

## Ohio State research, teaching, and outreach is...

### Making our waters healthier



**17,500 FERTILIZER APPLICATORS** trained and certified across Ohio on best practices for nutrient stewardship

Conducting research and sharing results from **MORE THAN 300 ON-FARM RESEARCH STUDIES** to determine the most effective practices for preventing nutrient runoff



Development of stormwater management and water treatment guidance for **8 LARGE MUNICIPALITIES** that can be used by dozens of smaller communities

### Sustaining new economic growth and jobs



**5,200 PROFESSIONALS** educated and trained annually to help them advance their careers or keep their jobs

**OVER 500 STUDENTS** graduate from Ohio State each year with majors that include a focus on water



About **\$33.4 MILLION IN ECONOMIC SERVICES** provided by protection and restoration of 6,000 acres of water habitats

### Accelerating innovation, technology, and partnerships

**COLLABORATING** with legislators, agencies, non-profits, and other academic institutions to tackle Ohio's water challenges and guide implementation of H2Ohio

**MORE THAN 150 FACULTY AND STAFF** conducting water research, the largest concentration of expertise in Ohio

**15 INNOVATIONS** to track algal toxins and reduce human health risks developed in partnership with the University of Toledo and others



Ohio State research and outreach contributes to clean water for drinking, industry, and enjoyment.

## Ohio State water-related assets

Aquatic Ecology Laboratory • Byrd Polar and Climate Research Center • Environmental Professionals Network • Environmental and Social Sustainability Lab • Global Water Institute • Infectious Disease Institute • Ohio Sea Grant • Ohio Water Resources Center • Olentangy River Wetlands Research Park • OSU Extension • Soil Water and Environmental Lab • Stone Laboratory • Sustainability Institute • Waterman Agricultural and Natural Resources Laboratory

## Examples of statewide research and outreach on water priorities

### ● Making our waters healthier

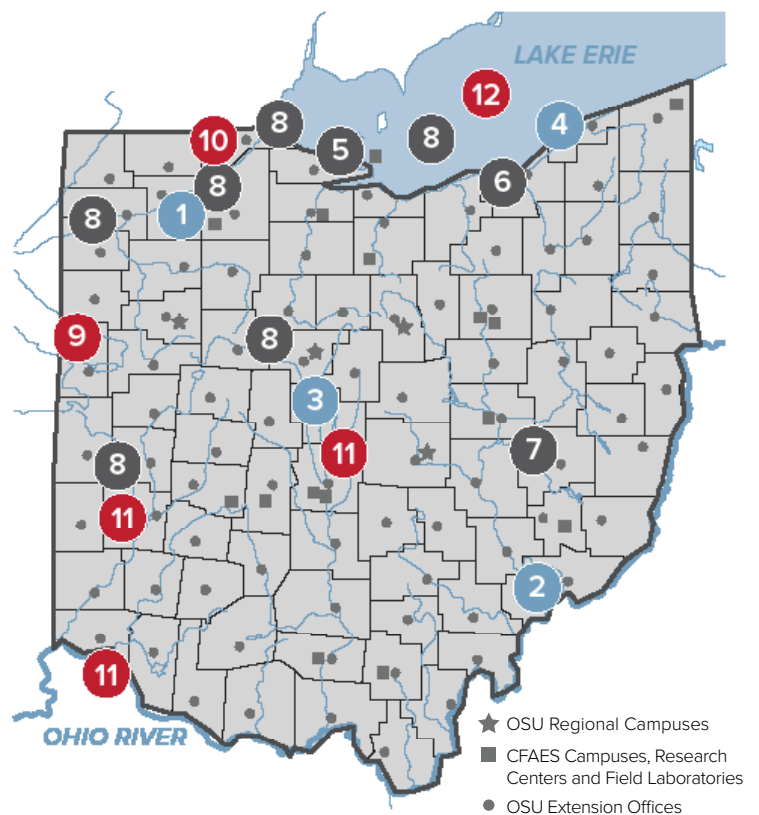
1. Evaluating conservation strategies with stakeholder collaboration, watershed modeling, and edge of field monitoring to reduce nutrient runoff
2. Understanding how “forever chemicals” (PFAS) spread to water systems
3. Tracking antibiotic resistance from “hotspots” to agricultural settings
4. Identifying *E. coli* contamination sources to improve beach water quality

### ● Sustaining new economic growth and jobs

5. Assessing accumulation of cyanotoxins in edible plants and Ohio game fish
6. Researching the safe reuse of dredged materials on urban and agricultural lands
7. Repurposing wastewater treatment byproducts for use as valuable raw materials
8. Assessing how agricultural conservation practices affect fish communities

### ● Accelerating innovation, technology, and partnerships

9. Testing new methods to maximize the capture and use of manure nutrients on croplands
10. Developing tools for water utilities to remove cyanotoxins from drinking water
11. Evaluating green Infrastructure to help manage excessive storm water in urban areas
12. Using satellite remote sensing to monitor for harmful algal blooms in Ohio’s lakes and rivers (statewide)



Ohio is a water-rich state surrounded by Lake Erie to the north and the Ohio River to the south. These water bodies, as well as thousands of miles of inland streams and rivers and thousands of acres of lakes and wetlands, contribute to the quality of life of every Ohio citizen.

## Federal funding at Ohio State to address federal water research priorities

Centers for Disease Control • Department of Agriculture • Department of Energy • Great Lakes Commission • Great Lakes Fishery Commission • International Joint Commission • National Aeronautics and Space Administration • National Institute of Environmental Health Sciences • National Oceanographic and Atmospheric Administration • National Science Foundation • U.S. Environmental Protection Agency • U.S. Fish and Wildlife Service • U.S. Geological Survey