening nutrient reduction efforts.

Impact and Use Cases

The WLEB Nutrient Reduction Project Directory is designed to provide value to a variety of users, including educators, government workers, nonprofits, and researchers.

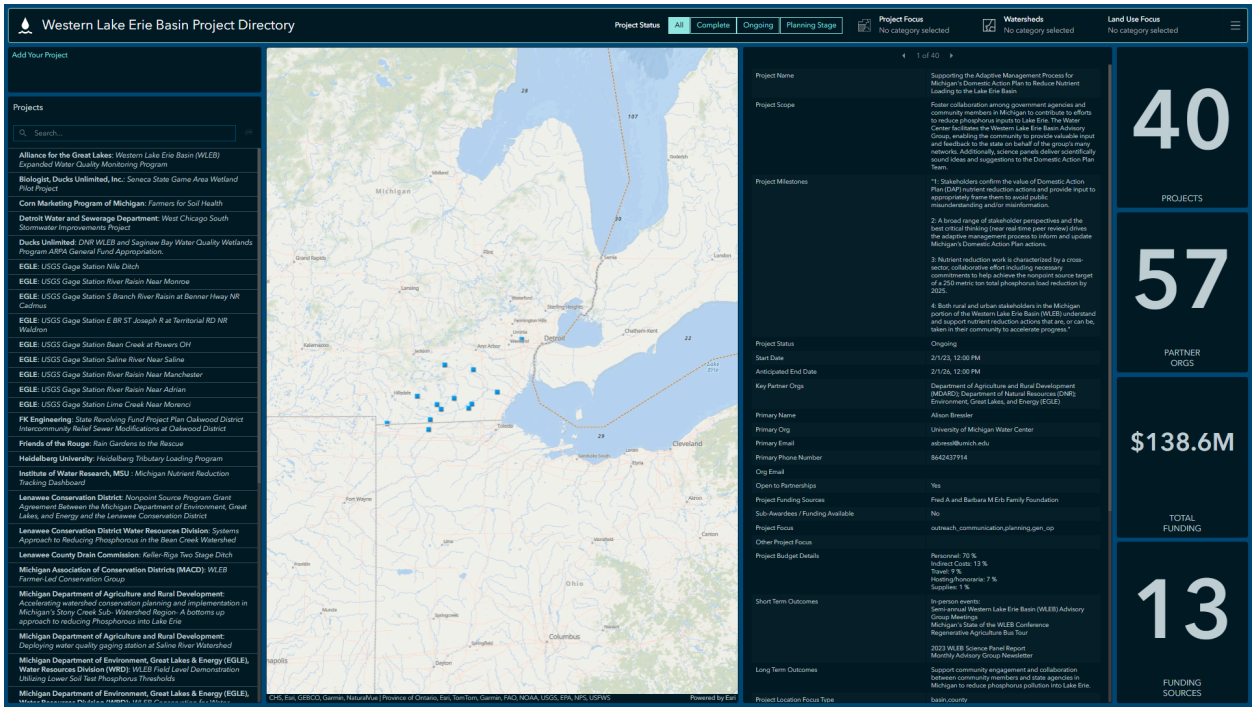

Figure 2: The Western Lake Erie Basin Project Directory

Community Education

Students, teachers, local businesses, and communities can use the dashboard to learn about projects that protect the WLEB. High school and college students can explore the dashboard for science fair projects or research papers on water pollution. Teachers can use it to show real examples of how people work together to keep water clean. Businesses that depend on clean water—like boating, fishing, and tourism companies—can use the dashboard to plan safe and healthy activities. Local volunteers can check the map to find areas that need cleanup events, and news reporters can share project updates with the public.

Local and Regional Government

People working in local government can use the dashboard to make smarter choices for their communities. City planners can look at project maps to guide new development while protecting water quality. County drain commissioners can use the dashboard to see where phosphorus-reduction projects already exist and where more are needed. Public health departments can check which areas have cleaner water near drinking water sources, and parks

departments can find places to restore wetlands and add educational signs for visitors. These features help government agencies coordinate efforts and prevent duplication.

Agriculture and Nonprofits
Local conservation districts can use the dashboard to find areas that need new soil and water programs. Nonprofit organizations can compare existing projects with their own goals and plan joint events or grant proposals. The dashboard promotes collaboration, helping professionals across agriculture and conservation work together more effectively.

Research and Policy
Researchers and decision-makers can use the dashboard to better understand progress toward protecting Lake Erie. Grant funding agencies can track project success and decide where to invest next. Policy advisors and state agency staff can monitor how well Michigan is meeting its phosphorus-reduction goals and identify areas that still need support. These insights make it easier to plan future projects and make choices that improve water quality for everyone.

Acknowledgements

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For More Information

- WLEB Nutrient Reduction Directory: https://graham.umich.edu/wleb/nutrient-reduction-database
- Western Lake Erie Basin Advisory Group: https://graham.umich.edu/wleb