



SCHOOL OF
FRESHWATERSCIENCES

GREAT LAKES RESEARCH VESSEL



MADE IN **MILWAUKEE**. SHAPING THE **WORLD**.
THE CAMPAIGN FOR UWM

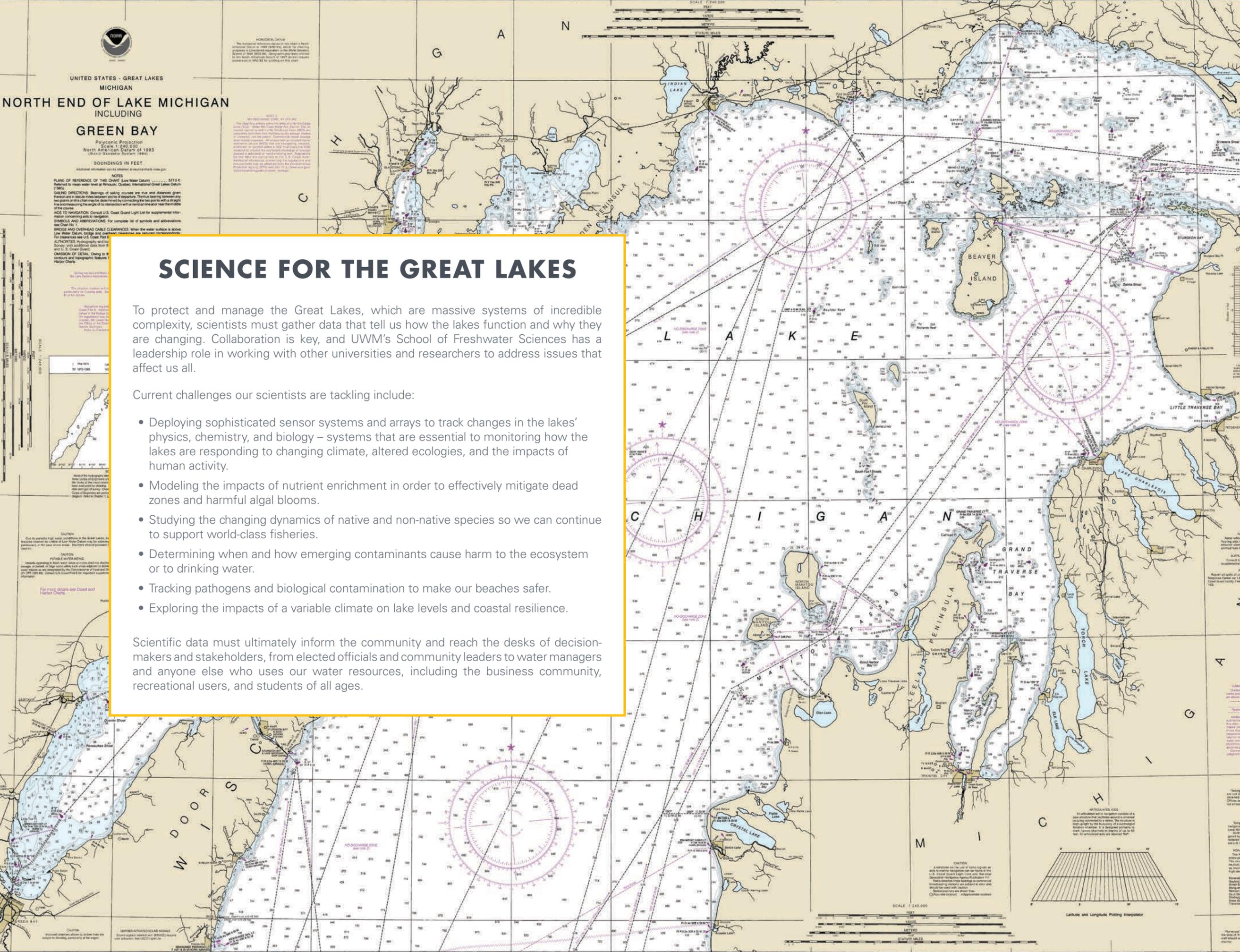


EXPLORING AN OCEAN OF FRESH WATER

The Great Lakes are the single greatest freshwater resource on the planet, containing 20 percent of the world's surface fresh water. They are North America's freshwater seas.

- ◆ If spread across North and South America, the waters of the Great Lakes would cover both continents with over a foot of water.
- ◆ More than 40 million people rely on the Great Lakes for clean drinking water. What is in the lakes can wind up in your glass.
- ◆ The lakes sustain more than 1.5 million jobs, generating \$62 billion in annual wages. They drive agriculture, energy production, manufacturing, real estate, shipping, tourism, recreation, and quality of life.
- ◆ Despite their size, the lakes are biologically highly sensitive. More than 180 non-native species – from fish-killing lampreys to prolific dreissenid mussels – have led to disruption of food webs, collapse of fisheries, and even local extinction of native fauna.
- ◆ Dead zones that lack life-sustaining oxygen are growing larger and lasting longer, and massive algal blooms have choked beaches and forced the shutdown of drinking water intakes.
- ◆ Water quality is increasingly threatened by runoff and discharges of nutrients, nanomaterials, microplastics, and emerging contaminants, like pharmaceuticals.
- ◆ Lake levels are oscillating in response to a changing climate regime. As evaporation increases, water levels decline, threatening shipping, shorelines, and recreational boating.





SCIENCE FOR THE GREAT LAKES

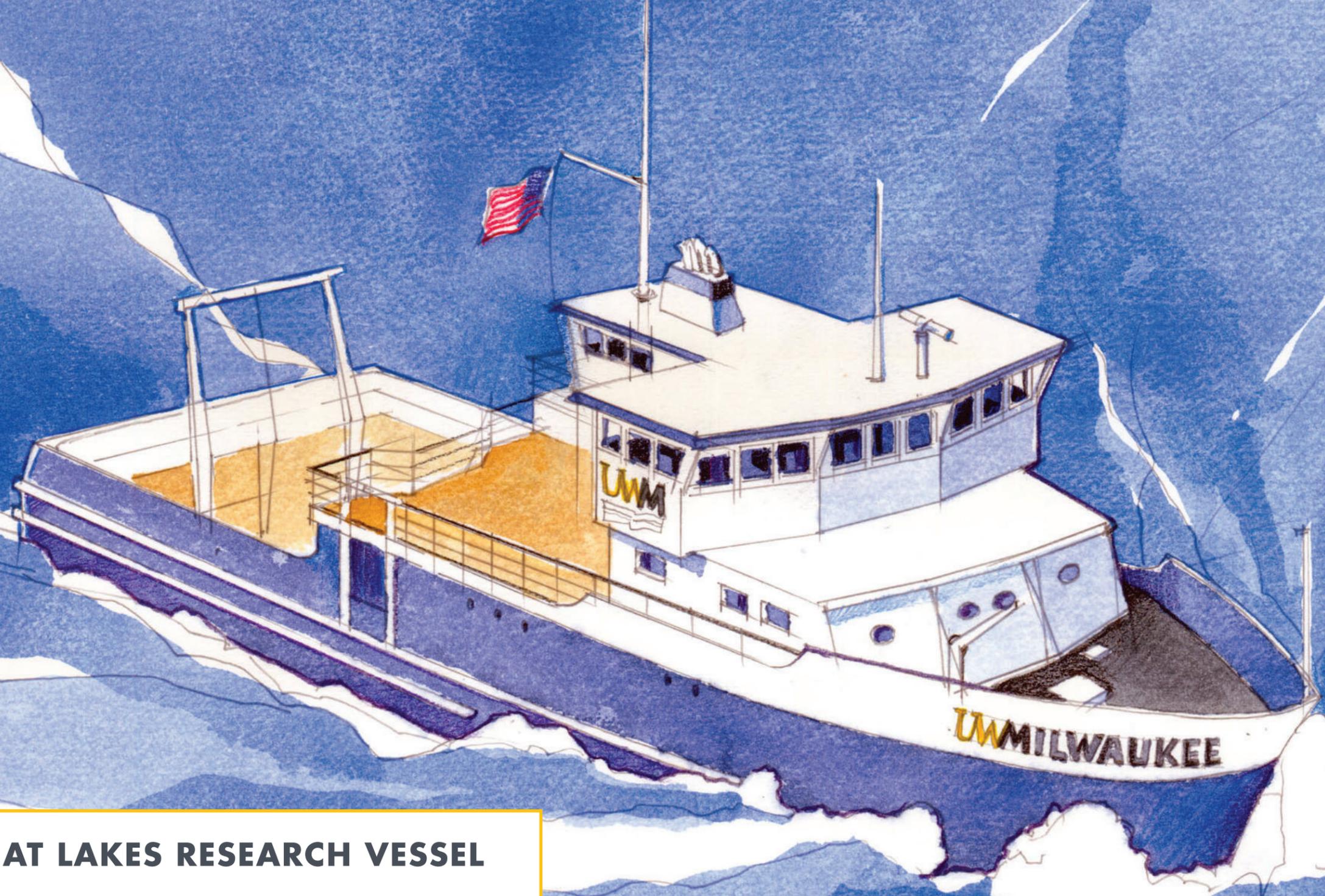
To protect and manage the Great Lakes, which are massive systems of incredible complexity, scientists must gather data that tell us how the lakes function and why they are changing. Collaboration is key, and UWM's School of Freshwater Sciences has a leadership role in working with other universities and researchers to address issues that affect us all.

Current challenges our scientists are tackling include:

- Deploying sophisticated sensor systems and arrays to track changes in the lakes' physics, chemistry, and biology – systems that are essential to monitoring how the lakes are responding to changing climate, altered ecologies, and the impacts of human activity.
- Modeling the impacts of nutrient enrichment in order to effectively mitigate dead zones and harmful algal blooms.
- Studying the changing dynamics of native and non-native species so we can continue to support world-class fisheries.
- Determining when and how emerging contaminants cause harm to the ecosystem or to drinking water.
- Tracking pathogens and biological contamination to make our beaches safer.
- Exploring the impacts of a variable climate on lake levels and coastal resilience.

Scientific data must ultimately inform the community and reach the desks of decision-makers and stakeholders, from elected officials and community leaders to water managers and anyone else who uses our water resources, including the business community, recreational users, and students of all ages.





GREAT LAKES RESEARCH VESSEL

Our children and grandchildren deserve clean drinking water, safe beaches and the opportunity to pursue livelihoods that depend on the Great Lakes. By fostering world-class science, we can manage this complex ecosystem and find solutions to the problems facing our freshwater supply.

UWM's new research vessel will extend the reach of our scientists and students, granting them access to any point on the Great Lakes. Onboard technology will open new avenues of research, increasing our ability to understand, explore, and manage this vital resource.

VESSEL CAPABILITIES

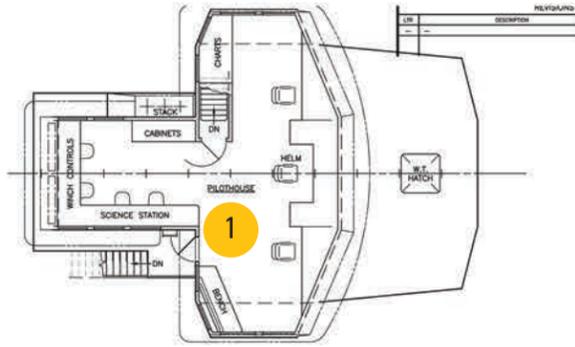


WHY CHANGE? Our current research vessel, the Neesky, has been a workhorse since UWM acquired it in 1970, but at over 65 years old, the converted Army T-Boat is no longer suited to the dynamic work our faculty, scientists, and students are doing. It lacks spaces required to be an effective educational resource and is incapable of applying modern research tools to the problems facing our lakes.

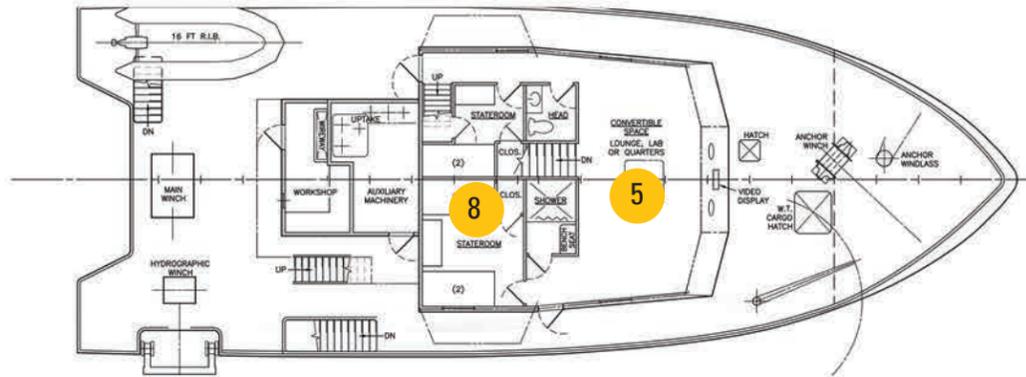
UWM's new research vessel will be the first vessel of its kind designed specifically for the Great Lakes. It will be the most sophisticated floating research platform on North America's freshwater seas.



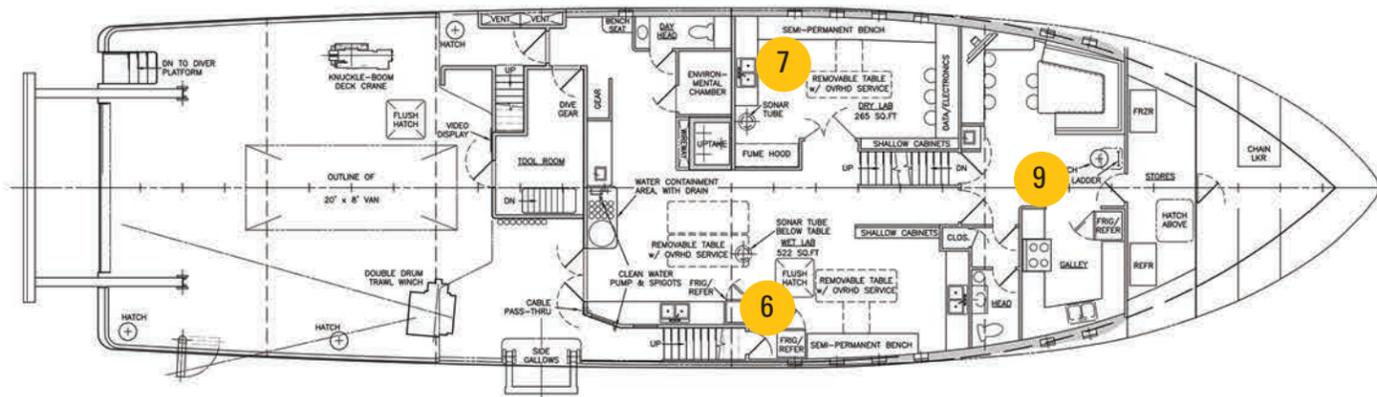
PILOTHOUSE



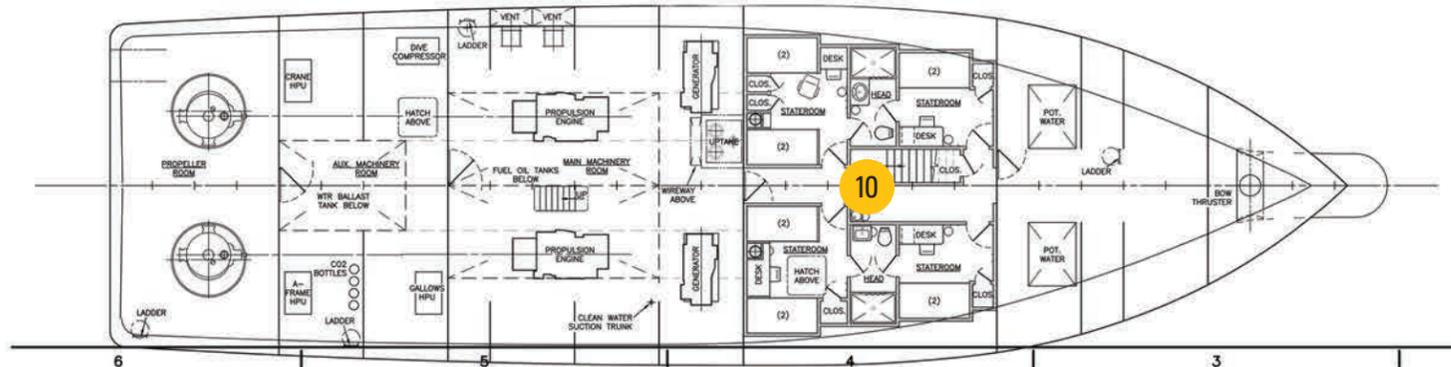
3 OBSERVATION DECK



2 WORKING DECK



4 ENGINEERING DECK



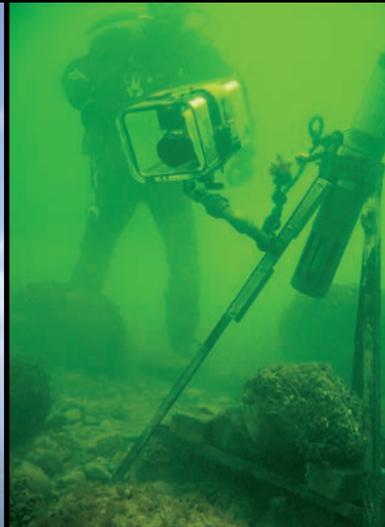
Please join us in this effort by offering your counsel, enthusiasm, and resources. Together we can leave an enduring legacy that will show future generations our resolve, ensuring that these lakes and all their benefits will be enjoyed by those who follow in our footsteps.



NAMING OPPORTUNITIES

In appreciation of your generous support of this vessel, the School of Freshwater Sciences would like to name part of the ship — or a prominent indoor space — in honor of you, your business, or someone you admire. These naming opportunities will serve as a lasting reminder of the people who made this vessel possible and their passionate desire to preserve our Great Lakes.

VESSEL SPACE	MINIMUM GIFT
Vessel	\$10 million
Pilot House 1	\$3 million
Working Deck 2	\$2 million
Observation Deck 3	\$1.5 million
Engineering Deck 4	\$1 million
Dock and Shoreside Marine Ops	\$1 million
Ship's Classroom 5	\$1 million
Wet Lab 6	\$1 million
Dry Lab 7	\$500,000
Captain's Quarters 8	\$500,000
Galley 9	\$250,000
Crew/Researcher Quarters (each) 10	\$250,000



Direct further inquiries to:
Eric Leaf, Assistant Dean for Advancement
School of Freshwater Sciences
414-382-1769 • leaf@uwm.edu
uwm.edu/give/freshwater