



Removing two obsolete dams on the Cuyahoga River helped Northeast Ohio officials save \$5 million to \$7 million in updates to meet water quality standards.



John Navarro poses along a restored stretch of the Olentangy River in Columbus. Removing a nearby obsolete dam helped key the restoration.

Showing the benefits of tearing down dams: Healthier rivers, cleaner water

Tear down a dam, and a river will change. But how? And how much? To find out, Ohio Agricultural Research and Development Center scientists are looking in their own backyard.

Mazeika Sullivan and Kristin Jaeger are studying the impacts of dam removals at two former dams in Columbus: one on the Olentangy River on The Ohio State University's Columbus campus, and another close by on the Scioto River. They're documenting the exact changes seen in the rivers' flow, biology and water quality.

"There's a growing trend toward using dam removal to restore rivers, but studies documenting the rivers' responses are limited," said Sullivan.

"It's logical to assume that removing a dam and restoring a river back to its natural state would provide an ecological boost," said study sponsor John Navarro, program administrator with the Ohio Department of Natural Resources Division of Wildlife. "But until now, there have been few studies that quantify these benefits."

More: go.osu.edu/RiverRestoration



Mazeika Sullivan



Kristin Jaeger

"The partnership between Ohio State and the ODNR Division of Wildlife, through the Ohio Biodiversity Conservation Partnership, supports the research being conducted by Mazeika (Sullivan) and Kris (Jaeger), and will provide concrete evidence of the benefits of dam removals."

— John Navarro, program administrator, Ohio Department of Natural Resources Division of Wildlife

ESSENTIALS

- Ohio has removed 60-plus dams in the past four decades, in large part to improve water quality.
- A recent low-head dam removal project in Northeast Ohio, for example (not connected to the OARDC study), led to a previously impaired section of the Cuyahoga River meeting Ohio Environmental Protection Agency water quality standards within just six months — with fish diversity going up by 57 percent.
- Dam removal cools a river's water — about 6 degrees Fahrenheit in a previous study in Michigan — and restores its natural temperature range.
- The improved water flow from dam removal keeps sediment from building up. Dam sediment can be full of accumulated toxins, including health threats such as polychlorinated biphenyls (PCBs).
- Sullivan and Jaeger's research is partly funded by a grant from the National Science Foundation.

u.osu.edu/cfaesimpact
oarc.osu.edu

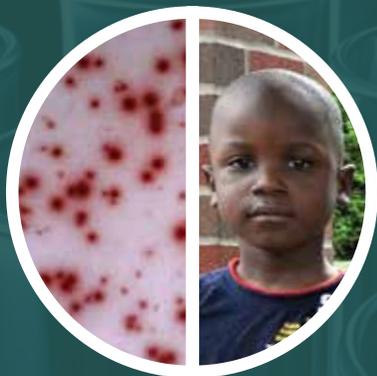


THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES

OARDC: A Leader in Agbioscience

ag·bi·o·sci·ence (ăg'bt'ō-sī'ens) *n.* the integration of scientific disciplines to address critical needs of food security, safety and health; environmental sustainability; and biobased energy, fuel and products



**Food Security, Production,
and Human Health**



**Environmental Quality
and Sustainability**



**Advanced Bioenergy
and Biobased Products**

Ohio Agricultural Research and Development Center

As the research arm of The Ohio State University's College of Food, Agricultural, and Environmental Sciences (CFAES), the Ohio Agricultural Research and Development Center (OARDC) employs nearly 650 scientists and staff members throughout the state.

Ohio State's Wooster campus is the largest agbioscience research facility in the U.S. OARDC scientists work closely with researchers in Ohio State's Colleges of Education and Human Ecology, Medicine, Public Health, Veterinary Medicine, Biological Sciences and Engineering.

At any given time, OARDC researchers are engaged in nearly 400 research projects. Primary focus is in three signature areas:

- Advanced Bioenergy and Biobased Products
- Environmental Quality and Sustainability
- Food Security, Production, and Human Health

The Ohio General Assembly established OARDC as the Ohio Agricultural Experiment Station in 1882. It is supported by a line-item appropriation from the Ohio General Assembly, competitive grants, gifts, contracts, federal grants and other sources. OARDC uses these funds to provide direct research support and economic development for Ohio's annual \$100+ billion agbioscience industry. OARDC is not funded by student tuition or any other general funds of The Ohio State University.

u.osu.edu/cfaesimpact
oardc.osu.edu



THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,
AND ENVIRONMENTAL SCIENCES