







Request for Proposals 2026-28

PREPROPOSALS

An informational webinar for prospective investigators will be from 3-4 p.m. CST on Friday, November 15, 2024, via https://uwmadison.zoom.us/j/97954044607?pwd=MEncyLEh5OpmgDakVnjl9kaqw1CUsT.1

(Meeting ID: 979 5404 4607, Passcode: 119162) **DUE DATE - Friday, January 17, 2025, 3 p.m. CST**SEE APPENDED GUIDELINES FOR PREPROPOSALS

FULL PROPOSALS

An informational webinar for prospective investigators will be from 3-4 p.m. CDT on Friday, March 7, 2025, via https://uwmadison.zoom.us/ij/96250679785?pwd=6Ud0s7Y3QufBJUbulQBUXfAFdqZsOE.1

(Meeting ID: 962 5067 9785, Passcode: 040750) **DUE DATE - Friday, May 2, 2025, 3 p.m. CDT**

All Sea Grant project funds are awarded via a highly competitive process involving external peer reviews and the recommendations of external advisory panels.

Our next two-year grant period begins on FEBRUARY 1, 2026.

seagrant.wisc.edu/rfp



Overview and Guidelines for Preproposal

UNIVERSITY OF WISCONSIN SEA GRANT COLLEGE PROGRAM

OVERVIEW

The University of Wisconsin Sea Grant College Program is inviting research and education project proposals for the next two-year grant period that begins on February 1, 2026. Proposals must be led by an investigator who is a faculty member or person with principal investigator status at their institution in the Universities of Wisconsin, or other Wisconsin college or university. The application process involves two steps:

- 1) Prospective investigators submit a preproposal by **3 p.m. CST, Friday, January 17, 2025**, following these guidelines.
- 2) Prospective investigators submit a full proposal by 3 p.m. CDT, Friday, May 2, 2025.

To be eligible to submit a full proposal, applicants MUST submit a preproposal by the preproposal deadline. All Sea Grant project funds are awarded via a competitive process involving external peer reviews and the recommendations of external technical and advisory panels.

HOW TO PROCEED

Please review the 1) <u>Program Description</u> (appended) for information about Wisconsin Sea Grant, including its mission, vision and values and 2) <u>Research and Education Priorities</u> (appended) for a detailed description of <u>research</u> and <u>education</u> priorities listed below. Follow the <u>Instructions for Submitting a Preproposal</u> (appended). For questions related to research proposals, please contact Jennifer Hauxwell (Associate Director, <u>jennifer.hauxwell@aqua.wisc.edu</u>, 608-263-4756). For questions related to education proposals, please contact Anne Moser (Education Coordinator, <u>akmoser@aqua.wisc.edu</u>, 608-262-3069). See more information at <u>seagrant.wisc.edu/rfp</u>.

Wisconsin Sea Grant solicits <u>research</u> proposals for up to \$100-130k/year¹ in the following areas:

Wisconsin Targeted Focus Areas, including:

- Justice, Equity, Diversity, Inclusion, and Accessibility for Underserved or Underrepresented Communities
- Organic Contaminants and Marine Debris
- Human Dimensions for the Health, Well-Being, and Sustainability of Coastal Communities and Great Lakes Ecosystems

¹ All research proposals are for up to \$130k/year, except the Minnesota-Wisconsin joint call at \$100k/year. For the joint call with Minnesota, these limits are for each state, resulting in a total of \$200k/year.

Wisconsin Base Focus Areas, including:

- Healthy Coastal Ecosystems
- Sustainable Fisheries and Aquaculture
- Resilient Communities and Economies

Minnesota-Wisconsin Joint Request for Proposals

In addition, Wisconsin Sea Grant solicits <u>education</u> proposals for up to \$40k/year to address the following priority:

Environmental Literacy and Workforce Development (Non-research Education Projects)

We welcome original, innovative proposals, as well as proposals from new and/or underrepresented faculty and/or principal investigators and are happy to support all interested researchers in navigating the proposal process. You are encouraged to visit the Wisconsin Sea Grant website and/or download a copy of our 2024-26 Directory of Projects and People for an overview of the types of projects recently funded by our program.

Please note, we encourage projects that:

- Support students in becoming strong scientists and provide opportunities to practice community engagement and actionable science.
- Engage communities and partners throughout all phases of a research study, including the preproposal stage when defining the question to be addressed.
- Connect with our Sea Grant outreach and communications staff to increase relevance and exposure of the work to relevant audiences.
- Incorporate the ideals of justice, equity, diversity, inclusion, and accessibility.

An informational webinar for prospective investigators will be provided on Friday, November 15, 2024, 3-4 pm CST. Our staff will discuss our priorities and the preproposal submission process. Connect via: https://uwmadison.zoom.us/j/97954044607?pwd=MEncyLEh5OpmgDakVnjl9kaqw1CUsT.1 (Meeting ID: 979 5404 4607, Passcode: 119162)

An informational webinar for prospective investigators interested in submitting full proposals will be provided on Friday, March 7, 2025, 3-4 p.m. CDT. Our staff will discuss the full proposal process and offer advice and options for incorporating outreach and education activities within research proposals. Connect via:

https://uwmadison.zoom.us/j/96250679785?pwd=6Ud0s7Y3QufBJUbulQBUXfAFdqZsOE.1 (Meeting ID: 962 5067 9785, Passcode: 040750)

Webinar recordings will be available at seagrant.wisc.edu/rfp.

Thank you for your interest. We look forward to learning more about your ideas for tackling our shared Great Lakes challenges!

Christy Remucal, Interim Director

Instructions for Submitting a Preproposal

Proposals must be led by faculty members or persons having principal investigator status at their institution in the Universities of Wisconsin, or other Wisconsin college or university. Supporting information and resources are at seagrant.wisc.edu/rfp.

Investigators must submit preproposals via the UW Aquatic Sciences Center (administrative home of the University of Wisconsin Sea Grant College Program) online proposal submission system, eDrop (https://edrop.aqua.wisc.edu/), by 3 p.m. CST on Friday, January 17, 2025. Preproposal recommendations to either encourage or discourage a full proposal submission will be sent in late February 2025, along with guidance for submitting a full proposal.

EVALUATION CRITERIA

Preproposals will be reviewed by panels of experts with input by Sea Grant staff and the Wisconsin Sea Grant Advisory Council.

Research review panel(s) will address the following questions when determining whether to encourage a full research proposal²:

- What is the importance of the proposed project for Wisconsin and is it relevant to the priorities listed in the RFP?
- What is the scientific merit of the proposed project?
- What are the qualifications of the investigators?
- What are the likely outcomes or impacts (environmental, educational, social, economic, etc.) that could result from the project? Did investigators identify potential users of project results (e.g., specific businesses, industries, coastal communities, underrepresented and/or underserved communities, state and federal government agencies, etc.?). How are partners, communities, and populations served by the project engaged in the process and potential outcomes associated with the proposed work?
- Does the budget estimate seem adequate, or too high/too low? Does the project seem to be a good value?

The education review panel will address the following questions when determining whether to encourage a full education proposal:

- Rationale and Methods: Is this a sound education project? Are the objectives and methods appropriate? Are the investigators qualified to execute the project/study?
- Meeting Wisconsin Sea Grant's Education Priorities: How well does the preproposal address at least one of the education priorities (numbers 48-56) identified in the Request for Proposals?
- Impact: Will this project make a significant impact on its target audiences? Are target audiences well defined? Is its scope appropriate? Have the investigators identified critical partnerships, especially ones that engage leaders of diverse community groups?
- Budget/Value: Does the budget estimate seem adequate or too high/too low? Does the project seem to be a good value?

² Please see slightly modified evaluation criteria for the Minnesota-Wisconsin Joint Request for Proposals here.

STEP-BY-STEP INSTRUCTIONS

Detailed instructions for submitting a preproposal are outlined below.

Applicants should contact Tom Xiong at tomxiong@aqua.wisc.edu with any difficulties associated with the proposal submission process using eDrop.

STEP 1 – Download templates for preproposal description and CV(s)

Go to <u>seagrant.wisc.edu/rfp</u> and download the Preproposal Description template and the CV template. These forms are needed for you to complete your preproposal.

STEP 2 – Prepare preproposal description

Provide the required information in the Preproposal Description template, omitting the bracketed text. Once completed, save the document - you will use the information to copy and paste into various eDrop fields described in Step 6.

STEP 3 - Prepare CV(s)

Provide the required information in the CV template by deleting the text within brackets and replacing it with investigator information. Rename file(s) using investigator name(s) in the following format: "Lastname_CV.doc" and convert to PDF(s) using the format "Lastname_CV.pdf". You are required to do this for the lead principal investigator listed on the preproposal and are encouraged to do this for all investigators. CVs for multiple investigators will result in separate PDF files. You will upload CV file(s) as described in Step 7.

STEP 4 - Log in or register in eDrop

Navigate to <u>eDrop</u> (<u>https://edrop.aqua.wisc.edu/</u>) and log in or register for a new account. Instructions on the site will assist you in entering your proposal package. Note to new users – the registration process involves a two-step verification, requiring you enter both an email address (step one) and phone number (step two) to receive two different verification codes that you must enter in order to complete the registration.

STEP 5 - Select the RFP associated with this request for proposals in eDrop

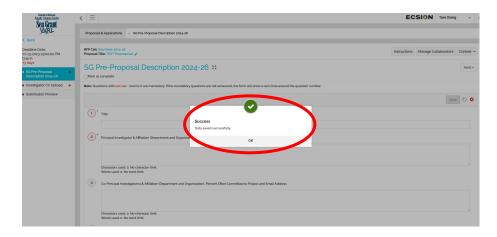
Once you are logged in, click on "Add" next to this funding opportunity called "Sea Grant FY2026-28 (Pre-Proposal)." Enter a title and click "Continue." If you are returning to edit your preproposal, simply click on the "Edit" button associated with your preproposal title. Click on "OK" to proceed to the next section.

STEP 6 – Enter preproposal description information into eDrop form

Complete the SG Pre-Proposal Description form in eDrop using the Preproposal Description template you saved in Step 2 by copying and pasting sections from your document into the corresponding form fields.

You do not need to upload your entire preproposal package in a single session; however, you must click the "SAVE" button to avoid losing anything you enter AND as you navigate between pages in eDrop. Do not click the "NEXT" button at the top of the page until you

have successfully saved your information. We encourage you to frequently SAVE your updates. If you exceed word limits, then SAVEs will not be successful, and you can lose data. A successful SAVE is indicated by the prompt depicted here.



Your account will remain active through the

submission deadline, and you may edit each section until the submission deadline.

You will copy and paste information from your word processing file into form fields (text boxes) labeled:

Title

[Use uppercase only for the first word in the title and for proper nouns.]

Principal Investigator - Name, Affiliation (Department and Organization), Percent Effort Committed to Project, and Email Address

[For joint calls with other state programs, please provide a lead investigator for each state.]

Co-Principal Investigator(s) - Name(s), Affiliation(s) (Department and Organization), Percent Effort Committed to Project, and Email Address(es)

Associate Investigator(s) - Name(s), Affiliation(s) (Department and Organization), and Email Address(es)

Begin Date

[Choose either Feb 1, 2026, or Feb 1, 2027. Projects will normally begin on February 1, 2026.]

Fnd Date

[Maximum project duration is two years.]

Name of Campus Administering Project

[For joint calls with other state programs, please provide the name of the campus in each state administering the project.]

Focus Area

[These areas are presented as a drop-down list in eDrop. Select one Wisconsin Targeted or Base Focus Area Priority or Minnesota-Wisconsin Joint Request for Proposals or Non-research Education Project from the dropdown menu.]

Specific Program Priority

[Check the box(es) associated with the priority action(s) that the proposal best addresses. For the joint request for proposals with Minnesota, leave these options unchecked.]

Statement of Problem or Opportunity to be Addressed [350-word limit.]

Overall Project Goal, Objectives and/or Hypotheses to be Tested

[350-word limit. For joint calls with other state programs, clearly indicate the portion of the project that is associated with each state investigative team.]

Approach

[350-word limit.]

Potential Impacts

[350-word limit. What are the likely outcomes or impacts (environmental, educational, social, economic, etc.) that could result from the proposed project? Identify potential users of project results (e.g., specific businesses, industries, coastal communities, underrepresented communities, state and federal government agencies, etc.) and how they have been involved in defining the question and proposed approach. How are partners, communities or populations served by the project engaged in the process and potential outcomes associated with the proposed work?]

Approximate Year 1 Budget Request

[Projects will normally begin on February 1, 2026. Though funding is on a year-by-year basis, project preproposals should be written to cover the entire period of time necessary to fulfill the proposed objectives. Projects may have durations of one year to a maximum of two years. For joint calls with other state programs, clearly indicate the budget request associated with each state investigative team.]

Approximate Year 2 Budget Request

[For joint calls with other state programs, clearly indicate the budget request associated with each state investigative team.]

Budget Justification

[Submitted budgets are to include lump sums as well as an estimated breakdown of costs across these categories for each year: a) salaries; b) fringe benefits; c) equipment; d) supplies; e) field travel; f) publications; g) other costs to include printing, mailing and workshops, contracts/subawards and shiptime; and h) indirect costs. Contracts and subawards must be managed at the institution of the primary principal investigator. Sea Grant does not cover costs associated with conference travel.

For joint calls with other state programs, clearly indicate the budget breakdown associated with each state investigative team separately by including the detail in the example above for each of two years for each state separately.]

Use a format similar to the example below (for each state separately for joint calls with other state programs):

Year 1

- a) Salaries \$A
- b) Fringe benefits \$B
- c) Equipment \$C
- d) Supplies \$D
- e) Field travel \$E
- f) Publications \$F
- g) Other costs \$G
- h) Indirect costs \$H

Example justification - The year 1 budget includes salary support and associated fringe benefits for x months for PI x, 12 months for an RA and a summer stipend for an undergraduate researcher. Supplies include x, y, and z for field work and laboratory analysis. Field travel is calculated as x visits to field site at \$x per trip for mileage, hotel, etc. Tuition remission of \$x is requested for year 1. A subcontract to "other entity" will support x months of salary support for Co-PI x and \$x in field travel support. Indirect costs are calculated at x% MTDC for "other entity" and y% for PI institution.

Year 2

- a) Salaries \$A
- b) Fringe benefits \$B
- c) Equipment \$C
- d) Supplies \$D
- e) Field travel \$E
- f) Publications \$F
- g) Other costs \$G
- h) Indirect costs \$H

Example justification - The year 2 budget includes salary support and associated fringe benefits for x months for PI x, 12 months for an RA and a summer stipend for an undergraduate researcher. Supplies include x, y, and z for field work and laboratory analysis. Field travel is calculated as x visits to field site at x per trip for mileage, hotel, etc. Tuition remission of x is requested for year 1. A subcontract to "other entity" will support x months of salary support for Co-PI x and x in field travel support. Indirect costs are calculated at x% MTDC for "other entity" and y% for PI institution.

When you are satisfied with the information you have entered in the eDrop Preproposal Description form, click the "SAVE" button and click "Mark as complete" at the top of the page.

STEP 7 - Upload CV(s)

Using the menu on the left, navigate to the investigator CV upload page. Upload the PDF version(s) of your CV template(s). Be sure to click the "SAVE" button after you upload the PDF files and click "Mark as complete."

STEP 8 (OPTIONAL) - Enter demographic information

Please provide the demographic information for the lead investigator on your proposal by navigating to this form provided by the National Sea Grant Office to enter the information. This information is anonymous and not tied to a name or a proposal, and providing this information is optional. (This step can be completed outside of the eDrop system.) After you have considered whether to submit this information or not, click "Mark as complete" at the top of the page in eDrop.

STEP 9 – Submit your application

When ready to submit, select the "Submission Preview" tab on the left-hand menu; then choose the "SUBMIT" button on the right side of the screen. Note, you can log back in to eDrop and make changes to your preproposal up until you have clicked on the "SUBMIT" button. Note: Your preproposal is not officially submitted until you click on the "SUBMIT" button in the "Submission Preview" tab.

Program Description

ABOUT SEA GRANT

For nearly 60 years, the National Sea Grant College Program has funded cutting-edge research at the nation's leading academic institutions, forming a network of 34 programs to serve American and American territorial communities along the coasts of the Atlantic and Pacific oceans and the Great Lakes. More than 3,000 university scientists, outreach specialists, educators and students participate in the program each year. It is a program of the National Oceanic and Atmospheric Administration, U.S. Department of Commerce, and also provides information, tools and services to ensure coastal communities are sustainable.

Established in 1968, the University of Wisconsin Sea Grant College Program is one of the oldest and most vibrant programs in both the national and Great Lakes Sea Grant networks and is well equipped to meet the research, outreach and education demands posed by a state, region, Tribal Nations and country reexamining and realigning priorities to address topics through a diversity, equity and inclusion lens, while meeting the challenges born of a changing climate.

That research has formed a legacy, one in which Wisconsin Sea Grant is a national leader on the topics of toxic contaminants, aquatic invasive species, data visualization for effective resiliency planning, coastal engineering, water quality, urban aquaculture and fisheries management. As an objective, non-advocate source of science-based information and thanks to outreach and communications professionals, the program reaches across Wisconsin and the Great Lakes basin, building bridges and fostering partnerships with businesses and industries, local communities, tribal nations and management agencies.

THE FOUNDATION OF WISCONSIN SEA GRANT

Statements of mission, vision, core values and cross-cutting principles shape the strategic direction of Wisconsin Sea Grant. Together, they provide a foundation for actions, communications, organization and culture.

Wisconsin Sea Grant's **mission** is to support and enhance the sustainable use, conservation and health of Great Lakes resources and the well-being of Great Lakes communities through research, education and outreach.

Wisconsin Sea Grant strives to achieve the **vision** of a future with diverse, thriving coastal communities and ecosystems that are supported by an engaged, environmentally literate public and informed decision-makers.

The following **core values** of Wisconsin Sea Grant complement its mission and vision.

- Actionable Science. The combination of targeted research valued by interested parties
 coupled with effective outreach and communication built on solid relationships with the right
 network and resulting conversations yields scientific information that is relevant and in a
 form that is understandable and actionable to guide decision-making.
- <u>Academically Grounded.</u> Wisconsin Sea Grant draws on the research, education, outreach
 and communications capacities of universities and delivers the science needed to address
 real-world coastal and aquatic issues.
- <u>Diversity, Equity, Inclusion, Justice and Accessibility.</u> Proactively engaging with the range of identities, cultures, communities and capacities present throughout our areas of work, with respect and sensitivity to each person's experiences, history and systemic challenges.
- <u>Non-advocacy.</u> Maintaining a commitment to objective research, programming and communication that avoids bias and advocacy in the development and delivery of information, tools and services.
- <u>Vision.</u> Advancing creative, innovative solutions that address emerging and chronic challenges through engagement, science and stewardship that look to the future.
- <u>Collaboration.</u> Seeking and sustaining partners with whom we leverage each other's strengths, and responsively, respectfully integrating diverse expertise and perspectives to reach shared goals.
- <u>Sustainability.</u> Advancing environmental stewardship and restoration practices and communicating the value of the services that the coastal, watershed and Great Lakes ecosystems provide to the nation.
- <u>Accountability.</u> Operating with integrity and transparency while maintaining quality and relevance in all functional areas, including program management.

Wisconsin Sea Grant embraces the following **cross-cutting principles** of the Sea Grant network.

- Cultivation of partnerships by integrating the expertise and capabilities of partners from international, federal, tribal, state and local communities as well as from academia, nongovernmental organizations and industry.
- Enhancement of diversity, equity, inclusion, justice and accessibility by seeking and integrating diverse perspectives to advance cultural understanding and enable the network to pursue its vision and mission with, and for, all audiences. We will actively create mechanisms to allow all people to participate in network activities. Bringing a range of perspectives, values and tools together to find solutions that are more innovative, creative, inclusive and responsive will help us be successful in tackling problems facing coastal and Great Lakes communities.
- Provision of trusted, science-based information of value to all audiences interested in coastal and Great Lakes issues using an inclusive, collaborative, and problem-oriented engagement process.
- Serve as an academic, neutral party and assist interested parties in making informed decisions about important, and sometimes controversial, issues in a factual and timely manner without advocating for specific positions or policies.

STRATEGIC IMPLEMENTATION

<u>Wisconsin Sea Grant's 2024-27 Strategic Plan</u> is structured in accordance with the National Sea Grant College Program's Strategic Plan for the same time period, which capitalizes on Sea Grant's unique capacities and strengths, and allows for flexibility and creativity on the part of state Sea Grant programs.

In order to achieve positive, measurable outcomes, the program connects researchers with the Wisconsin Sea Grant outreach and communications staff to make available and deliver research-derived information and findings to resource managers, policy- and decision-makers and public stewards—a clear demonstration of actionable science. With regard to the principle of enhancing diversity and inclusion, the program has accelerated its implementation through targeted outreach, revised recruiting and educational opportunities.

Built on this foundation, the Wisconsin Sea Grant strategic planning approach was a bottom-up process in which program priorities underwent review. The plan was informed by a web-based survey, along with facilitated discussions with involved parties, and it benefitted from the advice of the Wisconsin Sea Grant Advisory Council. Evaluation and accountability are central to any program's credibility and success. To that end, Appendix A includes 2024-27 performance measures and metrics that Wisconsin Sea Grant intends to support.

Research and Education Priorities

On the following pages, we describe the Wisconsin targeted and base research focus areas and education priorities.

Wisconsin Sea Grant strongly encourages proposals that:

- Support students in becoming strong scientists and provide opportunities to practice community engagement and actionable science.
- Engage communities and partners throughout all phases of a research study, including the preproposal stage when defining the question to be addressed.
- Connect with our Sea Grant outreach and communications staff to increase relevance and exposure of the work to relevant audiences.
- Incorporate the ideals of justice, equity, diversity, inclusion, and accessibility.

Wisconsin Sea Grant solicits <u>research</u> proposals in the following areas for up to two years with the funding limits associated with each opportunity indicated below:

Wisconsin Targeted Focus Areas (\$130k/year), including:

- Justice, Equity, Diversity, Inclusion, and Accessibility for Underserved or Underrepresented Communities
- Organic Contaminants and Marine Debris
- Human Dimensions for the Health, Well-Being, and Sustainability of Coastal Communities and Great Lakes Ecosystems

Wisconsin Base Focus Areas (\$130k/year), including:

- Healthy Coastal Ecosystems
- Sustainable Fisheries and Aquaculture
- Resilient Communities and Economies

Minnesota-Wisconsin Joint Request for Proposals (\$100k/year for Minnesota team and \$100k/year for Wisconsin Team)

In addition, Wisconsin Sea Grant solicits <u>education</u> proposals for up to two years to address the following priority:

Environmental Literacy and Workforce Development (Non-research Education Projects) (\$40k/year)

Wisconsin Targeted Focus Areas

Wisconsin Sea Grant solicits proposals that address the following targeted focus areas for up to \$130k/year.

Focus area: Justice, Equity, Diversity, Inclusion, and Accessibility for Underserved or Underrepresented Communities

In order for Wisconsin Sea Grant to meet its vision of having thriving coastal ecosystems and communities, it is imperative to engage and address the specific needs of underserved and underrepresented groups. According to Sea Grant, "Underserved communities are those that have experienced low levels of access to our programming, while underrepresented communities refer to persons for whom representation in our programs is smaller than that of the general population." Furthermore, it is important to recognize the barriers that prevent marginalized communities from safely and equitably accessing, enjoying and benefiting from Great Lakes coastal communities, resources and projects. In accordance with its key principle of "enhancing diversity and inclusion," Wisconsin Sea Grant seeks proposals that aim to advance issues around environmental justice for the state's underserved and underrepresented communities.

According to the U.S. Environmental Protection Agency, "[e]nvironmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income, with respect to the development, implementation, and enforcement of environmental laws, regulations and policies" and "...will be achieved when everyone enjoys the same degree of protection from environmental and health hazards and equal access to the decision-making process to have a healthy environment in which to live, learn and work."

Ensuring that new research projects not only acknowledge but also directly address and mitigate the ways in which environmental issues may disproportionately affect communities of color (e.g., African American/Black, Hispanic/Latine, Native American/First Nations) and/or economically disadvantaged communities is essential. Furthermore, individuals from these communities must be meaningfully engaged in the projects. Preference will be given to proposals that demonstrate strong community-buy in and early community engagement in scoping these projects.

Potential project topics include, but are not limited to public access to coastal resources, water safety, water quality, emergency preparedness, food security in the context of fisheries and aquaculture, workforce development, disparate impacts from climate change such as flooding, use of traditional and local knowledge to advance ways of knowing and understanding coastal systems and for addressing environmental justice, etc. Preference will be given to proposals that can also help inform Wisconsin Sea Grant's outreach and education activities around issues of justice, diversity, equity, inclusion, and accessibility.

_

³ https://www.epa.gov/environmentaljustice

Focus area: Organic Contaminants and Marine Debris

<u>Organic contaminants of concern include but are not limited to: PFAS, Microplastics, 6PPD-quinone, pharmaceuticals, and personal care products</u>

Many chemicals can help people and animals live easier, healthier, and safer lives, but their use sometimes comes with unknown consequences for human and environmental health. The scientific and regulatory communities are continually recognizing and adapting to environmental and health impacts of technologies, products, and processes. As new technologies and products are developed for commercial and consumer use, analysis for understanding and managing human health and environmental impacts must also evolve.

A wide range of products utilize per- and polyfluoroalkyl substances (PFAS), which have been identified as substances with potential adverse human effects. Products containing PFAS include water-repellent or temperature-resistant textiles and cookware, fire-fighting foams, and paper products. PFAS, a complex family of over 9,000 synthesized fluorinated organic chemicals, have been produced for half a century, and scientists are increasingly discovering their effects. Manufacturers have developed many alternatives to commonly used PFAS, but it is yet unknown whether these alternatives are more or less hazardous. Federal and state agencies have been identifying PFAS contamination sites, and the U.S. EPA recently proposed the first federal regulations for PFAS in drinking water. However, more research is needed to identify sites and sources of contamination, as well as to understand environmental cycling of a broader range of PFAS chemicals. PFAS have already been found in many Wisconsin waterways, yet little is known about other potential areas such as private wells, smaller water districts, and other sources of drinking water. In particular, Wisconsin Sea Grant is interested in Great Lakes-connected proposals that improve knowledge related to sampling, detection, analysis, and cycling in the environment.

Microplastics are also flagged as prolific environmental pollutants. Products containing microplastics include personal care products, paints, detergents and textiles, and routine washing of synthetic fabrics introduces microfibers to local waterways. Larger types of debris like plastic bags, containers and plastic-containing trash break down into microplastics. Plastics can be found in waterways ranging from nano to micro to macro sizes. Research and collaboration are needed to explore exposure and risks for biota and people, fate and transport in the environment, and to characterize effects of microplastics in organisms and systems to understand the environmental and socioeconomic impacts. In addition, there is a need for standardizing national/multi-national microplastics sampling protocols to allow for comparisons temporally and spatially and to identify areas of concern.

Vehicle tires contain the chemical known as <u>6PPD</u> to prevent tires from breaking down due to reactions with ozone and other reactive oxygen species in the air. When 6PPD reacts with ozone in the air, it forms <u>6PPD-quinone</u>. Tires wear down through contact with roads, releasing particles into the environment. When it rains, stormwater from hard surfaces like parking lots and streets washes these particles into streams and other water bodies. As a result, 6PPD-quinone may be

present, and aquatic organisms can be exposed to it. A recent *Science* publication linked coho salmon death to 6PPD-quinone in stormwater. In general, there is a need for information regarding emissions, fate and transport, and human health effects of 6PPD-quinone. More background can be found here.

More background on pharmaceuticals, personal care products, and other organic contaminants can be found here.

Wisconsin Sea Grant seeks organic contaminants proposals that develop or improve methodologies, standards of procedures, models or management plans; inventory sources; evaluate transport, fate and distribution of contaminants in the Great Lakes ecosystems; conduct intensive analyses in Areas of Concern or for Species of Concern; examine the interactions with fish populations and impacts on food webs; explore human health impacts; and support and improve testing capacity within the state.

Marine Debris

The National Oceanic and Atmospheric Administration Marine Debris Program (NOAA MDP) defines marine debris as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes. While perhaps more commonly thought of as an oceanic problem, the Great Lakes Region, with its complex system of habitats, wetlands, rivers, and tributaries, is an area that is also affected by debris. Debris in the Great Lakes ranges from microplastics to abandoned and derelict vessels, and is generally classified into two source categories: lake-based and land-based. Lake-based debris includes items that are dumped, swept, or blown from vessels or stationary platforms at sea, as well as abandoned, lost, or derelict fishing gear. Land-based debris includes debris from intentional or unintentional littering and dumping in rivers and streams, as well as from stormwater discharges and waste management practices. The NOAA Great Lakes Marine Debris Action Plan establishes a comprehensive framework for strategic action to ensure the Great Lakes and its coasts, people, and wildlife are free from the impacts of marine debris. This Action Plan encompasses work undertaken from 2020-2025, and specific goals include:

- The research and monitoring of marine debris addresses knowledge gaps and informs action.
- A science-based, strategic approach guides marine debris policy and management decisions in the Great Lakes.
- Marine debris is prevented and reduced through an educated and involved community.
- The marine debris that reaches the Great Lakes environment is removed to minimize adverse impacts

Wisconsin Sea Grant seeks research proposals that advance any of the goals above to prevent and remove marine debris and that build connections with partners and communities.

Focus area: Human Dimensions for the Health, Well-Being, and Sustainability of Coastal Communities and Great Lakes Ecosystems

Social science is essential to improve our understanding of how social, cultural, and institutional factors are related to our natural environment and how people and communities perceive and engage with environmental issues. Social science can also be conducted in collaboration with community members to address a community-identified question, with the goal of producing knowledge that may inform social action, change, and/or justice. This research can provide valuable insights for developing innovative solutions, policies, and programs that support the sustainability of Great Lakes people and ecosystems.

Wisconsin Sea Grant seeks research proposals focused on examining the human dimensions of Wisconsin's Great Lakes to improve the health, well-being and sustainability of coastal communities and Great Lakes ecosystems. Fields in the environmental social sciences commonly include sociology, psychology, communication studies, anthropology, economics, geography, history, political science, and community-engaged research; however, other relevant fields will be considered. More information about community-engaged research can be found at the UW-Madison Morgridge Center for Public Service website. Possible methods may include qualitative or quantitative methods such as surveys, in-depth interviews or listening sessions, ethnographic research, geographic information systems mapping, focus groups, participatory research, case studies, or a combination of social science methods. All social science research must be approved by an Institutional Review Board and may require additional review processes through local entities such as Tribal Governments to protect human subjects. knowledge keepers, and data sovereignty. Proposals describing community-engaged research must include descriptions indicating how relationships were developed and how community needs were identified. Proposal topics may fall under any priorities listed under the base focus areas (next pages) and could include, but are not limited to:

- Risk communication (e.g., contaminants/harmful algal blooms and public health, climate resilience preparedness and disaster response, coastal erosion)
- Behavior change (e.g., stormwater pollution, aquatic invasive species, marine debris prevention)
- Geography (e.g., climate migration, environmental justice issues)
- Behavioral economics (e.g., fish purchasing and consumption, implementation of agricultural best management practices)
- Anthropology (e.g., coastal access and recreational use, sense of place, climate anxiety)
- Community-engaged research (e.g., multi-sector collaboration towards water safety or coastal bluff erosion, mapping flooding risk with inclusion of neighborhood stories, creating effective dialogue tools for climate change in historically excluded communities)

Applicants are encouraged to think broadly and provide innovative frameworks for their human dimensions research. Preference will be given to proposals that can also help inform Wisconsin Sea Grant's outreach and education activities related to the health, well-being, and sustainability of Wisconsin's coastal communities and Great Lakes ecosystems.

Wisconsin Base Focus Areas

Wisconsin Sea Grant's focus areas enable the program to harness and apply its energy and resources to imminent and emerging Great Lakes needs. By addressing the following focus areas, Wisconsin Sea Grant researches and attends to the lakes' ecosystems, strives for sustainable fisheries and aquaculture operations, aims to prepare communities to address risks and build resilience, fosters a diverse and engaged workforce and sparks environmental literacy.

These focus areas of the Sea Grant network are enriched by and responsive to the needs of interested parties, which ensures the local-level input identifies and develops methods to address what is most relevant to Wisconsin and the Great Lakes.

Focus areas provide an order to the wide expanse of Wisconsin Sea Grant's topical interests and initiatives. Further, they are interrelated, and a single activity may reflect and advance the goals, actions and desired outcomes of more than one of these priorities.

The areas are: Healthy Coastal Ecosystems, Sustainable Fisheries and Aquaculture, and Resilient Communities and Economies.

Wisconsin Sea Grant solicits <u>research</u> proposals that address the following base focus areas and their associated goals and numbered priority actions for up to \$130k/year.

Focus Area: Healthy Coastal Ecosystems

GOAL: Coastal and Great Lakes habitats, ecosystems and the services they provide are protected, enhanced and/or restored.

Ecosystem Protection and Restoration

- Support research, outreach and communications to understand the environmental and socioeconomic effects of challenges facing Great Lakes ecosystems including physical processes, climate change and changes to biodiversity and ecosystem structure.
- Help residents, resource managers, businesses, industries and the agricultural sector understand the effects of human activities and environmental changes on coastal resources.
- 3. Develop new or improved approaches for reducing or preventing harmful algal blooms.
- 4. Support research, outreach and communications to understand the important role that tributaries, coastal wetlands and nearshore habitat play for fisheries and other aquatic life.
- 5. Co-develop, improve and share knowledge, decision-support tools, technologies and approaches to protect, enhance and restore ecosystems.

Aquatic Invasive Species

6. Conduct research, outreach and communications that lead to a better understanding and prioritization of invasion pathways into the Great Lakes.

- 7. Develop innovative and effective communication approaches to reach interested parties with aquatic invasive species prevention messages.
- 8. Develop tools and approaches that better understand and improve aquatic invasive species prevention actions.
- 9. Conduct research, outreach and communications about the ecological impacts of invasive species on food webs and important species.

Emerging Contaminants

10. Support research, outreach and communications to understand the environmental and socioeconomic effects of current and emerging contaminants on Great Lakes ecosystem and human health including, but not limited to Per- and polyfluoroalkyl substances (PFAS), microplastics, pesticides and herbicides.

Marine Debris

 Support research, outreach and communications that addresses knowledge gaps and informs action related to the prevention and removal of marine debris impacting the Great Lakes.

GOAL: Land, water, air and living resources are managed by applying science, tools and services to sustain resilient coastal and Great Lakes ecosystems.

Ecosystem Management

- 12. Support a science- and management-driven framework that integrates research, observations, monitoring and modeling and that includes community engagement and traditional and local knowledge to provide a scientific basis for informed decision-making.
- Identify and advance successful strategies that enhance resilient ecosystems and watersheds in the context of changing conditions, including environmental variability and climate change.
- 14. Utilize integrated assessment methods that bridge natural sciences, social sciences, economics and policy studies to support more holistic management and restoration of Great Lakes resources, including freshwater estuaries and urban harbors.
- 15. Utilize ecosystem-based science and management to address the interconnections between land use and nutrient input from watersheds and impacts on receiving waters, with an emphasis on restoration of the Green Bay ecosystem.

Special topic - Great Lakes acidification

A. The Great Lakes (similar to other freshwater and marine systems around the world) are projected to experience acidification. Great Lakes Sea Grant programs are prioritizing research to a) elucidate spatiotemporal trends in carbonate chemistry within the Great Lakes region, b) consider potential effects of carbonate chemistry changes on physical, chemical and biological, including upper trophic level, dynamics of the Great Lakes and c) use social and natural science methods to explore management strategies in regard to carbonate chemistry changes. (for NOAA perspective and priorities on Great Lakes

Acidification Research see Chapter 11: https://oceanacidification.noaa.gov/wp-content/uploads/2023/02/ResearchPlan2020-2029 comp.pdf)

Focus Area: Sustainable Fisheries and Aquaculture

Note - Researchers involved in funded projects with an aquaculture focus will be invited to join the <u>Great Lakes Aquaculture Collaborative (GLAC)</u>, a working group coordinated by Minnesota Sea Grant and including the following Great Lakes Sea Grant programs: Illinois-Indiana, Michigan, New York, Ohio, Lake Champlain, and Wisconsin. GLAC will organize member-driven activities that may include quarterly meetings, workshops, conference special sessions, miniconferences, special issue journal proposals and coordinated communications to amplify research impacts. GLAC members will also assist researchers where appropriate by networking with producers, relaying research results on the GLAC website and providing communication opportunities among the Great Lakes Sea Grant programs.

GOAL: Wisconsin fisheries and aquaculture supply food, jobs and economic and cultural benefits.

Harvest and Processing Techniques

- 16. Promote and support harvesting, culturing and processing techniques that lead to safe, sustainable, high-quality food as well as economic, social and ecosystem benefits.
- 17. Collaborate in identifying Great Lakes regional aquaculture opportunities and bestmanagement practices along with sustainable production systems such as recirculating aquaculture systems (RAS).
- 18. Support research, outreach and communications to develop and improve economically viable and environmentally sustainable aquaponic operations.
- 19. Support research to develop and improve commercially viable and environmentally sustainable aquaculture practices and techniques, including nutritional value of feeds, broodstock selection, water supply and quality, husbandry, and disease and pathogen prevention and diagnosis.
- 20. Support value-added product development and processing to maximize value from wild-caught and farm-raised seafood.

Fisheries and Aquaculture Workforce

- 21. Support development of a trained and diverse workforce and enhance technology transfer in a manner that recognizes a variety of methodologies and approaches, including those based on traditional and local knowledge.
- 22. Identify and better understand the barriers to expansion of the aquaculture industry in Wisconsin and implement innovative partnerships to address scientific, business, economic, policy and legal challenges.
- 23. Identify new sources of workforce for aquaculture and commercial fisheries, as well as develop training frameworks to build that pool.

Consumer Science/Perceptions

- 24. Support research that leads to a better understanding of the benefits and risks of consuming Wisconsin-produced and Great Lakes region fish, as well as how aquaculture can address food safety and security issues during times of national and global health and food supply chain concerns.
- 25. Support research, outreach and communications that encourages the application of behavioral and consumer sciences toward consumer perception and preferences, food safety, labeling and certifications, seafood demand studies and promotion of local seafood.

New Aquaculture Species/Markets

- 26. Investigate emerging species and new technologies suitable for aquaculture in Wisconsin.
- 27. Support development of urban aquaculture in new markets and provide knowledge resources to existing operations.

GOAL: Natural resources are sustainably managed to support coastal communities and working waterfronts, including commercial, recreational, subsistence fisheries and aquaculture.

Fisheries and Food Webs

- 28. Support research, outreach and communications to better understand our Great Lakes fisheries, including status and trends, measurement and modeling techniques, future scenarios, and socioeconomic costs and benefits under different management approaches and environmental conditions.
- 29. Support research, outreach and communications to advance an environmentally sustainable and robust recreational, commercial and subsistence Great Lakes fishery.
- 30. Better understand threats to Great Lakes fisheries, including, but not limited to, food web changes, invasive species, nutrient enrichment, contaminants, genetics and climate change as well as effective responses to build resilience and resist, facilitate and accept change.
- 31. Support research to improve understanding of the impacts of food web change, climate, and other stressors on early life history and interaction of valuable sport and commercial species and develop management actions to mitigate impacts.

Focus Area: Resilient Communities and Economies

GOAL: Great Lakes coastal communities have the capability and resources to prepare for and adapt to extreme and chronic weather and coastal hazards, climate change, economic disruptions and other threats to community health and well-being.

Coastal Processes

32. Support research, outreach and communications that will lead to a better understanding of how the sediment supply from coastal bluffs influences beach and nearshore sediment transport in order to guide sound shore protection and bluff stabilization choices and build more resilient coastal communities and economies.

Ports, Harbors and Marinas

- 33. Promote research, outreach and communications for sustainable and resilient ports, harbors and marinas.
- 34. Encourage adoption of best-management practices by marinas and boaters that keep Wisconsin's waterways clean and safe.

Nature-Based Shorelines

35. Support research, outreach and communications on nature-based shore protection along Great Lakes coasts, including suitability, performance, habitat benefits and design guidance for the various practices that are applicable to the Great Lakes.

Climate Change

- 36. Support research, outreach and communications to better understand the impacts that a changing climate will have on the Great Lakes.
- 37. Support research that evaluates the impacts of increased climate variability and change on coastal communities and work with management and regulatory agencies, tribal nations and vulnerable and at-risk communities to reduce vulnerability to fluctuating water levels and storms.

Coastal Planning

38. Work with coastal communities to advance collaborative planning, including incorporation of natural hazards resilience and climate adaptation principles into community plans.

Maritime History and Culture

39. Support research, outreach and communications that documents and preserves cultural and historical resources in coastal and marine areas.

Coastal Economy

- 40. Work with communities to explore and support diversification, strengthening, sustainability and social equity within coastal economic sectors and the blue economy.
- 41. Support research to document the socioeconomic contributions of water-dependent industries.

Sustainable Tourism and Recreation

- 42. Support research, outreach and communications to understand the value of and opportunities for subsistence, tourism and commercial and recreation-related activities in coastal communities.
- 43. Build collaborative and diverse networks to promote sustainable tourism and outdoor recreation.

GOAL: Water resources are enhanced, sustained and protected to meet existing and emerging needs of the communities and economies that depend on them.

Water Quality, Quantity and Availability

- 44. Support research, outreach and communications to assess and share the impacts of human activities on Great Lakes water quality and supply, as well as coastal and nearshore habitats.
- 45. Support environmental and socioeconomic research to protect the supply and quality of fresh water.

Water Resource Management

- 46. Collaborate with diverse partners and interested parties, especially the most vulnerable, to advance plans and management practices for protecting and managing water resources.
- 47. Support research, outreach and communications to promote the development and implementation of green stormwater infrastructure practices.

Environmental Literacy and Workforce Development

Wisconsin Sea Grant solicits non-research <u>education</u> proposals for up to \$40,000 per year to address one or more of the following education goals and numbered priority actions:

GOAL: A diverse, environmentally literate public participates in lifelong formal and nonformal learning opportunities aligned to the Great Lakes literacy principles.

Environmental Literacy

- 48. Provide financial support for Great Lakes education projects that incorporate innovative practices or technologies and multicultural perspectives developed through engagement with leaders of diverse community partners.
- 49. Develop Pre-K-12 resources that address the Great Lakes literacy principles and support state, tribal and national educational standards.
- 50. Support professional learning opportunities that engage and train educators about Great Lakes literacy principles.
- 51. Promote place-based learning as a way to engage communities in local stewardship and commitment to preserving and protecting the environment.
- 52. Promote the intersection of the arts, humanities, sciences and traditional and local knowledge to inspire an environmentally literate society.

GOAL: A diverse, skilled and environmentally literate workforce that is engaged and able to build prosperous lives and livelihoods in a changing world through traditional and innovative careers.

Workforce Development

- 53. Identify, promote and expose students, working professionals and the unemployed to Great Lakes related career pathways to build a diverse and skilled Wisconsin workforce.
- 54. Develop and carry out programs that help people discover, create and grow within careers that support the current and future needs of coastal communities and ecosystems and to adapt and thrive in changing conditions.
- 55. Support a graduate student and post-graduate fellows program to provide emerging professionals with opportunities to practice community engagement and actionable science and to connect them with the full range of Sea Grant activities and Great Lakes-related employment opportunities.
- 56. Increase opportunities for students at all levels (P-12, undergraduate, graduate, technical and vocational) to gain knowledge and experience addressing issues that are important to the Great Lakes and its watersheds.

Minnesota-Wisconsin Joint Request for Proposals

The Minnesota and Wisconsin Sea Grant College Programs invite proposals from collaborative interstate teams. For this special solicitation, only projects involving both Minnesota and Wisconsin researchers will be considered. By partnering, these two Great Lakes Sea Grant programs can support broader-scale projects to tackle challenges at a regional scale. In addition, generating collaborations across state lines can enrich the expertise of our in-state research teams. Each preproposal should describe and submit a single project with researchers participating and collaborating from each of the two states. Projects should start February 1, 2026.

Joint Priorities

This joint request for proposals aims to support research to advance climate adaptation and resilience of Lake Superior coastal resources and communities in Minnesota and Wisconsin. Potential applied research topics include, but are not limited to:

Hazardous Material Transport

 Assess existing strategies and develop novel strategies to reduce the risks to communities and ecosystems from hazardous material transport near or on Lake Superior.

Storms, Infrastructure, and Preparedness

- Analyze historical trends of Lake Superior storms and build predictive models to assess current and likely risks to onshore infrastructure and habitat.
- Identify coastal hazards and extreme weather risks to people and their livelihoods and identify associated solutions for vulnerable coastal communities.
- Design, test, or model novel coastal infrastructure approaches that increase resilience to future climate conditions and coastal hazards.
- Develop novel and transferable methods to assess Great Lakes coastal communities' vulnerability and/or associated climate adaptation pathways.
- Develop or assess collaborative planning approaches and/or tools to advance the incorporation of natural hazards resilience and climate adaptation principles into community plans, policies, and actions.

Resilient Fisheries

 Analyze how the historic 2022 Cisco year class is influencing the food web dynamics in Lake Superior and the associated management implications for the Lake Superior commercial and recreational fisheries.

Budget

Up to \$100,000 per year for two years will be available for funding each of the Minnesota and Wisconsin portions of a joint research project for a grant total of up to \$200,000 per year. Match is not required for Wisconsin partners. Minnesota-based partners must demonstrate a 25 percent non-federal match and a minimum of 40% of funds must be dedicated to student support. Additional budget instructions will be provided at the full proposal stage of the competition.

Interstate Team Building

Preference will be given to proposals that leverage research strengths across the states to employ multidisciplinary or complementary approaches. If you have interest in this topic and/or skills that would be relevant to a research team, but you are not sure how to connect with researchers in other states, you are encouraged to submit your info via the google form below and review the list of potential collaborators. Submitting your information to this list is not a requirement for submission to this RFP.

- Investigator Connection Form
- Responses to the Investigator Connection Form

Community Engagement

The ultimate intent of this call for proposals is to provide Lakes Superior coastal communities with information and tools to adapt and increase resilience to changes in climate. Given this, the potential applied impact of the proposed work will be evaluated at the preproposal stage. Preproposals should clearly identify community partners with whom researchers will engage. Applicants are encouraged to think creatively about the most appropriate engagement method for their work and are welcome to discuss outreach ideas with Sea Grant extension professionals in their respective Sea Grant programs.

Evaluation Criteria

A preproposal research review panel, assembled and attended by representatives both state programs, will address the following questions when determining whether to encourage a full proposal submission:

- What is the importance of the proposed project for the region and to what extent is the proposed project relevant to Lake Superior communities?
- What is the scientific merit of the proposed project?
- What are the qualifications of the investigators?
- What are the likely outcomes or impacts (environmental, educational, social, economic, etc.) that could result from the project? Did investigators identify potential users of project results (e.g., specific businesses, industries, coastal communities, underrepresented and/or underserved communities, state and federal government agencies, etc.?). Are partners, communities, and populations served by the project engaged in the process and potential outcomes associated with the proposed work?
- Does the budget estimate seem adequate, or too high/too low? Does the project seem to be a good value?
- How well integrated is the project, given researchers from different state programs?

Preproposal submission instructions

Investigators from the two state programs should prepare **one preproposal document** for submission to Wisconsin Sea Grant as described in the <u>Instructions for Submitting a</u>

<u>Preproposal</u>. In this preproposal document, clearly indicate the portion of the project and budget that is associated with each state investigative team.

Timeline

The deadline for preproposals is Friday, January 17, 2025, 3 p.m. CST. Applicants will receive feedback on their preproposals by the end of February 2025. Full proposal guidance will also be provided at this time. The deadline for full proposals is Friday, May 2, 2025, 3 p.m. CDT. To be eligible to submit a full proposal, applicants MUST submit a preproposal by the preproposal deadline.

Webinars

Informational webinars for prospective investigators specifically interested in the joint call for proposals with Minnesota and Wisconsin Sea Grant programs will be from 4-4:30 pm on November 15, 2024, and March 7, 2025 (immediately following a Wisconsin-specific PI meeting from 3-4 pm on those days) using the connection information below:

- Preproposals (4-4:30 pm, 11/15/24):
 https://uwmadison.zoom.us/j/97954044607?pwd=MEncyLEh5OpmgDakVnjl9kaqw1CUsT.1
 (Meeting ID: 979 5404 4607, Passcode: 119162)
- Full proposals (4-4:30 pm, 3/7/25):
 https://uwmadison.zoom.us/j/96250679785?pwd=6Ud0s7Y3QufBJUbulQBUXfAFdqZsOE.1
 (Meeting ID: 962 5067 9785, Passcode: 040750)

For more information, contact:

- Wisconsin Sea Grant: Jennifer Hauxwell (jennifer.hauxwell@aqua.wisc.edu)
- Minnesota Sea Grant: Alexander Frie (frie0388@umn.edu)

Appendix A. National Performance Measures and Metrics from the National Sea Grant College Program 2024-2027 Strategic Plan Supported by Wisconsin Sea Grant. Below is a list of the performance measures and metrics that Wisconsin Sea Grant intends to support and is responsible for tracking and reporting annually to the National Sea Grant Program. We will work with funded researchers and educators to help track accomplishments associated with competed projects.

Туре	2024-2027 National Performance Measure and Metrics
Healthy Coastal	Number of resource managers who use ecosystem-based
Ecosystems (HCE)	approaches in the management of land, water, and living resources
	as a result of Sea Grant activities.
Healthy Coastal	Number of acres of coastal habitat protected, enhanced, or restored
Ecosystems (HCE)	as a result of Sea Grant activities.
Sustainable Fisheries	Number of fishers, seafood processors, aquaculture industry
and Aquaculture	personnel or seafood consumers who modify their practices using
(SFA)	knowledge gained in fisheries sustainability and seafood safety as a
	result of Sea Grant activities.
Resilient	Number of communities that adopt/implement sustainable economic
Communities and	and environmental development practices and policies as a result of
Economies (RCE)	Sea Grant activities.
Resilient	Annual number of communities that adopt/implement hazard
Communities and	resilience practices to prepare for and respond to/minimize coastal
Economies (RCE)	hazardous events.
Environmental	Number of Sea Grant products that are used to advance
Literacy and	environmental literacy and workforce development.
Workforce	
Development (ELWD)	
Environmental	Number of people (youth and adults) engaged in Sea Grant-
Literacy and	supported informal education programs.
Workforce	
Development (ELWD)	
Environmental	Number of Sea Grant supported graduates who become employed in
Literacy and	a job related to their degree within two years of graduation.
Workforce	
Development (ELWD)	
Cross-Cutting	Number of Sea Grant tools, technologies and information services
Measure	that are used by our partners/customers to improve ecosystem-
	based management.
Cross-Cutting	Economic and societal impacts and benefits derived from Sea Grant
Measure	activities (market and non-market; jobs and businesses created or
	sustained; patents/licenses).
Cross-Cutting Metric	Sea Grant Staffing: Number of individuals and full-time equivalents
	(FTEs) devoted to Sea Grant.

Cross-Cutting Metric	Core Funding Proposals: Number and Origination of Core Funding
	Pre- and Full-Proposals.
Cross-Cutting Metric	Number of Volunteer Hours.
Cross-Cutting Metric	Number of Postsecondary Students and Degrees Financially
	Supported by Sea Grant in Higher Education Programs
	(Undergraduate, Graduate).
Cross-Cutting Metric	Number of P-12 Students who participated in Sea Grant-supported
	formal education programs.
Cross-Cutting Metric	Number of P-12 Students Reached Through Sea Grant-Trained
	Educators.
Cross-Cutting Metric	Number of educators who participated in Sea Grant-supported
	professional development programs.
Cross-Cutting Metric	Number of Sea Grant-Sponsored/Organized Events.
Cross-Cutting Metric	Number of Attendees at Sea Grant- Sponsored/ Organized Events.
Cross-Cutting Metric	Number of Public or Professional Presentations.
Cross-Cutting Metric	Number of Attendees at Public or Professional Presentation.
Cross-Cutting Metric	Number of Marinas Certified as "Clean Marina" by the Clean Marina
	Program as a result of Sea Grant Activities.
Cross-Cutting Metric	Number of individuals certified or recertified in Hazard Analysis
	Critical Control Point (HACCP) as a result of Sea Grant activities.
	[Metric not supported by Wisconsin Sea Grant. Program does
	not conduct HAACP training.]
Cross-Cutting Metric	Number of peer-reviewed publications produced by Sea Grant.
Cross-Cutting Metric	Visitor Attendance: Number of people that visit museums, aquariums,
	and other informal education institutions hosting NOAA-supported
	exhibits or programs (NEW; Pilot). [Metric not supported by
	Wisconsin Sea Grant. Program does not oversee these types of
	institutions.]
Cross-Cutting Metric	Environmental Actions: Number of people participating in
	environmental actions through NOAA education programs (NEW;
	Pilot).