

# FRESHWATER SCIENCES (SCHOOL OF)

Learn how to use science to address complex environmental challenges at the nation's only School of Freshwater Sciences. Located on the shores of Lake Michigan, our school offers a unique opportunity to study freshwater ecosystems, climate change, and weather patterns while applying science to shape policy and drive real-world solutions.

Freshwater and marine systems are deeply interconnected, making freshwater sciences an essential foundation for those interested in marine science or oceanography. Rivers, lakes, and groundwater feed the oceans, influencing coastal pollution, nutrient cycles, and ecosystem health. Climate change affects both freshwater and marine environments, emphasizing the need to study water systems from their sources to their broader environmental impacts to fully understand global water dynamics. A degree in freshwater sciences offers hands-on experience in water quality analysis, ecosystem monitoring, and policy development, equipping students with skills for careers in research, conservation, government, non-government agencies, consulting, and industry.

The School of Freshwater Sciences offers bachelor's, master's, accelerated master's, and doctoral degrees in a range of interdisciplinary areas, preparing the next generation of scientists with the knowledge and skills to tackle environmental issues.

Areas of study include:

- Water Policy and Economics
- Water Ecosystems and Human Health
- Great Lakes Research and Management
- Water, Weather, and Climate

Undergraduate students build a strong foundation through coursework and hands-on experiences, while graduate students gain access to extensive research or internship opportunities with faculty mentorship. Students work in state-of-the-art labs, a genomics center, and research vessels, developing expertise in the latest scientific techniques.

## Programs

- Freshwater Sciences, BS (<https://catalog.uwm.edu/freshwater-sciences/freshwater-sciences-bs/>)
- Freshwater Sciences, Minor (<https://catalog.uwm.edu/freshwater-sciences/freshwater-sciences-minor/>)
- Freshwater Sciences, MS (<https://catalog.uwm.edu/freshwater-sciences/freshwater-sciences-ms/>)
- Freshwater Sciences, PhD (<https://catalog.uwm.edu/freshwater-sciences/freshwater-sciences-phd/>)
- Water and Climate, Undergraduate Microcredential (<https://catalog.uwm.edu/freshwater-sciences/water-climate-undergraduate-microcredential/>)
- Water Quality Instrumentation, Graduate Microcredential (<https://catalog.uwm.edu/freshwater-sciences/water-quality-instrumentation-graduate-microcredential/>)

## Faculty

Name	Rank	Degree	School	Graduate Faculty	Emeritus Faculty
Carmen Aguilar	Senior Scientist	PhD	University of Wisconsin-Milwaukee		✓
Harvey Bootsma	Associate Dean, Professor	PhD	University of Manitoba	✓	
Tracy Boyer	Professor	PhD	University of Minnesota	✓	
Arthur Brooks	Professor	PhD	Johns Hopkins University		✓
Michael Carvan	Shaw Professor	PhD	Texas A&M University		
Russell Cuhel	Senior Scientist	PhD	Massachusetts Institute of Technology and Woods Hole Oceanographic Institution		✓
Dong-Fang Deng	Professor	PhD	University of California-Davis	✓	
George Duffy	Teaching Assistant Professor	PhD	Vanderbilt University		
Brandon Gerig	Assistant Professor	PhD	University of Notre Dame	✓	
Tim Grundl	Professor	PhD	Colorado School of Mines		✓
Laodong Guo	Professor	PhD	Texas A&M University	✓	
John Janssen	Professor	PhD	Michigan State University		✓
Jonathan Kahl	Professor	PhD	University of Michigan		✓
Jerry Kaster	Associate Professor	PhD	University of Colorado		✓
Rebecca Klaper	Dean, Professor	PhD	University of Georgia	✓	
J. Val Klump	Professor	PhD	University of North Carolina-Chapel Hill		✓
Sergey Kravtsov	Professor	PhD	Florida State University	✓	
James Lubner	Professor	PhD	University of Wisconsin-Milwaukee		✓
Sandra McLellan	Distinguished Professor, Lynde B. Uihlein Professor in Ecosystem Health	PhD	University of Cincinnati Medical Center	✓	
Ryan Newton	Associate Professor	PhD	University of Wisconsin-Madison	✓	

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Benjamin Peterson	Assistant Professor	PhD	University of Wisconsin-Madison	✓	
James Price	Assistant Professor	PhD	The University of New Mexico	✓	
Paul Roebber	Distinguished Professor	PhD	McGill University		✓
Melissa Scanlan	Director of the Center for Water Policy, Professor, Lynde B. Uihlein Endowed Chair	JD	University of California, Berkeley	✓	
Xinyi Shen	Assistant Professor	PhD	Institute of Remote Sensing and GIS, Peking University	✓	
James Waples	Associate Professor	PhD	University of Wisconsin-Milwaukee		✓

**Contact**

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