



Solving Water Challenges Through Workforce Development

Freshwater Collaborative of Wisconsin Outcomes Report - July 1, 2023—June 30, 2025

Undergraduates in Action

The **Freshwater@UW Summer Research Opportunities Program** equips the next generation of freshwater professionals with the knowledge and skills they need to meet Wisconsin's water challenges. Sixty five undergraduates from Wisconsin and beyond conducted mentored research at one of the Universities of Wisconsin during the last biennium.



Researchers from UW Madison, UW Milwaukee and UW Stevens Point partnered with commercial fish farms, K 12 schools and universities statewide to create **aquaculture experiences** for high school and undergraduate students. They hope to help the aquaculture industry solve a major staffing shortage.

During the two week **Data Analysis and Monitoring (DAM) Crew** summer experience, undergraduates trained with river restoration professionals to monitor the impacts of dam removal on the Kinnickinnic River. Their data contributes to the 10 year Kinnickinnic River Monitoring Plan.



Water Words from the Executive Director



Water is essential to our well-being and survival — and maintaining healthy water systems is a challenge throughout the world.

Wisconsinites are uniquely connected to two of the largest freshwater systems: the Great Lakes and the mighty Mississippi River. Within our borders also lie thousands of smaller lakes and rivers.

Yet even in Wisconsin, we face challenges. In its early days, the Freshwater Collaborative of Wisconsin worked with the Wisconsin State Legislature to identify 10 Grand Water Challenges. These challenges affect our state's largest industries, including agriculture, recreation and tourism, shipping, commercial fishing, energy production, manufacturing, mining, and water technology and infrastructure.

As we invest in curriculum and programs that recruit and train students for careers in water, we do so with the knowledge that our future workforce must be prepared to help solve our state's Grand Water Challenges. **Our funding has focused on two of the most prevalent challenges: Agricultural Water Management and Water Quality Safety & Emerging Contaminants.**

In this biennial report, we highlight some of the growth and successes in these two areas. We also share more about our ongoing efforts to expand the water workforce through K-12 outreach, curriculum, and undergraduate research and internships.

Thank you to the governor, state legislature, faculty and staff at the Universities of Wisconsin, and the more than 300 partners who have collaborated with us. Working together, we are showing the future workforce that Wisconsin is THE place to study and work in water.

Best,

Marissa Jablonski
Executive Director

A Vision for Wisconsin

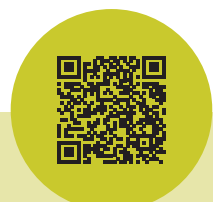
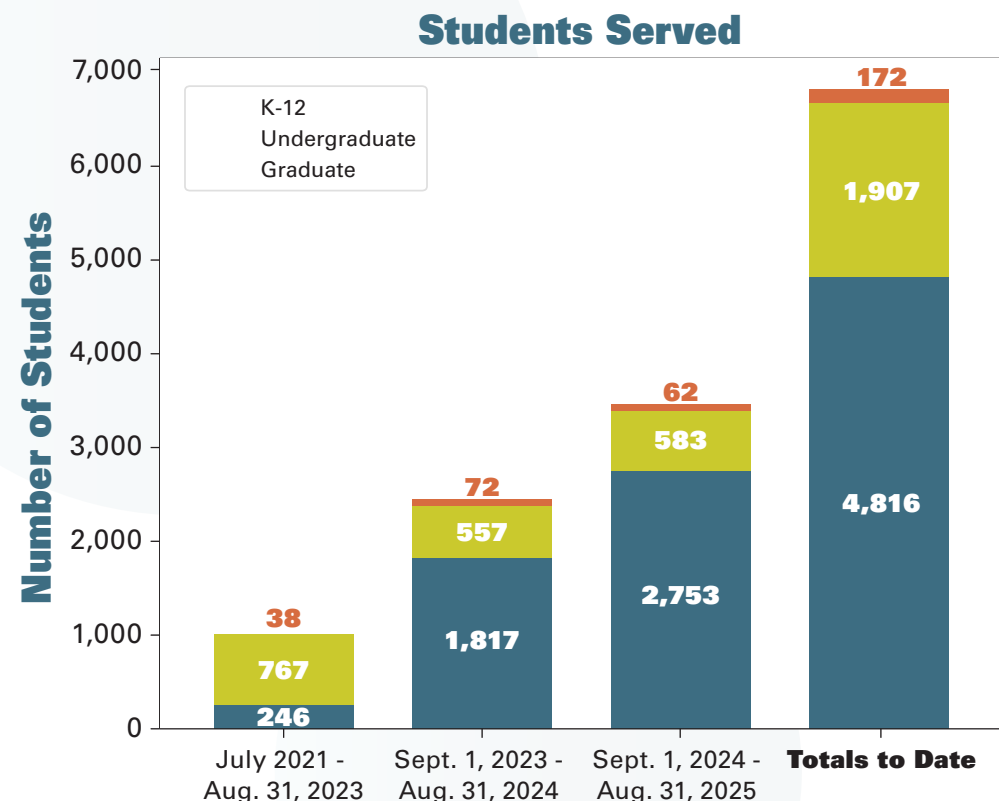
The Freshwater Collaborative of Wisconsin applies the power of the 13 Universities of Wisconsin and the Wisconsin Idea to lead the global community in addressing freshwater challenges.

Our Mission:

- Create knowledge to solve freshwater challenges through collaborative research across academia in fields such as natural and applied sciences, engineering, economics, social sciences, arts, humanities and policy.
- Recruit and develop talented professionals across all freshwater disciplines through intentional structuring of curriculum, training and workplace experiences.
- Improve the well-being of natural ecosystems and all people by applying research and training to engage and serve communities and solve freshwater challenges.

Student Participation

Since our inception, nearly 7,000 middle and high school, undergraduate and graduate students have participated in programs, courses and research experiences funded through the Freshwater Collaborative.



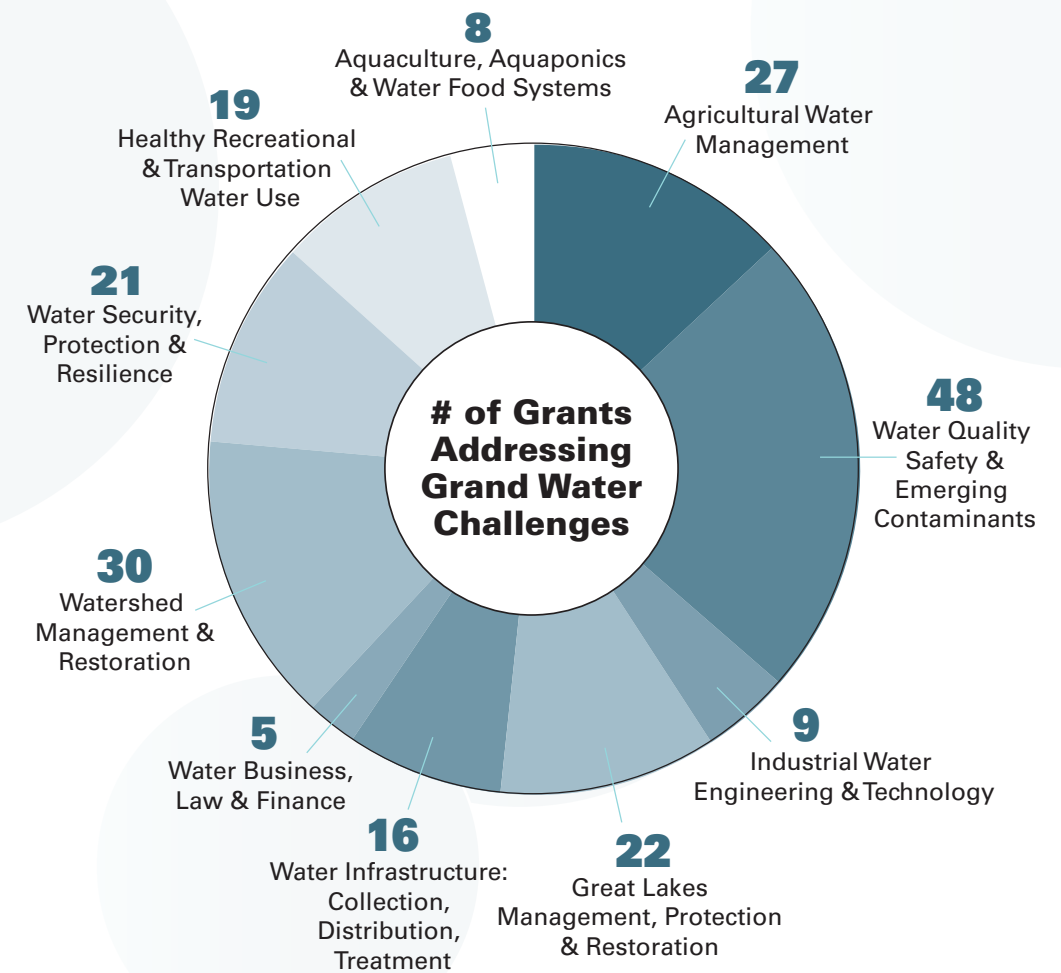
Use our searchable online database to learn more about individual projects.

Tackling the State's Grand Water Challenges

The 10 Grand Water Challenges affect many of our state's largest industries. We invest in projects that not only train students but also address water challenges.

Grand Water Challenges Addressed

Freshwater Collaborative funding addresses all the Grand Water Challenges. Evaluations from 2024 and 2025 indicate that the following Grand Water Challenges were addressed as part of Freshwater Collaborative-funded grants. All grants focus on more than one Grand Water Challenge. A few focus on all 10. The Freshwater Collaborative prioritizes grants that address Agricultural Water Management and/or Water Quality Safety and Emerging Contaminants.



Grand Water Challenge: Agricultural Water Management

Farming is a vital part of Wisconsin's economy, and agricultural practices significantly impact the state's water systems. Nutrient pollution, particularly from phosphorus, causes frequent harmful algal blooms in lakes and rivers throughout Wisconsin. Investment in research projects that improve agricultural water management benefits farmers, recreationists and entire Wisconsin communities.

MONITORING WATER QUALITY IN THE RED CEDAR BASIN

The Red Cedar Watershed includes Lake Menomin and Tainter Lake, which are listed as impaired by the Wisconsin Department of Natural Resources. Harmful algal blooms often make these lakes unusable for fishing and water recreation.

Funding from the Freshwater Collaborative helped UW-Stout faculty establish the Red Cedar Basin Monitoring Group in 2022. Each summer, a team of undergraduate students collects data to monitor the long-term effectiveness of restoration efforts. To prepare, they take a Collaborative-funded summer course taught at UW-Eau Claire, UW-River Falls and UW-Stout.

Students gain professional skills and help inform management and restoration decisions. The collaboration involves WDNR Fisheries, City of Menomonie, Dunn County, Beaver Creek Reserve, the Colfax-Red Cedar Preserve and The Prairie Enthusiasts, among others.

Eighteen students have participated over the last three years. Many have presented at Research in the Rotunda and regional and national conferences.

In 2025, the Freshwater Collaborative committed to long-term programmatic funding for this community-driven project.



“

The skills I learned this summer directly relate to what I want to do in the future. Having experience with monitoring will give me a step up when it comes to the job market after graduation.”

Cayanna Erickson | UW Stout | 2025 Intern



Jessie Kreiling and Sean Babasin take water samples at Upham Woods.

PHOSPHORUS POLLUTION AND YOUTH EDUCATION

Researchers at UW-Green Bay and UW-Madison are tackling phosphorus pollution head on. They are combining cutting-edge research with hands-on learning experiences for students of all ages.

Two field locations at Upham Woods Outdoor Learning Center on Blackhawk Island provide an ideal setting for research and educational outreach. Students learn how to take water samples and conduct chemical analyses. They also become proficient in using advanced laboratory equipment to measure water quality.

In addition to undergraduate and doctoral students from UW-Green Bay and UW-Madison, the project has included students from other Freshwater Collaborative-funded programs, including UW-Green Bay's High School Summer Scholars Program and the statewide Freshwater@UW Summer Research Opportunities Program run by UW-Madison.

Continued programmatic funds from the Freshwater Collaborative will expand the research and bring more high school students to Upham Woods for hands-on field trips. Programs like these help recruit students to study water at the Universities of Wisconsin.



Alumna Lands Job as Stormwater Engineer

Conducting research at UW-Green Bay helped Jessie Kreiling land a job as a stormwater engineer with the Town of Grand Chute. Her work focuses on phosphorus, sediment, and pollutant reduction to enhance water quality.

“My undergraduate research experiences played a significant role in my job search by igniting my passion for fieldwork and ensuring that my chosen career included ample opportunities for it,” she said. “The data analysis skills I acquired during my research enhanced my organizational abilities, which are essential in my current role.”



Lindsey Redepenning installs a weather station in a farm field.

RESEARCH INNOVATION FOR FARMERS

One of the first Freshwater Collaborative grants helped UW-Stout faculty and students develop a mathematical model that helps dry bean growers in Wisconsin manage water usage.

Over the years, faculty and students have worked closely with Chippewa Valley Bean to fine tune the models. Recently, the collaborative team installed five weather stations in farm fields. The stations collect real-time data that measure sunlight, soil moisture, wind speed and direction, and precipitation. The information will enhance the models and allow farmers to simulate how various scenarios will affect crop yield.

With programmatic funds, Crop per Drop is adding a second industry partner, Bes Bean. They are also launching growth experiments in the UW-River Falls greenhouses. Mentors from this project and the Red Cedar Basin project plan to hold a community poster session in summer 2026 to highlight student research.



Students, faculty and staff tour Chippewa Valley Bean.



Redepenning works on a weather station.

Crash Course in Water Management

The Ag-Water Nexus Seminar and Ag-Water Nexus Field Experience courses exemplify collaboration on every level. Learning from faculty from multiple institutions, water professionals and farmers, students will examine the complex relationship between farming practices and water management.

The courses, developed with and supported by Freshwater Collaborative funding, will be offered twice per year beginning spring 2026. They will rotate among UW-Green Bay, UW-Platteville, UW-River Falls and UW-Stevens Point, allowing students to study multiple regions across the state.

“

This information will allow kidney bean growers in Wisconsin to better target their irrigation practices to reduce strain on the state’s freshwater as well as boost yields and prices for Wisconsin farmers.”

Charles Wachsmuth | Chippewa Valley Bean | Vice President

Grand Water Challenge: Water Quality Safety and Emerging Contaminants

The health and safety of our water supply depend upon properly trained researchers and water professionals. The Freshwater Collaborative has invested extensively in collaborative research that addresses emerging contaminants, particularly per- and polyfluoroalkyl substances (PFAS).

These hazardous chemicals are used widely in household products and manufacturing, and they are linked to serious health hazards. Discovering ways to remove PFAS and other contaminants from our water supplies benefits us all.



The fish labs at UW-La Crosse gave Anika Oplanic hands-on experience.

ADVANCING PFAS RESEARCH, EDUCATING THE LOCAL COMMUNITY

Anika Oplanic started working in a lab at UW-La Crosse her sophomore year. As part of a pilot grant from the Freshwater Collaborative, Oplanic helped to develop an assay to test whether PFAS exposure reduces immune system function in fish.

The pilot grant led to a \$260,000 Wisconsin Sea Grant from the National Oceanic and Atmospheric Administration (NOAA) to use the assay to further study how PFAS affects the health and survival of fish embryos. Research findings could provide insight into the risk to human embryos exposed to PFAS.

Oplanic graduated in May 2025 and is now a genetic counseling assistant at PreventionGenetics.



Andrew Votis uses sensors to evaluate the effectiveness of filter media.

TOOLS TO REMOVE PFAS FROM AGRICULTURAL SOIL AND GROUNDWATER

For years, Wisconsin farmers have applied biosolids — a byproduct of wastewater management — to fertilize their fields. Unfortunately, biosolids are a source of PFAS.

Five years ago, UW-Green Bay faculty received Freshwater Collaborative funding to partner with faculty and students from UW-Madison, UW-Platteville and UW-Stevens Point. They determined that land application of biosolids led to PFAS leaching into groundwater. Students then tested various biochar filter media for their ability to adsorb PFAS from soil.

With a second grant, UW-Green Bay teamed up with UW-Milwaukee and a local farmer who has been using biosolids. The research team installed sensors on his fields and began testing the biochar filter media in a real-world scenario to determine which are most efficient at PFAS removal.

The project has trained 14 undergraduates, and two graduate students are conducting research for their theses. A student who worked on the project as part of the Freshwater@UW Summer Research Opportunities Program published their results in *Soil Research*.

Researchers hope to identify practical solutions to PFAS leaching — and give farmers a cost-effective tool for protecting groundwater near their fields.

Farmer Turned Engineering Technician

Andrew Votis (in photo at left) says working on PFAS leaching research was a natural fit. He and his wife run a dairy farm north of Green Bay in the Coleman-Peshtigo area. He says his work strengthened his ability to communicate with various groups, manage a team and increased his understanding of the intricacies of research projects.

It also helped him land a job as an engineering technician at the Brown County Land & Water Conservation Department after graduating in 2025.

A NOVEL APPROACH TO PFAS REMOVAL AND AWARENESS EFFORTS

PFAS are particularly hard to remove from water. Activated carbon has been shown to adsorb PFAS. Adding silver to activated carbon increases its adsorption capacity even further.

A collaborative project could pave the way for more efficient filters. UW-Madison scientists synthesize activated carbon by burning renewable materials. The UW-Stevens Point team then tests the activated carbon to determine which source is most effective in removing PFAS from water.

Students play a central role in this research, working in the lab to make and test materials, running experiments, and analyzing results. They also disseminate research results, engage the community with STEM education, and increase public awareness of PFAS contamination. The students, including Olivia Stellpflug (see sidebar), published results in *Chemosphere*. The research team at UW-Stevens Point is also hosting workshops for middle and high school students and developing curriculum materials for middle and high school educators.



UW-Stevens Point undergraduates train on PFAS equipment at UW-Milwaukee.

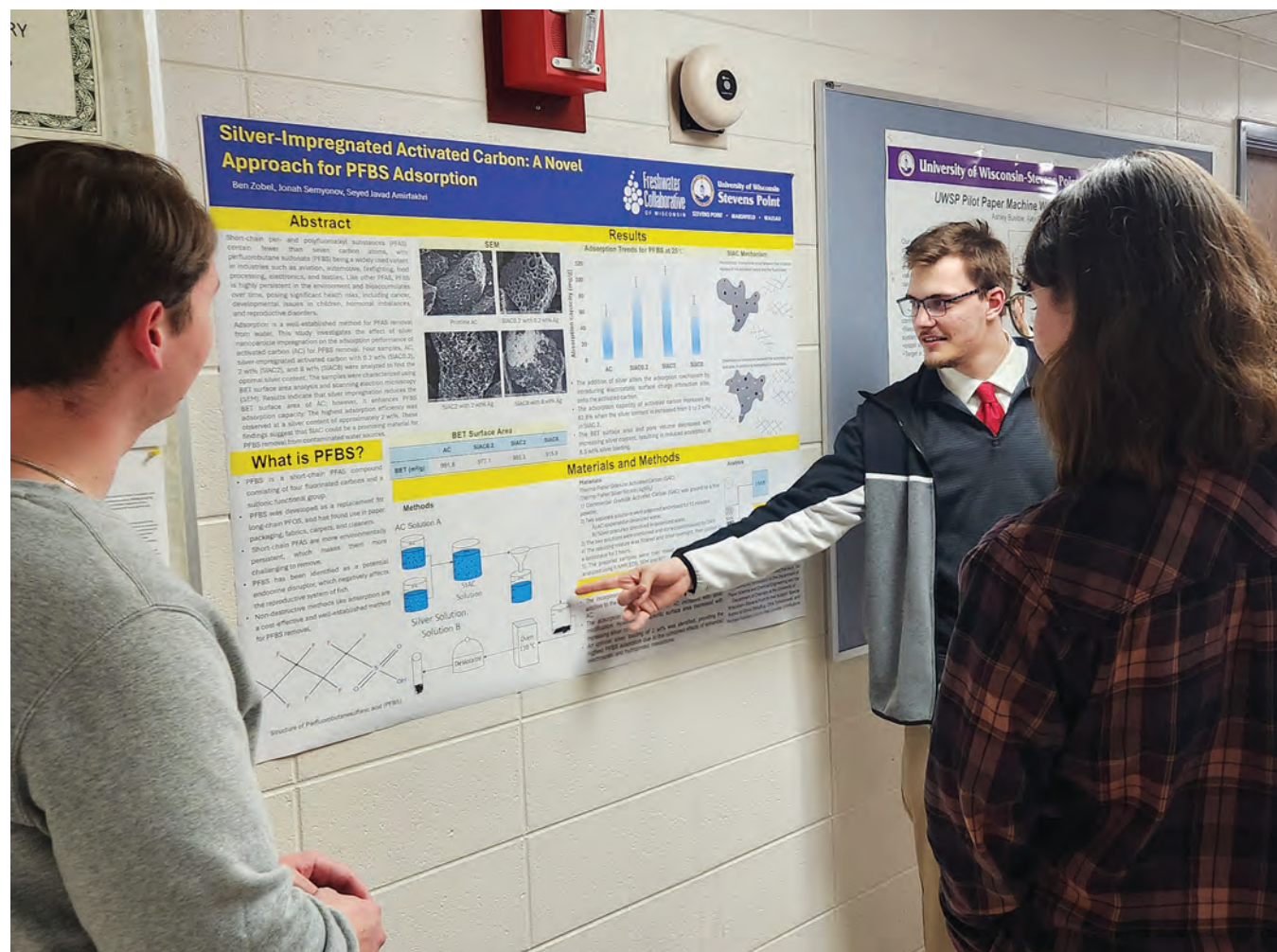


Undergrad Research Leads to Employment

Olivia Stellpflug says she accidentally specialized in water. The 2025 UW-Stevens Point graduate majored in chemical engineering because she was interested in plastics pollution and wanted to design products with fewer environmental effects.

Conducting PFAS research for two Freshwater Collaborative-funded grants led her to add a waste resources minor to further study water. She now works at Fehr Graham Engineering and Environmental. She splits her time between the environmental remediation group and the drinking water group.

“Having the PFAS research on my resume was a good foundation,” Stellpflug said. “It taught me a lot more about PFAS than most people know. It’s such a hot topic right now.”



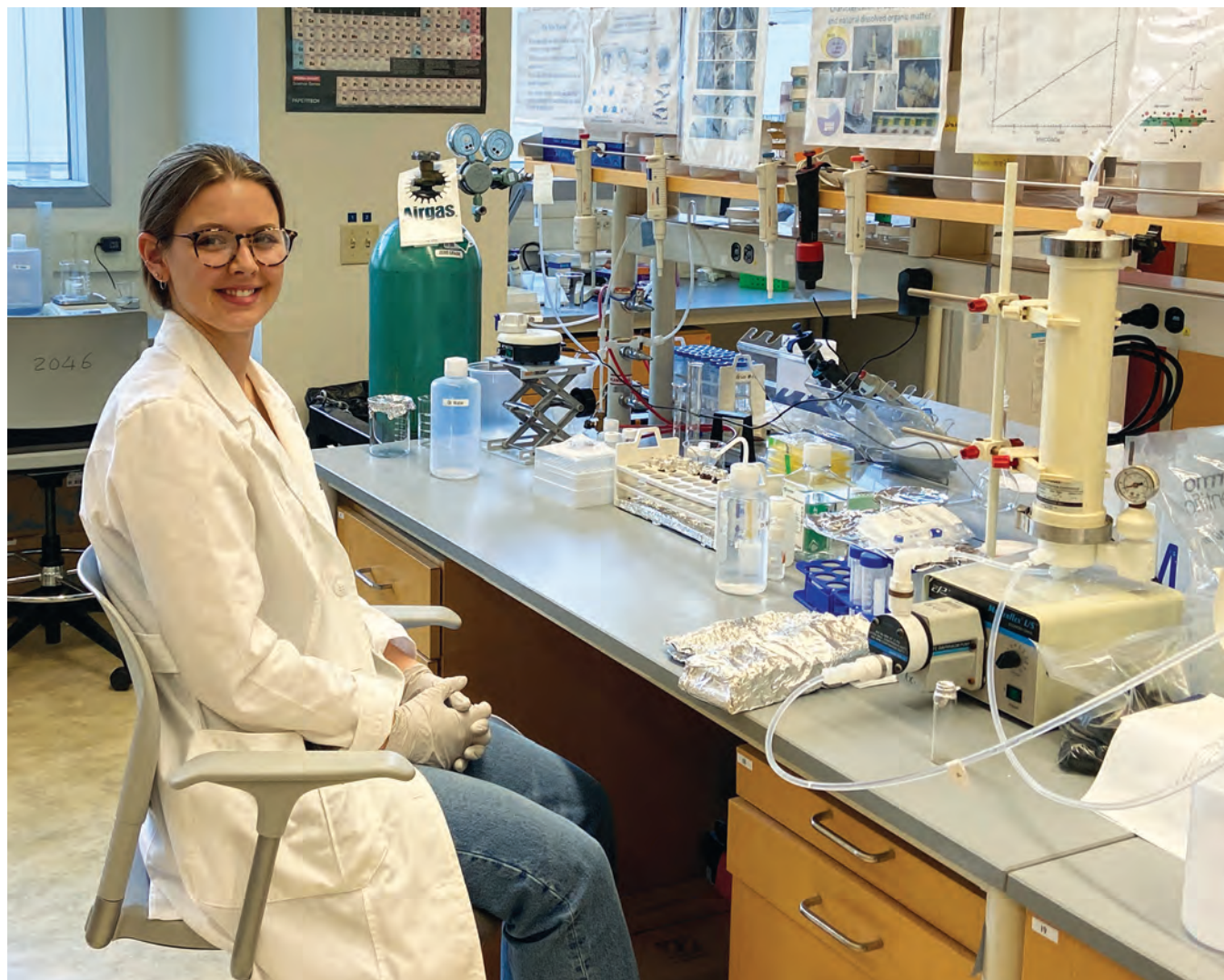
Ben Zobel presents PFAS research at the UW-Stevens Point Undergraduate Research Symposium.

A COLLABORATIVE PFAS RESEARCH EXPERIENCE

Funding from the Freshwater Collaborative helped create an undergraduate research experience to reduce PFAS contamination in water. The project builds upon PFAS adsorption chemistry techniques developed at UW-Stevens Point and leverages PFAS analysis expertise and equipment at UW-Milwaukee.

Students from both universities are testing sponges that adsorb six of the PFAS on the Environmental Protection Agency’s list of chemicals of special concern. They hope to determine which are best at removing PFAS from water. A UW-Madison student also worked on a summer research project as part of the 2025 Freshwater@UW Summer Research Opportunities Program.

Students have presented their research at the American Chemical Society Conference. Seven of the undergraduates, including Olivia Stellpflug (see sidebar), coauthored a manuscript published in *ACS Omega*.



CATCHING THE RESEARCH BUG

When Oconomowoc native Sam Krueger (photo above) participated in the Freshwater@UW Summer Research Opportunities program, she caught the research bug. The UW-Whitewater geography graduate participated in the program to gain experience in hydrogeology. She worked with a UW-Madison professor on a groundwater project in rural Wisconsin. That project inspired her to conduct research her senior year on the toxicity of insecticides widely used for crop protection.

Now, she's finishing her second year of graduate school at UW-Milwaukee's School of Freshwater Sciences. Krueger is investigating microplastics, PFAS and heavy metals in Milwaukee Harbor and Green Bay sediments. Her research is contributing to a Freshwater Collaborative-funded project at UW-Madison and UW-Milwaukee that is studying how emerging contaminants are affecting soil and water in the Greater Milwaukee Estuary. She's considering a future career in drinking water treatment or wastewater monitoring.



“

Undergraduate research gives you more confidence in lab work. You are more comfortable asking questions because you've worked with a diverse group of PIs and graduate students," Krueger said. "Freshwater@UW showed me that research can be fun."

Sam Krueger | UW Milwaukee | Graduate Student

PFAS Collaboration Group

The PFAS Collaboration Group emerged from the first FreshH₂O Partner Event in 2023. It meets throughout the year to encourage research collaborations and communication among PFAS researchers.

During the 2025 in-person gathering, Town of Campbell Supervisor Lee Donahue and UW-Madison Professor Mike Cardiff discussed their partnership and the outreach they have conducted to address the ongoing PFAS crisis in Campbell. Faculty from around the state presented lightning talks about their research.

The Freshwater Collaborative is partnering with Green Bay Innovation Group to identify ways to promote collaboration between academia and industry.

K-12 Outreach Highlights

Introducing young students to freshwater science research and careers is critical to creating a pipeline to water-related jobs in Wisconsin. More than 4,800 K-12 students have participated in a Freshwater Collaborative-funded program. In addition, many high school educators participated in workshops throughout the state that have helped them introduce water science into their classrooms.

PFAS EDUCATION WORKSHOP

UW-Stevens Point faculty and students developed a PFAS Education Workshop to help middle and high school educators bring PFAS education into their classrooms. These materials are available for any educator to use.



FRESHWATER HIGH SCHOOL EXPERIENCE

UW Oshkosh launched its three-day summer camp for high school students in 2024. Participants conduct hands-on research, pilot water drones, explore waterways on a pontoon boat, learn about freshwater college majors and careers, and enjoy fun evening activities in the residence halls. The camp attracted 18 high school students from Wisconsin and Illinois in 2024, and 20 from Wisconsin, Illinois, Iowa, Minnesota and Michigan in 2025.

High school students from Wisconsin and Illinois take freshwater samples during summer camp at UW Oshkosh.



High school students study stream ecosystems.

FRESHWATER SCIENCE FIELD EXPERIENCE

The Freshwater Science Field Experience celebrated its fifth year in 2025. This field-based learning experience for high school juniors is offered by UW-Eau Claire, UW-Stout and UW-River Falls. Students stay in residence halls, learn about careers and take part in activities on each campus to learn about things such as stream ecosystem analysis, fluvial geomorphology and groundwater flow.

Ten high school students from nine counties in Wisconsin explored western Wisconsin's waterways in 2025. Seventeen students from 11 Wisconsin counties and one from Colorado participated in 2024.

UW-GREEN BAY FRESHWATER EDUCATOR NETWORK

UW-Green Bay coordinates a network of educators in 16 counties. They offer sixth- to 12th-grade teachers a range of opportunities to learn about freshwater science and bring it into their classrooms. Activities range from one-day workshops to ongoing river monitoring projects and growing wild rice in the classroom.

ENVIRONMENTAL SCIENCE DAY

More than 70 high school students from two local high schools attended UW-Eau Claire's Environmental Science Days in 2024 and 2025. Participants attended classes in oceanography, radiation pollution and health, and environmental conservation. Interactive experiences brought scientific concepts to life. And undergraduates shared their research projects during a science fair.



“

The students loved being on campus and learning about environmental science programs. We hope these experiences will encourage the participating students to consider going into the freshwater/environmental science workforce.”

Sarah Vitale | UW Eau Claire | Associate Professor

HIGH SCHOOL FRESHWATER SUMMER SCHOLARS PROGRAM

The High School Freshwater Summer Scholars program provides students with paid internships in water science. In 2025, UW-Green Bay hosted its largest cohort of Freshwater Summer Scholars yet — 15 students from 12 high schools.

The students were highly engaged in hands-on activities, combining fieldwork with lab analysis and community engagement. Each student worked on an individual freshwater project under the mentorship

of a faculty member, graduate student or qualified undergraduate student. They also participated in group field trips to learn more about water quality and careers.

The program encourages students to enroll at one of the Universities of Wisconsin — and it works.

Ziah Mangin was one of 15 scholars in 2025. She was part of a large phosphorus research project funded by the Freshwater Collaborative involving UW-Green Bay, UW-Madison and Upham Woods Outdoor Learning Center. Mangin is now a first-year student at UW-Madison.

Maddie Mueller, worked on the project in 2024 when she was a senior at Oshkosh West High School. She’s now enrolled at the UW-Milwaukee School of Freshwater Sciences.

“Going into the internship, I had a strong idea of what I wanted to eventually achieve, but not the classes or knowledge of what I needed to do to earn it,” Mueller said. “I was exposed to a wider variety of majors within the freshwater field.”



High school scholars conduct mussel research with the WDNR.



“

I’m excited to have lab experience going into Madison. All the equipment is so different from the equipment in high school, and I will already have experience with it.”

Ziah Mangin | UW Madison | Freshwater Student



Resources for K-12 educators are available on our website.

MY RIVER ADVENTURES CAMP

During the My River Adventures Camp, high school students explore water careers and visit rivers in the Driftless region for hands-on fieldwork and lab activities with UW-La Crosse faculty, local educators and community members. Many campers see the Mississippi River for the first time.

Ninth grader Ivy from Fountain City was one of 24 students from 18 high schools who participated in 2025. He said it was one of the highlights of his entire summer. His mom, Rebecca, agreed, saying: “The UWL MRA camp was such an enriching experience

for my son. He loved the hands-on field trips with the faculty along the Mississippi River. We are grateful for this unique camp experience and the ways it has broadened his view of college and career opportunities!”

By conducting hands-on fieldwork, students learn about water careers they may have never heard of.



Students explore rivers in the Driftless region.

Building a Statewide K-12 Outreach Network

The UW-Milwaukee School of Freshwater Sciences outreach manager is leading the creation of the Freshwater Collaborative Outreach Network. This initiative will help connect the 13 Universities of Wisconsin with their local K-12 schools to foster partnerships, share expertise and inspire the next generation of water stewards.

GROUNDWATER WORKSHOP

UW-Eau Claire’s Groundwater Workshop provided K-12 educators with activities that they can take back to their classrooms. Activities included classroom instruction on groundwater flow fundamentals, field exercises measuring water depth using the UW-Eau Claire educational wellfield and groundwater flow model exercises. Teachers received a groundwater model to use in their classrooms.

Local teachers measure water depth at UW-Eau Claire.



Real-World Classrooms

UW Oshkosh's **Field Sampling and Analysis** course provides university students at any level with the opportunity to learn in some of the state's most beautiful places: the Lowenwood campus in Land O' Lakes and Crossroads at Big Creek in Door County. Nearly 40 students have taken the course during the past three summers.



Microbial Ecology at UW River Falls gives ecology and organismal biology majors the opportunity to study microbes and how they improve the health of soil and different bodies of water. Students will be helping to create a diatoms database that can be used to help monitor the health of the Kinnickinnic River.

The **Experimentation and Analysis in Freshwater Sciences** field course at UW Milwaukee trains undergraduate and graduate students for jobs. Partners from U.S. Geological Survey (USGS), the Wisconsin Department of Natural Resources (WDNR), Stantec and Watertech of America advised on the curriculum and co teach fieldwork.



The **Expedition to the Great Lake Michigan** course offered by faculty from UW Milwaukee and UW River Falls took undergraduate students on four expeditions on the R/V Neeskey to conduct research on Lake Michigan. Students collected water samples for a long term research initiative, looked for shipwrecks using sonar and ROVs, and more.



The **Special Topics in Freshwater Science Laboratory and Field Techniques** developed by UW River Falls and UW Madison teaches undergraduates proper lab and field techniques before they enter the workforce — where mistakes can be costly.



The newly renamed **Field Hydrology** course was one of the first hands on courses developed with Freshwater Collaborative funding. Students learn how to conduct groundwater and water quality research at field sites near UW Eau Claire, UW River Falls and UW Stout.

Hundreds of students have taken the **Freshwater 101** course developed in 2021. Last fall UW Oshkosh classes took water samples at eight rivers and creeks in the Oshkosh area. At UW Milwaukee, students used equipment on the school's research vessel. A version of the course is also offered at UW La Crosse, UW Madison and UW Parkside.



Students in the **Human Interactions with Lake Michigan Coastal Ecosystems** learned from faculty at UW Green Bay, UW Milwaukee and UW Parkside as they explored differences between rural and urban environments along the Lake Michigan coast.



Partnering to Advance Water Science

The Freshwater Collaborative fosters collaborations among the Universities of Wisconsin and partners from industry, government, nonprofits, tribal nations, K-12 schools and the community.

The annual **FreshH₂O Partner Event** brings together faculty and staff from the 13 Universities of Wisconsin to discuss water challenges and workforce development in Wisconsin with external partners. The event provides an opportunity for in-person meetings for the PFAS Collaboration Group, K-12 Outreach Network and Water Policy Network. In 2025, a panel of former and current legislators discussed the state's challenges and priorities when it comes to water.



The **Freshwater Collaborative Water Policy Network** is a statewide network coordinated through the Center for Water Policy at UW-Milwaukee. It convenes policy experts from the 13 Universities of Wisconsin. Members share ideas, leverage research methods, collaborate on research proposals and develop water policy curricula. The network is also a resource for government agencies, the private sector and other stakeholders to connect with water policy experts.

The Freshwater Collaborative hosted seven online **Great Lakes Freshwater Symposiums** in 2024 and 2025. These events are held in partnership with the Great Lakes Higher Education Consortium and Council of the Great Lakes Region. These organizations bring together university systems in the United States and Canada to advance research that supports the Great Lakes economy, the third largest in the world. The webinars encourage collaborations, share science across borders, and present research that is solving real-world problems.



Want to know more about our resources for partners? Visit our Partner Resource page.



Partnerships

The Freshwater Collaborative is growing its partnerships. It held informational sessions for Jacobs Engineering and Veolia that helped these companies to quickly hire undergraduates as interns to work on water projects.

Part of our funding for UW Oshkosh goes toward Water Technology Enterprise Projects. Faculty receive small grants to hire students to work on research and development projects for industry partners. Partners include Wisconsin-based companies Whirl-Pak and Sadoff Iron & Metal Company.

PARTNER LIST

The list below includes those who have partnered on a Freshwater Collaborative-funded grant since 2020.

**Indicates new partners during the biennium*

| | | |
|--|--|---|
| Aldo Leopold Community School | Bass Lake Association | Buffalo County Public Health Department |
| Alliance for the Great Lakes | Bayfield County Health Department | Butternut-Franklin Lake Association |
| Anvil Lake Association | Bay View Middle School | Cardinal Glass |
| A.O. Smith Corporation | Big Arbor Vitae Lake Association | Cargill |
| Appleton East High School | Bighorn Renewables* | Carpenter Nature Center |
| Ashland County Health Department | Big Portage Lake Riparian Owners Association | CHEM-AQUA |
| Athens Services* | Big Sand Lake Association | Chippewa Valley Bean |
| Atlas Science Center* | Big St. Germain Area Lakes District | Chiwaukee Prairie State Natural Area* |
| Augusta High School* | BLACK* | Chiwaukee Prairie Preservation Fund* |
| Badger Meter | Boy Scouts of America | C.H. Koch Plumbing & Heating LLC |
| Baileys Harbor Ridges Sanctuary Lake Organizations | Brookfield High School | Cia Siab Inc. |
| Baileys Harbor Wastewater Treatment Plant | Brown County | Cisco Chain Riparian Owners Association |
| Baird Creek Preservation Foundation | Buckatabon Lakes District | |

| | | |
|--|---|--|
| City of Algoma | doc UWM | Fifth Ward Brewing Company |
| City of Green Bay | Door County Environmental Council* | Florence County Health Department |
| City of Kenosha | Door County Health Department | Flow Project |
| City of Kewaunee | Door County Maritime Museum* | Fond du Lac County Health Department |
| City of La Crosse | Door County Soil and Water Conservation | Food Safety Workshop |
| City of Manitowoc | Dubuque River Museum & Aquarium | Forest Lake Preservation District |
| City of Menomonie | Dunn County Land & Water Conservation | Forest to Brook |
| City of Milwaukee | Eagle Creek Renewable Energy | Found Lake Property Owners Association |
| City of Oshkosh | Eagle Lake Management District | Fox Wolf Watershed Alliance |
| City of Racine* | EarthFest 2023 | GEI Consultants |
| City of River Falls | East High School | GHD Services* |
| City of Two Rivers | Eau Claire City County Health Department | Girl Scouts |
| Clark County Health Department | Eau Claire Groundwater Advisory Committee | Glacial Lakes Conservancy* |
| Clean Lakes Alliance | Eau Claire Memorial High School | Glendale Public Works Department |
| College of Menominee Nation* | Eau Claire Municipal Water Treatment Plant* | Great Lakes Higher Education Consortium |
| College of Oneida Nation* | Effigy Mounds National Monument | Great Northern Corporation |
| Council of the Great Lakes Region | Egg Harbor Marina | Green Bay Area Public Schools |
| County of Santa Barbara* | Elk Mound High School* | Green Bay Metropolitan Sewerage District |
| Country Water Works | Etude High School | Green Bay Southwest High School |
| Covia Sand Plant | F3 | Harbor District Inc. |
| Crossroads at Big Creek | Farmers Union of Wisconsin | Heckrodt Wetland Preserve* |
| Crystal Lake Association | The Farmory Inc. | Ho-Chunk Youth and Learning Center* |
| C. Sweeting Plumbing | Fence Lake Association | Homestead High School |
| Cudahy Public Works Department | | |
| Delong Middle School* | | |
| Department of Agriculture, Trade & Consumer Protection | | |
| De Pere High School | | |
| Doane Family Farms* | | |

FOSTERING PARTNERSHIPS

| | | |
|--|--|---|
| Hope Restores | Lake Lorraine Lake Association | Manitowoc County Health Department |
| Howard-Suamico School District | Lake Michigan Bird Observatory* | Manitowoc Marina |
| Ice Age Trail Alliance | Lake Michigan Commercial Fishing Board | Manitowoc Soil & Water |
| IDEXX* | Lakeshore Natural Resource Partnership | Marinette County Conservation District |
| Indigenous Peoples Task Force (Ikidowin) | Lake Superior National Estuarine Research Reserve | Marinette High School* |
| Inter-Fluve | Lancaster Public Library | Marquette University |
| Iowa County Health Department | Langlade County Public Health | Mayo Clinic |
| Iron County Health Department | Lawrence University* | Meijer* |
| Island Outdoors | LF Bioenergy* | Memorial High School* |
| Jacobs Engineering* | Liberty Utility* | Menominee Indian School District |
| Johnson Controls* | Lincoln County Health Department | Menominee Indian Tribe of Wisconsin |
| J. Rasmussen Plumbing | Little Arbor Vitae Lake Protection & Rehabilitation District | Menominee Tribal High School |
| Kaukauna High School | Little St. Germain Lake Protection & Rehabilitation District | Menomonie Middle School* |
| Kentucky Lake Protection & Rehabilitation District | Local farms | Merten Plumbing & Heating |
| Kewaunee County Health Department | Lodi Elementary School* | Michigan Department of Natural Resources |
| Kiap-Tu-Wish Chapter Trout Unlimited | Lombardi Middle School* | Michigan Hydropower Reform Coalition |
| Kinni Corridor Collaborative | Long Lake of Phelps Lake District | Michigan Technological University |
| Kinnickinnic River Land Trust | Lost Lake Protection & Rehabilitation District | Milwaukee County Department of Transportation |
| Koken Farms | Ludwigs Plumbing | Milwaukee Kayak Company* |
| Kurt Zentner & Sons Inc. | Lystek International* | Milwaukee Metropolitan Sewerage District* |
| La Crosse Queen Cruises | Maas Energy Works* | Milwaukee Public Museum |
| La Crosse School District* | Madison East High School | Milwaukee Public Schools |
| Lafayette County Health Department | Maiden Voyage Tours | Milwaukee Public Works Department |
| Lake Altoona Lake Association | | |
| Lake Express | | |



UW-Milwaukee's research vessel provides training experiences for students at all levels.

| | | |
|--|---|--|
| Milwaukee Riverkeeper | Norskedalen Nature & Heritage Center* | River Alliance of Wisconsin |
| Milwaukee World Fest | | Riveredge Nature Center* |
| Minnesota Department of Natural Resources | Northeast Wisconsin Land Trust* | Rock River Partnership |
| | North High School | Roncalli High School |
| Mishicot High School | Northey Farms* | Root-Pike Watershed Initiative Network* |
| Monroe County Health Department | North & South Twin Lakes Protection & Rehabilitation District | Root River Environmental Education Community Center* |
| Morgridge Institute for Research* | Oneida County Health Department | Rushing Waters Fisheries* |
| MP Kelly Plumbing | Oneida Environmental, Land & Agriculture Division* | Sammons Plumbing |
| Mud Lake Association | Oneida Nation | Sawyer County Health & Human Services |
| Mulberry Aquaponics* | Oneida YES Program* | Science Museum of Minnesota |
| National Estuarine Research Reserve* | Oshkosh High School | Scouting America* |
| National Marine Sanctuary* | Outagamie County Public Health | Shell Galloway* |
| National Mississippi River Museum & Aquarium | Parker Lake Association | Shorewood High School |
| National Oceanic & Atmospheric Administration (NOAA) | Pentair | Skyline Construction |
| | Pine Lake Association | Smoky Lake Preservation Association |
| National Park Service* | Plastic Free Milwaukee | Stormy Lake Association |
| The Nature Conservancy | PortFish Ltd* | South Bay Marina |
| Nelson Deer Farm/Rush Canyon Ranch | The Prairie Enthusiasts* | Southeastern Wisconsin Regional Planning Commission (SEWRPC) |
| New Berlin Eisenhower High School | Preble High School | Southeastern Wisconsin Watershed Trust |
| | Pulaski Middle School | Stantec Consulting* |
| NEW Water* | Racine County Public Health Division* | St. Croix Watershed Stewards |
| Nibi Center | Racine Water Utility* | St. Francis Xavier Middle School* |
| Nicolet High School | Ramboll | St. Joseph Catholic Academy* |
| NOAA National Marine Sanctuary | Red Smith Middle School | Steinthal Lodge |
| Nohr Chapter of Trout Unlimited | The Renaissance Academy | |
| NOLS (National Outdoor Leadership School) | Ridges Sanctuary* | |

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|---|---|---|
| Stevens Point Area School Districts | UW-Madison's Trout Lake Research Station* | Wisconsin Department of Natural Resources |
| St. Thomas Aquinas Academy* | Veolia* | Wisconsin Department of Natural Resources – Drinking Water & Groundwater |
| Suring High School | Vernon County Health Department | Wisconsin Department of Natural Resources – Great Waters |
| Susie-Q Fish Company* | Vilas County Health Department | Wisconsin Department of Natural Resources Lake Sturgeon Rehabilitation Program* |
| Sustainable Phosphorus Alliance | Village of Whitefish Bay* | Wisconsin Department of Natural Resources – Water Quality |
| Tainter Lake Districts | Walter Plumbing LLC | Wisconsin EcoLatinos* |
| Taylor County Health Department | Washington Ozaukee Public Health Department | Wisconsin Economic Development Corporation |
| Three Petals RNG* | Water Quality Investigations | Wisconsin Geological and Natural History Survey |
| Tomahawk Boy Scout Camp | Watertech of America* | Wisconsin Historical Society |
| Town of Boulder Junction | Watts Water | Wisconsin Maritime Museum* |
| Town of Colfax* | Waupaca County Public Health Department | Wisconsin Public Service |
| Town of Gays Mills | We Energies | Wisconsin Sea Grant |
| Town of Plum Lake | WellIntel | Wisconsin Shipwreck Coast National Marine Sanctuary* |
| Trout Unlimited | West De Pere High School | Wisconsin State Capitol Staff |
| University of Notre Dame Environmental Research Center* | Weyauwega-Fremont High School | Wisconsin State Lab of Hygiene |
| University School of Milwaukee | Whirl-Pak | Wood County Health Department |
| Upham Woods Outdoor Learning Center* | White Sand Lake "Lac du Flambeau" | Woodland Dunes Nature Center* |
| Upper Midwest Water Science Center of USGS | Whitewater Lake Association | WUWM, Wisconsin Public Radio |
| Urban Ecology Center | Wild Rose State Fish Hatchery* | Zanilu Education* |
| U.S. Army Corps of Engineers | Winnebago County Public Health | |
| U.S. Fish & Wildlife Service | Winnebago Mental Health Institute | |
| U.S. Geological Survey | Wisconsin Clear Waters Trout Unlimited | |
| U.S. National Parks Service | | |
| UW Extension | | |
| UW-Madison Office of Tribal Relations | Wisconsin Cooperative Fishery Research Unit | |

What Would We Do With More Funding?

The Freshwater Collaborative of Wisconsin receives \$5 million per biennial budget from the Wisconsin State Legislature. Wisconsin is the place to study water, but we cannot serve more Freshwater Collaborative students without additional investment. Additional investment would allow the universities to expand collaborative programs, further advance workforce development and make significant progress on Wisconsin's Grand Water Challenges.

With additional funds, the Freshwater Collaborative would:

- Increase statewide PFAS research and training
- Increase our capacity to fund pilot projects and research in emerging topics
- Expand resources for the statewide K-12 Outreach Network to help recruit students to the Universities of Wisconsin to study water
- Launch targeted recruitment campaigns to attract students outside of Wisconsin
- Create a freshwater scholars program to support retention efforts
- Offer more undergraduate research and paid internship opportunities to train students in critical areas
- Grow established programs and courses to serve more students
 - » Provide financial support for teaching and coordinating hands-on, high-impact collaborative courses
 - » Supplement equipment usage course fees to ensure affordability for students
 - » Support statewide usage of research vessels

Investment in the Freshwater Collaborative leads to a highly skilled workforce that can develop solutions to water challenges that affect Wisconsin and beyond by:

- Meet growing employer demand for trained professionals
- Address water challenges
- Attract talented students, faculty, and industry to Wisconsin



Participants in the Freshwater@UW program spend one day of orientation at the UW-Milwaukee School of Freshwater Sciences.



A special thank you to former Sen. Robert Cowles and Rep. Joel Kitchens for hosting a legislative informational session in November 2024 to showcase Freshwater Collaborative work. Faculty and industry partners from eight Freshwater Collaborative-funded projects presented their research and findings. **Watch now!**

Freshwater Collaborative of Wisconsin

600 E. Greenfield Avenue
Milwaukee, WI 53204

freshwater.wisconsin.edu • freshwater_collab@uwm.edu

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