Michigan Sea Grant 2023 Request for Proposals

Research Program Overview

Michigan Sea Grant (MISG) is inviting proposals for innovative research projects for the 2024–2026 funding period that begins on February 1, 2024. All MISG funds are awarded via a competitive process involving external peer review and external advisory panel recommendations. A total of approximately $570,000 will be awarded each year within this two-year project period.

MISG will support three types of research projects during this funding cycle:

1) **Integrated Assessment Projects** (Page 2) – Projects that use Integrated Assessment methods and/or extensive partner and community engagement to address important social and ecological issues affecting the Great Lakes. Funding up to $110,000 per year. Note that MISG funding requires a 50% non-federal match – see below for more information. MISG has identified a set of priority topics listed below that are aligned with our 2024-2027 Strategic Plan.

   Page 4: Priority Topics
   Page 7: Letter of Intent Guidelines (Due: March 15, 5:00 PM EDT)
   Page 9: Full Proposal Guidelines (Due: May 24, 5:00 PM EDT)

2) **Core Research Projects** (Page 15) – Research on issues affecting the Great Lakes ecosystem and its communities, and that will have clear application to management, policy, or conservation or address a clear partner need or question. Funding up to $110,000 per year. Note that MISG funding requires a 50% non-federal match – see below for more information. MISG has identified a set of priority topics listed below that are aligned with our 2024-2027 Strategic Plan.

   Page 15: Priority Topics
   Page 17: Letter of Intent Guidelines (Due: March 15, 5:00 PM EDT)
   Page 19: Full Proposal Guidelines (Due: May 24, 5:00 PM EDT)

3) **Graduate Student Research Fellowships** (Page 24) – Fellowships to support graduate students (M.S. or Ph.D.) conducting research in the natural or social sciences in collaboration with Great Lakes agencies or non-governmental organizations for one or two years. Funding up to $60,000 total per fellowship. Note that MISG funding requires a 50% non-federal match – see below for more information.

   Page 25: Application Submission Information and Proposal Guidelines (Due: May 24, 5:00 PM EDT)

Information and Guidelines for Integrated Assessment Proposals

Michigan Sea Grant (MISG) will support Integrated Assessment (IA) projects that address important ecological and socioeconomic issues within the Great Lakes and that inform planning, policy, and natural resource management. Integrated Assessment researchers conduct a comprehensive analysis of relevant natural and social scientific information, working closely with partners and MISG Extension educators. IA projects place an emphasis on identifying and engaging with key community partners throughout the research process because this collaboration helps ensure the outputs and recommendations are usable and appropriate. Ultimately, the purpose of the assessment is to develop information, tools, and partnerships that will help decision-makers better address the focal issue.

MISG encourages proposals that 1) recruit and engage with students, staff, and collaborators from underrepresented racial and ethnic groups, individuals with disabilities, or educationally or economically disadvantaged backgrounds; and 2) proposals that benefit underserved communities in Michigan's coastal regions.

Up to $110,000 per year for two years ($220,000 total) is available for these projects. Principal Investigators are required to provide a 50% non-federal match to MISG funding for each year of the project (see Non-Federal Match section below for more information).

Each IA project will follow a unique trajectory depending on the type and scope of the focal issue; however, most projects address the following components:

- **Define and refine the policy-relevant question around which the assessment is to be performed.** This often begins with identification of an issue by managers, community groups, or policy-makers that has defied typical and routine action. The focal IA question must be refined with stakeholder input.

- **Clarify the history, causes, and consequences of the issue.** Projects should help clarify aspects of the issue that are uncertain and are impeding action. A description of current conditions and historical trends can enhance understanding and provide a foundation for further analyses. To address the issue effectively, decision-makers will need to better understand the probable causes and environmental, social, and economic consequences of the issue.

- **Identify and evaluate potential options.** Projects should identify potential options for addressing the issue, including policies, management actions, or new initiatives that are politically, socially, and economically feasible. Integrated Assessments help partners compare and evaluate a suite of options, rather than recommending a single approach. Integrated Assessment projects often integrate the expertise of social and natural scientists and could include economic analyses and cost-benefit assessments during discussions about potential policy options.

- **Develop tools and information that can guide decisions and help implement potential options.** If appropriate, researchers should provide an assessment of certainty levels associated with their findings to help policy makers interpret analyses or identify future research needs.

IA topics identified for the 2023 RFP reflect challenging issues identified by the MISG Advisory Board, Extension educators, state and federal agencies, and local communities. These example priority topics are outlined under the 2023 Integrated Assessment Research Topics section below.

Important Dates
- **March 15, 2023** – Letters of Intent (LOI) are due by 5 p.m. (EST). LOIs should be submitted through the application link provided on the [MISG website](#).
- **April 1 - May 22, 2023** – Questions about research RFP full proposals can be submitted to [MSG-RFPinfo@umich.edu](#) until 5 p.m. (EST). Responses will be posted on the MISG website as soon as possible after questions are received.
- **May 24, 2023** – Full research proposals are due by 5 p.m. (EST). Full proposals should be submitted through the [MISG website](#).
- **September 2023** – Notification of final proposal funding decisions.
- **February 1, 2024** – Funding for new projects begins, pending federal appropriations.
- **February 1, 2024 through January 31, 2026** – Timeline for projects approved for funding.

Eligibility

Qualified researchers at universities and colleges, including community and tribal colleges, located in Michigan are eligible to be Principal Investigators on MISG-funded projects. Lead scientists must have Principal Investigator standing at an accredited Michigan institution to be eligible for funding. However, project team members are not limited to researchers at these institutions. For example, project team members may include people from federal, state, and local agencies; non-governmental organizations and community groups; K-12 schools; and other organizations relevant to the project. Note that federal collaborators cannot receive any funding. MISG encourages eligible applicants of all races, ethnicities, national origins, gender identities, and ages to apply. Individuals currently serving as a member of the MISG Advisory Committee are ineligible to apply.

Questions and Informational Webinar

Questions related to Integrated Assessment proposals for this RFP, whether technical or content-related, should be submitted to MISG via email at [MSG-RFPinfo@umich.edu](#). Responses to questions will be posted on the Michigan Sea Grant Research [website](#). MISG will also host a webinar during early February 2023 (TBD) to introduce the RFP process and answer any questions.

2023 Integrated Assessment Priority Topics

Several topics have been identified as high priority for IA projects. These topics align with focus areas of the MISG 2024-2027 Strategic Plan. The specific priorities identified as 2023 Integrated Assessment topics were developed in partnership with federal, state, and local government agencies, tribal representatives, and the MISG Advisory Committee, Management Team, and Extension educators. Each topic identifies a MISG Extension education staff and a policy contact; consultation with these contacts is encouraged as teams develop full proposals. Research investigators are also invited to develop their own unique Integrated Assessment research proposal that fits within one of the 2024-2027 Strategic Plan Focus Areas for consideration. Additional material on Integrated Assessments, including a guide and example projects, can be found at the Michigan Sea Grant website.

Integrated Assessment Topic 1: *Local Bioassessments in the Detroit Area*

Policy contact: Mike Reed, Detroit Zoological Society (mreed@dzs.org)
MISG Extension contact: Erica Clites (clitese1@msu.edu)

MISG is interested in funding researchers to work with K-12 students to conduct bioassessments of the water around their area, present their results to the local neighborhood organization, and establish a plan of action to remove any beneficial use impairments. We also are interested in projects that include analyses of how restoration has affected or could affect the economics of the area (please also see Core Research Topic 1: Green Gentrification), how this and similar approaches affect long-term community support of projects, and developing a guidebook for best practices.

More broadly, this project also could address the following questions: What does environmental literacy look like when nature is perceived and valued differently, especially for underrepresented groups in Michigan? The COVID pandemic has changed people's interaction with the outdoors and nature. For example, young and non-male participation in fishing and hunting has increased, and the connection to the environment in urban communities may have changed as perceptions of natural areas shift from scary to safe (pers. comm. Randy Claramunt, Mike Reed). Have the science- and nature-based audiences become more diverse and why? Does connection to the environment in urban areas influence what children in these communities are interested in and may choose to study in school? The Great Lakes and humans in their watersheds are inextricably interconnected. How do connections to the natural spaces where youth live, learn, and play help them make informed and responsible decisions regarding the Great Lakes and their local environment? Does this change in connection to the environment influence how nature is valued? How do we continue to promote this reawakening of interest in our natural areas in a sustainable way while ensuring individuals feel engaged in the process? What does environmental literacy look like when nature and our education strategies are perceived differently?

Integrated Assessment Topic 2: *Barriers to Aquaculture in Michigan*

Policy contact: Ed Eisch, Michigan DNR (eische@michigan.gov)
MISG Extension contact: Lauren Jescovitch (jescovit@msu.edu) and Elliot Nelson (elliotne@msu.edu)

MISG is interested in funding research to assess barriers, costs, and benefits for aquaculture in Michigan. A range of technical, social, and economic issues present challenges to aquaculture operations, including the application of new technologies, financing, real and perceived potential to negatively affect receiving waters, marketing, fish health issues, and connections with processors and distributors. A variety of aquaculture systems, products, and business models are being used throughout the Great Lakes that could be applicable for development in Michigan. An Integrated Assessment would address the feasibility and barriers and identify a range of policy and management actions that would support an ecologically safe, efficient, and vibrant aquaculture industry in the state.

Researchers involved in funded projects with an aquaculture focus will be invited to join the Great Lakes Aquaculture Collaborative (GLAC), a working group coordinated by Minnesota Sea Grant and including the following Great Lakes Sea Grant programs: Illinois-Indiana, Lake Champlain, Michigan, New York, Ohio, and Wisconsin. GLAC will organize member-driven activities that may include quarterly meetings, workshops, conference special sessions, mini-conferences, 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.

Integrated Assessment Topic 3: Harmful Algal Blooms, Fish, and Human Health

Policy contact: Tammy Newcomb, Michigan Department of Natural Resources
(newcombt@michigan.gov)
MISG Extension contact: Erica Clites (clitese1@msu.edu)

Harmful algal blooms (HABs), specifically blue-green algae blooms that produce cyanotoxins (for example, the toxin microcystin), have the potential harm human and pet health through contact, ingestion of water, and inhalation of aerosol in water spray from motor boats. What is unknown is the level of risk to human health by ingesting fish that were exposed to cyanotoxins, especially the microcystin toxin, and what levels may be harmful to fish, if any. Examples of information that would be useful for human health risk evaluation include concentrations of cyanotoxins in fish muscle tissue and how concentrations vary by fish species, proximity, and severity of a HAB; waterbody characteristics related to HAB occurrence; etc. This uncertainty leaves gaps in knowledge for public health communication and for fisheries managers.

The IA goals would include: 1) To conduct a publishable literature review(s) on these topics by in-depth exploration of published literature and gray literature that may be housed in state or federal agencies (e.g.

DNRs and other state agencies) that have not yet reached publication. The review should come to some conclusions about the uncertainties associated with the issues and make recommendations for next steps for research to advance understanding within the knowledge gaps; and 2) To develop a heuristic or numeric model to evaluate circumstances (when and where, and temporal variation) fish may develop high levels of microcystin (and other cyanotoxins if data is available) in their tissue to be harmful to humans or harmful to fish. The outcome of this work would guide fisheries managers and public health officials for better risk assessments of environmental conditions that could develop in Lake Erie, Lake Huron, or inland waters that would be detrimental to human health or fisheries management.

Integrated Assessment Topic 4: Planning for Offshore Wind Development in the Great Lakes

Policy contact: Patrick Doran, The Nature Conservancy (pdoran@tnc.org)
MISG Extension contact: Tyler Augst (augsttyl@msu.edu)

Many advancements in data and tools to guide the siting, design, and operations of renewable energy development have occurred over the past decade. However, coastal and offshore areas, especially in the Great Lakes region, have lagged in the development of spatial planning tools to guide wind energy development. For inland areas, The Nature Conservancy (TNC) has developed a tool intended to inform siting of renewable energy. This effort shows great promise for expansion into coastal and offshore geographies. Additionally, Rhode Island Sea Grant successfully worked with numerous partners to plan and build the first offshore wind farm in the United States near Block Island. They followed an integrated process involving industry representatives, local regulators, and local partners such as commercial and recreational fishers (Rhode Island Ocean Special Area Management Plan). We are interested in supporting a project that helps to develop a similar plan for the Great Lakes. For example, this project could involve 1) working with a diverse network of partners to assess potential positive and negative impacts (ecological, economic) and demand for offshore or coastal wind development; and/or 2) creating and collating spatial data layers to inform wind development and partnering with TNC to incorporate data layers into siting tools. This project could also involve developing local case studies.

Integrated Assessment Topic 5: Approaches to Implementing the 30x30 Conservation Goal

Policy contact: Patrick Doran, The Nature Conservancy (pdoran@tnc.org)
MISG contact: Tyler Augst (augsttyl@msu.edu)

The United Nations Convention on Biodiversity recently released a new global biodiversity framework (often called 30x30) that calls for protecting 30% of land and sea area globally by 2030. Michigan has begun considering a similar statewide goal (e.g., House Resolution 0025). However, figuring out what that means for our coastal and open water areas remains ambiguous, especially in areas where a variety of uses (e.g., recreation, ports, housing/business development, etc.) intersect. Furthermore, the variety of management techniques that count towards 30x30 also remain ambiguous in coastal areas, especially in the Great Lakes where marine protected areas are designed differently than in marine systems. For a broad perspective on how 30x30 goals might best be implemented, please see this report. MISG seeks a

similar report for Michigan or the entire Great Lakes that focuses on our aquatic ecosystems and defines types of management that could contribute to 30x30, provides a current status assessment of contributions toward the 30x30 goal, and/or develops a design pathway based upon best practices.

Developing an Alternate Integrated Assessment Topic

Research teams can propose an Integrated Assessment project for a topic not described in this RFP. When doing so, provide the following additional information:
- Explain why the issue is a challenging problem, how it relates to MISG's Strategic Plan, and why it is of interest to resource management agencies at the local, state, regional, tribal, or federal level.
- Demonstrate that the topic is amenable to analysis based on existing data and information.
- Secure a letter of support from a policy sponsor who has the authority to make or influence management decisions relative to the problem identified. It is not necessary for sponsors to provide funding for the project, but they should be willing to work with the process for two or more years beginning during Winter 2023-2024.

Letter of Intent Guidelines

Note that PIs are **required** to submit a Letter of Intent (LOI) to be eligible to submit a full proposal. LOIs not received by the deadline of March 15, 2023 at 5:00 PM EDT, will not be considered. Investigators must submit their LOI as a PDF through our [website](#). LOIs will not be peer reviewed and evaluated, but rather will be used to identify the number and topics of full proposals expected to be received to help plan the full proposal review process (e.g., identifying appropriate panelists). The LOIs should include the components listed below.

1) Cover Page that includes:
   - Project title
   - Principal investigator (PI)
   - Title and position(s)
   - Institution
   - Postal mailing address
   - Email address
   - Telephone number
   - Co-investigators and institutions
   - Estimated total amount to be requested each year from MISG. This amount should include all direct and indirect costs such as supplies, travel, fringe benefits, student assistantships, etc., but does not need to be itemized until the full proposal is submitted.
   - Estimated total amount of non-federal match expected to be provided each year by the PI (see Non-Federal Match section below for additional information).

2) Brief Project Narrative (1-2 pages) that includes:

- ○ Background – a brief description of the problem, issue, or topic to be addressed, including a list of potential partners. This may include:
  - ■ Origin of the issue
  - ■ Why the issue is a complicated, challenging problem
  - ■ How the project engages with underserved communities
  - ■ Who is or should be involved
  - ■ Concise project objectives as they would appear in a full proposal

3) Project Approach (1-2 pages) – overview of how you intend to develop the project. It is not necessary to explain analytic methods in detail.
   - ○ Possible Solutions – options that could be considered, such as management actions, education, outreach programs, legislation, regulations, or other initiatives.
   - ○ Project Team and Collaborators – list of the project team and individual responsibilities. Outline steps taken to recruit a diverse team including students, staff, and co-PIs from underrepresented racial and ethnic groups, individuals with disabilities, or from disadvantaged backgrounds. Also, provide names and affiliations of all persons and institutions you intend to recruit as collaborators. Note that it is not necessary at this time to contact or secure a commitment from these individuals and organizations.
   - ○ Data and Data Sets – funds for Integrated Assessments should primarily support analysis and communication of existing data, rather than collection of new data. However, stakeholder surveys, focus groups, observations, and interviews are permitted if used to support project goals. Please identify any existing data sets you plan to use, their owners, and how you intend to access the data. You may also indicate your knowledge of closely related projects, briefly identifying those projects and their PIs. If you will generate new data, you will be required by NOAA regulations to submit a data management plan as part of your full proposal. The MISG data management plan can be found here.

4) Office of Management and Budget-Approved Demographics Question (optional). The National Sea Grant Office requests that all applicants answer a demographics question that will help us understand how well we engage underserved communities with our research program. Answering is optional, and all information provided will be kept separate from the proposal and not provided to reviewers. Note that this question is specifically asking about the PI. To answer this question, please use this form.

Non-Federal Match
The LOI may document the source of a 50% non-federal match for each year of the project; note that all full proposals will require this information. For example, if the PI requests $60,000 in a year, at least $30,000 in non-federal match must be provided during that year for a total of $90,000 put toward the project in that year. Potential sources of the match include foregone faculty and staff salary and fringe benefits (e.g., student mentoring, technical support of project); equipment; ship time; office or laboratory space; and third-party matching funds or gifts. Researchers are encouraged to work with their institution's

business office and MISG to ensure that proposed sources of matching funds follow the federal cost policy for eligible match prior to submitting a full proposal.

Full Proposal Guidelines

When developing topics for Integrated Assessment projects, MISG identified one or more policy, community, or management contacts (in addition to the Extension educator contacts) for each topic included in our RFP. Research teams are encouraged to discuss their focal issue and project approach with the contact(s) identified in the RFP. The contact(s) potentially support the proposal development process in several ways:

- Serve as a contact for the research teams submitting a full proposal, providing further explanation of the issue, the policy context, and the key players as needed.
- Offer feedback about the full proposal to ensure that the proposal is strong and targets the needs of the state or area.
- Help the research team engage partners and identify additional resources that could support the project.
- Provide guidance about how to best package and share the project results.
- Serve as an advisor or collaborator for the research team during their project, attending project meetings as relevant, reviewing documents, and providing guidance. Some policy contacts (or their staff) become involved in the analytical or outreach components of the project.

Because the policy contact helped develop the topic descriptions in the RFP, conflict of interest guidelines prevent MISG funds for this project from supporting project activities in the policy contact's government unit or organization.

The collaborative process is an essential component of an Integrated Assessment. To identify or refine proposed outreach opportunities, research teams should discuss their focal issue and project approach with the Communications and Extension contact(s) noted under the RFP topic or those listed below. Michigan Sea Grant will seek expert review of the proposal's overall approach to outreach and partner engagement. The participation of partners, including local, tribal, and state decision makers, natural resource managers, community groups, and other intended users of the assessment, can improve the research team's understanding of the issue, ensure that the project is useful and relevant, and promote application and implementation. MISG encourages proposals that 1) recruit and engage with students, staff, and co-PIs from underrepresented racial and ethnic groups, individuals with disabilities, or educationally or economically disadvantaged backgrounds and 2) proposals that directly engage and benefit underserved communities in Michigan's coastal regions.

We encourage research teams to talk with MISG outreach staff and relevant state, tribal, and local government personnel:

- For an initial discussion of proposal and outreach needs, please contact Heather Triezenberg, Extension Program Leader, at vanden64@msu.edu
- To discuss communication ideas, please contact Elizabeth Striano, MISG Communication Program Leader, at estriano@umich.edu

Full Proposal Preparation

The proposal narrative should be a maximum of 10 pages, including elements 3-8 below. The title page, non-technical summary, list of potential peer reviewers, references, current and pending support, bios, budgets, and letters of support do not count toward the page limit. Please use 1-inch margins and 12-point Times New Roman font. See details below.

1) Cover Page that includes:
   ○ Project title
   ○ Principal investigator (PI)
   ○ Title and position(s)
   ○ Institution
   ○ Postal mailing address
   ○ Email address
   ○ Telephone number
   ○ Co-investigators and institutions
   ○ Non-technical summary: Provide a 200-word summary suitable for a general audience that describes the proposed IA and why it is important.

2) Peer Reviewers – at least three potential reviewers for the proposal from institutions other than those represented by the project team and outside the State of Michigan. Include name, institution, phone number, and email address. These reviewers will be included in the pool of experts that MISG will contact for reviews.

3) Problem Statement – Describe the issue your project will address, demonstrating an understanding of the context and underlying causes. Identify previous and ongoing attempts to address this problem, and the technical and non-technical barriers that hinder an effective response. Indicate the geographic focus of your assessment and the type of potential options that will be considered, e.g., management actions, legislation, regulations, education/outreach programs, or other initiatives.

4) Objectives – describe the objectives of this project and convey what you will attempt to accomplish with the project. Do not describe how you will conduct the assessment.

5) Project Approach – describe each stage of the project and how it links to the objectives. If your proposal relies on developing new methods, give the reviewers ample information about the starting point for those new methods and how they will evolve over the course of the project. Indicate how you will access or generate the needed data and information for the technical

analysis. Be sure to identify specific methods and tools (e.g., models, special analytical approaches, etc.) to be used. Make it clear how the proposed methods are appropriate and how they will succeed. What are the expected outcomes and deliverables? What is the project timeline?

6) Partner Engagement Process – a detailed overview of the partner or community engagement process. Research teams are encouraged to discuss their outreach plans with MISG's outreach specialists and the policy contact identified in the RFP. Questions to consider include:
    ○ What roles will partners or communities fill?
    ○ Who will be involved?
    ○ How will you determine that all the correct entities are engaged?
    ○ What specific methods will you use to engage partners or communities?
    ○ How will you maintain partner or community involvement?
    ○ How will the engagement process be integrated with technical aspects of the project?
    ○ How does the project engage with underserved communities?

7) Data and Data Sharing – funds for IA projects usually support analysis and communication of existing data rather than collection of new data. However, new data, including surveys, focus groups, observations, interviews, and model output, may be collected if essential to support the goals of the project. Please identify any existing data sets you plan to use, their sources, and how you intend to access the data. You may also indicate your knowledge of closely related projects, briefly identifying those projects and their PIs. Note that all proposal PIs will be required to fill out a MISG Data Management Plan form located here, as stipulated by NOAA regulations. IRB approval may also be needed from the PI's institution.

8) NEPA Environmental Compliance Questionnaire – all funded projects are required to complete the NEPA Environmental Compliance Questionnaire. This questionnaire is used by NOAA to collect information about proposed activities for NEPA and other environmental compliance requirements associated with the proposed project. All questions must be addressed; if a question is not applicable to your proposed activity, please explain why the requested information is not relevant. The PI must complete this form located here. Additional guidance can be provided upon request if needed.

9) Project Timeline – a timeline of the project stages, including the partner engagement process. Identify project tasks, team leader, and support for each element.

10) Overview of IA Team – how the PI's previous accomplishments are relevant both to leading a multidisciplinary team and to this specific project. Indicate why the IA team is appropriate for this project and whether individuals, sub-units or the entire team have worked (together or separately) on similar projects. Specify the roles and responsibilities of each team member, including who will be involved in day-to-day project activities. Identify steps taken to recruit a

diverse team including students, staff, and co-PIs from underrepresented racial and ethnic groups, individuals with disabilities, or from disadvantaged backgrounds.

11) References – information on those cited in the proposal body.

12) Qualifications – curriculum vitae or bios of PI and co-PIs. Each CV should be no more than two pages and should include relevant publications.

13) Ongoing Support – current and pending support of principal investigator and co-investigators. Indicate if any projects are complementary to the proposed project.

14) Supporting Documentation – at least one letter of endorsement from a representative of the appropriate management or policy agency and/or end-user. Additional letters indicating partner willingness to participate and contribute are valuable.

15) NOAA Budget Form – a detailed budget and budget justification using the 90-4 form available on the proposal submission web page. The Excel-based form includes tabs for annual expenses, a summary of expenses, and a budget justification. Submit the budget as a separate Excel file when submitting your application. The 90-4 budget form can be found here.

16) Office of Management and Budget-approved Demographics Question (optional) – National Sea Grant Office requests that all applicants answer a demographics question that will help us understand how well we engage underserved communities with our research program. Answering is optional, and all information provided will be kept separate from the proposal and not provided to reviewers. Note that this question is specifically asking about the PI and that we are asking applicants to answer this question at both the LOI and full proposal submission stages. To answer this question, please use this form.

Proposal Evaluation Criteria

Proposals must comply with all submission instructions and proposal guidelines to be considered for funding, and PIs must have submitted a LOI. Each compliant, full proposal will be peer-reviewed in writing by three experts in the field of the proposed project from outside of Michigan, then discussed by a diverse review panel of experts. The panel might include one of the peer review writers. Peer reviewers will provide both written comments and a proposal rating using the criteria below.

All written peer reviews will be provided to the review panel, which will review the proposals and provide advice on funding priorities to the MISG management team. Review panelists will read all of the proposals (or a subset of proposals if too many) and each reviewer will be prepared to lead a panel discussion of one or more proposals depending on the total number of proposals being reviewed. The panelists will discuss each proposal, evaluate the relevance of the project to the MISG 2024-2027 Strategic Plan and research goals, and assess if the project is fundable. The outcome of the panel review will be a final score for the project, an assessment of the fundability, and funding priority

recommendations. Funding decisions are made by the MISG Management Team and incorporate all reviews and rankings as well as availability of funding, prior award performance of applicants, balance across institutions, focus areas, applicant diversity, and programmatic needs, objectives, and priorities. As identified above, projects are encouraged that will benefit underserved communities and/or recruit team members from underrepresented racial and ethnic groups or educationally or economically disadvantaged backgrounds, and projects that address the priority topics identified in the RFP. All recommendations must be approved by the NOAA National Sea Grant Office prior to a research grant being awarded.

Applicants should directly and explicitly address the following criteria within their proposal. Each submittal will be rated under a point system with a total of 100 points possible. Applicants will be evaluated based on the quality and extent to which they address the criteria; failure to provide applicable information in the proposal will affect the score.

1) Problem Statement – 5 points
   To what extent does the proposal explain the context, underlying issues, and potential options related to the focal issue?

2) Project Approach – 30 points
   ○ Technical Aspects – 15 points
     How well does the proposal explain the data sources and analytical methods involved in the technical aspects of the assessment?
   ○ Collaborative Process – 15 points
     To what extent does the list of potential decision-makers, intended users, and relevant partners reflect a holistic understanding of the defined problem? To what extent does the proposal describe appropriate methods for collaboration related to each stage of the project?

3) Roles, Responsibilities, and Qualifications – 20 points
   To what extent do the PI and project team members possess the skills, experience, and qualifications to execute the proposed activities? How suitable is the PI to lead a multidisciplinary assessment process, and will they be involved in day-to-day project activities? To what extent have individuals or the team addressed similar issues or taken a similar approach to addressing natural resource problems? How well defined are roles within the team? Does the team include members from underrepresented racial and ethnic groups or economically or educationally disadvantaged backgrounds?

4) Synergy – 15 points
   To what extent will the research team leverage complementary projects, existing data sources, and the time and support of partners or government units? Does the proposal include letters of support demonstrating significant interest from partners or collaborators?

5) Feasibility – 30 points

- ○ Practicality – 15 points
  How feasible is the approach given the available data, expertise of the team, and proposed methods? How realistic is the timeline in terms of completing the proposed work and activities? Is the budget appropriate for the work proposed?
- ○ Potential Impact – 15 points
  To what extent will the project address the technical and non-technical barriers to effective resolution of the issue? How likely is the project to influence policy, planning, natural resource management, or other types of decision-making? Does this research benefit underserved communities?

Information and Guidelines for Core Research Proposals

MISG is accepting proposals for Core Research projects for the 2024-2026 funding cycle. University-based researchers are encouraged to submit research projects that fulfill critical research needs for the Great Lakes and its coastal ecosystems and communities, can be translated to management, policy, or conservation application and decision-making, and fit within the focus areas of the 2024-2027 Michigan Sea Grant Strategic Plan. MISG seeks to bring together innovative, diverse research teams from Michigan universities and, where possible, leverage active research programs conducted by federal and state agencies. MISG encourages proposals that recruit and engage with students and staff from underrepresented racial and ethnic groups, individuals with disabilities, or educationally or economically disadvantaged backgrounds. The projects will run for two years, and the maximum annual research project budget is $110,000 per year, for a project total of $220,000, including indirect costs. The proposal is also required to provide non-federal matching funds provided by the Principal Investigator of at least 50% of the amount requested from MISG (see more information in Non-Federal Match section below).

For the 2023 RFP, MISG has identified the following priority topics, however, additional research topics that align with the goals of the 2024-2027 Strategic Plan will be accepted:

Core Research Topic 1: *Green Gentrification*

Sometimes, restoration or creation of parks and greenways can lead to inequitable outcomes for, and even displacement of, a neighborhood's residents because of unintended consequences such as increasing housing prices. MISG seeks proposals that analyze this phenomenon in Michigan and identify possible ways to reduce the costs while maintaining the benefits of green space development. These projects could take the form of socioeconomic analyses of completed GLRI and other restoration activities, forward-looking planning that takes a social justice and equity perspective in green space development, or other approaches that lead to improved decision-making and processes.

Core Research Topic 2: *Evaluating Social, Physical and Ecological Aspects of Shorezone Restoration Areas in the St. Clair-Detroit Rivers System*

We are interested in supporting an interdisciplinary social and ecological science research program to assess new and old restored shorezone areas in the St. Clair-Detroit Rivers system (e.g., McDonald et al. 2014, Francis et al. 2014, Fischer et al. 2018, Hilling et al. 2021). Key questions to address could include: who uses these areas and why/how; how access for fishing, leisure, and other recreation is accommodating the public; what the limitations are for access and multi-purpose use; how components of the physical habitat are maturing; and how the ecological functions of habitats are changing through time. Please contact Ed Roseman, USGS (eroseman@usgs.gov) for more information on project sites and available data.

Core Research Topic 3: Recreational Catch-and-Release Mortality

Sitar et al. 2017 found higher than expected post-release mortality in lake trout caught in Lakes Superior and Huron under some conditions. A more complete understanding of the factors influencing post-release mortality among the major recreational species caught in Michigan's Great Lakes could improve management of these species and support recommendations for angler education. We are interested in proposals that compare post-release mortality among major sportfishes across a range of likely environmental conditions.

Core Research Topic 4: Commercial Bycatch

A better understanding of bycatch mortality in Michigan's commercial fishing industry may support improved management of target and non-target populations and development of strategies to reduce by-catch. We seek proposals that expand on previous studies of bycatch in Michigan's Great Lakes (e.g., MacMillan and Roth 2012); for example, by analyzing the whitefish and lake trout/walleye ratio or target/non-target ratios in other important commercial fisheries.

Core Research Topic 5: Strategies to Improve Yellow Perch Recruitment past the YOY Stage

MISG is interested in proposals to better understand sources of mortality (e.g., alewife predation) in post-age 1 yellow perch and to identify possible management strategies to support higher survival rates. These projects might involve experimental work, modeling, or a combination of the two. This project might build on previous and ongoing research by Wisconsin DNR scientists on this issue.

Core Research Topic 6: Winter Limnology

In-lake processes have long been understudied during the winter in the Great Lakes, but have recently received increasing attention (e.g., Ozersky et al. 2021; 2022 Winter Grab). We seek to build on these initial efforts through proposals to better understand ecological, biogeochemical, and physical patterns and processes during winter. In particular, we look to support projects that study multiple sites and sample multiple times to better understand how variable the ecosystem is over the winter, what drives variation, and what the impacts are on following spring and summer. These projects might include remote sensing and/or modeling.

Important Dates

- **March 15, 2023** – Letters of Intent (LOI) are due by 5 p.m. (EST). LOIs should be submitted through the MISG website: https://www.michiganseagrant.org/research/2023-request-for-proposals/
- **May 22, 2023** – Questions about the RFP can be submitted to MSG-RFPinfo@umich.edu until 5 p.m. (EST). Responses will be posted on the MISG website as soon as possible after questions are received.
- **May 24, 2023** – Full research proposals are due by 5 p.m. (EST). Full proposals should be submitted through the MISG website: https://www.michiganseagrant.org/research/2023-request-for-proposals/
- **September 2023** – Notification of final proposal funding decisions.
- **February 1, 2024** – Funding for new projects begins, pending federal appropriations.
- **February 1, 2024 through January 31, 2026** – Timeline for projects approved for funding.

Eligibility

Qualified researchers at universities and colleges, including community and tribal colleges, located in Michigan are eligible to be Principal Investigators on MISG-funded projects. Lead scientists must have Principal Investigator standing at an accredited Michigan institution to be eligible for funding. However, project team members are not limited to researchers at these organizations. For example, project team members may include people from federal, state, and local agencies; non-governmental organizations and community groups; K-12 schools; and other organizations relevant to the project. Note that federal collaborators are ineligible to receive any funding. MISG encourages eligible applicants of all races, ethnicities, national origins, gender identities, and ages to apply. Individuals currently serving as a member of the MISG Advisory Committee are ineligible to apply.

Questions and Informational Webinar

Questions related to this RFP, whether technical or content-related, should be submitted to the Michigan Sea Grant Research Program (MSG-RFPinfo@umich.edu) by the respective deadlines listed above. Responses to questions will be posted on the MISG Research website.

MISG will also host a webinar during early February (TBD) to introduce the RFP process and answer any questions. Details will be provided on our website and social media.

Letter of Intent Guidelines

Note that PIs are **<u>required</u>** to submit a Letter of Intent (LOI) to be eligible to submit a full proposal. LOIs not received by the deadline (March 15, 2023) will not be considered. Investigators must submit their LOI as a PDF through our website. LOIs will not be peer reviewed and evaluated, but rather will be used to identify the number and topics of full proposals expected to be received to help plan the full proposal

review process and begin identifying appropriate reviewers. The LOI should include the items listed below.

1) Cover Page that includes:
    ○ Project title
    ○ Principal investigator (PI)
    ○ Title and position(s)
    ○ Institution
    ○ Postal mailing address
    ○ Email address
    ○ Telephone number
    ○ Co-investigators and institutions
    ○ Estimated total amount to be requested each year from MISG. This amount should include all direct and indirect costs such as supplies, travel, fringe benefits, student assistantships, etc., but does not need to be itemized until the full proposal is submitted.
    ○ Estimated total amount of non-federal match expected to be provided each year by the PI (see Non-Federal Match section below for additional information)

2) A brief (1-2 pages) Project Narrative that includes:
    ○ Statement of Research Need – how your research would advance the body of knowledge or address an important problem for Michigan's Great Lakes. Does the project benefit underserved communities in Michigan's coastal regions?
    ○ Project Goals and Objectives – what this project will accomplish, including the objectives or hypotheses of your research.
    ○ Research Methods – techniques you plan to use to achieve your objectives.
    ○ Research Relevance and Dissemination Plan – summary of the relevance of the project to Michigan's Great Lakes and the Michigan Sea Grant 2024-2027 Strategic Plan and include any other state, federal, or private organizations involved in this proposal, including level of participation and funding. Note that it is not necessary to contact or secure a commitment from these individuals and organizations at the LOI stage. Also provide a brief description of how you will share your research findings with relevant partners.
    ○ Project Team and Collaborators – project team and individual responsibilities. Identify steps taken to recruit a diverse team including students, staff, and co-PIs from underrepresented racial and ethnic groups, individuals with disabilities, or from disadvantaged backgrounds.
    ○ Data Management Plan – NOAA regulations require a data management plan to make data available within two years of award completion. If you will generate new data, you will be required to submit a data management plan as part of your final proposal. The MISG data management plan can be found here.

3) Office of Management and Budget-approved Demographics Question (optional). The National Sea Grant Office requests that all applicants answer a demographics question that will help us understand how well we engage underserved communities with our research program. Answering is optional, and all information provided will be kept separate from the proposal and not provided to reviewers. Note that this question is specifically asking about the PI. To answer this question, please use this [form](#).

Non-Federal Match

LOIs may document the source of a 50% non-federal match for each year of the project; note that all full proposals will require this information. For example, if the PI requests $60,000 in a year, at least $30,000 in non-federal match must be provided during that year for a total of $90,000 put toward the project in that year. Potential sources of the match include foregone faculty and staff salary and fringe benefits (e.g., student mentoring, technical support of project); foregone university indirect costs; equipment; ship time; office or laboratory space; and third-party matching funds or gifts. Note that researchers are encouraged to work with their institution's business office and MISG to ensure that proposed sources of matching funds follow the federal cost policy for eligible match prior to submitting a full proposal.

Full Proposal Guidelines

The proposal narrative should be a maximum of 10 pages, including elements 3-8 below. The title page, non-technical summary, list of potential peer reviewers, references, current and pending support, bios, budgets, and letters of support do not count toward the page limit. Please use 1-inch margins and 12-point Times New Roman font. See details below.

1) Cover Page that includes:
   - Project title
   - Principal investigator (PI)
   - Title and position(s)
   - Institution
   - Postal mailing address
   - Email address
   - Telephone number
   - Co-investigators and institutions
   - Non-technical summary: Provide a 200-word summary suitable for a general audience that describes the proposed core research and why it is important.

2) Peer Reviewers – at least three potential reviewers for the proposal from institutions other than those represented by the project team and outside of the State of Michigan. Include name, institution, phone number, and e-mail address. These reviewers will be included in the pool of experts that MISG will contact for reviews.

3) Introduction – a statement of the research problem or question that identifies the purpose and significance of the research. Include background info that will:
   ○ Clarify the research question.
   ○ Identify what research has been done, what is needed, and how those relate to the proposed research.
   ○ Explain how your research addresses current issues identified by state, regional, tribal, or federal agencies for Michigan's Great Lakes as well as priorities outlined in the Michigan Sea Grant 2024-2027 Strategic Plan.

4) Project Description (including Methods or Approach) – a comprehensive description of the research objectives and the research design/methods proposed to accomplish those objectives.
   ○ If applicable, identify the hypothesis tested for each objective.
   ○ Methodology – a detailed technical overview of your proposed research design and methods. If your proposal relies on developing new methods, give the reviewers ample information about the starting point for those new methods and how they will evolve over the course of the project. Be sure to identify specific methods and tools (e.g., models, special analytical approaches, etc.) to be used. Make it clear how the proposed methods are appropriate for each objective and how they will succeed.
   ○ What are the expected outcomes and outputs?
   ○ Applicability – how your research is relevant and will contribute to the body of knowledge in the topic area. Identify ways that your project benefits underserved communities, if applicable.

5) Dissemination Plan – plan to ensure that your research findings are communicated to appropriate end-users or partners. These activities should go beyond conference presentations and peer-reviewed publications, although those are also important. Depending on the project, regular meetings with partners, organized workshops, and similar in-depth interactions may be productive. Working with an Extension educator can be a great way to connect with relevant partners, but is not required. Note that some funding may need to be allocated to these activities.

6) Project Timeline – a timeline of the research stages by project quarter that includes project tasks, team leader, and support for each element.

7) Overview of Research Team – summary of the research team's previous accomplishments and their relevance to this specific project. Indicate why the research team is appropriate for this project and whether individuals, sub-units, or the entire team have worked (together or separately) on similar projects. Specify the roles and responsibilities of each team member, including who will be involved in day-to-day project activities. Identify steps taken to recruit a

diverse team including students, staff, and co-PIs from underrepresented racial and ethnic groups, individuals with disabilities, or from disadvantaged backgrounds.

8) References – provide those cited in the proposal body.

9) Qualifications – curriculum vitae of the PI and co-PIs. Each CV should be no more than two pages and should include relevant publications.

10) Ongoing Support – current and pending support of the PI and co-PIs. Indicate if any of those projects are complementary to the proposed project.

11) Data Sharing Plan – If your project produces environmental data, it must conform to NOAA's Data Sharing Directive for Grants, Cooperative Agreements, and Contracts. Proposals submitted in response to this RFP must include a Data Management Plan describing how these requirements will be satisfied. To comply with this requirement, the PI must complete the Sea Grant Data Sharing form located here and include information for all applicable datasets related to your project(s) explaining how the data and metadata will be provided. The NOAA data sharing policy requires:
    ○ Environmental data generated by a grant project must be made available after a reasonable period of exclusive use.
    ○ Grant application must describe the plan to make the data available (Principal Investigators are expected to execute the plan). Even if your proposed activities do not generate any environmental data, you still must address the requirement. For example, include the statement: "This project will not generate any environmental data."

12) NEPA Environmental Compliance Questionnaire – All funded projects are required to complete the NEPA Environmental Compliance Questionnaire. This questionnaire is used by NOAA to collect information about proposed activities for NEPA and other environmental compliance requirements associated with the proposed project. All questions must be addressed - if the question is not applicable to your proposed activity, please explain why the requested information is not relevant. The PI must complete this form located here. Additional guidance can be provided upon request.

13) Supporting Documentation – Letters of support are optional; if included, please submit no more than three letters.

14) NOAA Budget Form – a detailed budget and budget justification using the 90-4 form available on the proposal submission web page. The Excel-based form includes tabs for annual expenses, a summary of expenses, and a budget justification. Submit the budget as a separate Excel file when submitting your application. The 90-4 budget form can be found here.

15) Office of Management and Budget-approved Demographics Question (optional) – National Sea Grant Office requests that all applicants answer a demographics question that will help us understand how well we engage underserved communities with our research program. Answering is optional, and all information provided will be kept separate from the proposal and not provided to reviewers. Note that this question is specifically asking about the PI and that we are asking applicants to answer this question at both the LOI and full proposal submission stages. To answer this question, please use this form.

Proposal Evaluation Criteria

Proposals must comply with all submission instructions and proposal guidelines in order to be considered for funding, and PIs must have submitted a LOI. Each compliant, full proposal will be peer-reviewed in writing by three experts in the field of the proposed project from outside of Michigan, then discussed by a review panel of experts. The panel might include one of the peer review writers. Peer reviewers will provide both written comments and a proposal rating using the criteria below.

All written peer reviews will be provided to the review panel, which will review the proposals and provide advice on funding priorities to the MISG management team. Review panelists will read all of the proposals and each reviewer will be prepared to lead a panel discussion of one or more proposals depending on the total number of proposals being reviewed. The panelists will discuss each proposal, evaluate the relevance of the project to the MISG 2024-2027 Strategic Plan and research goals, and assess if the project is fundable. The outcome of the panel review will be a final score for each project, an assessment of the fundability, and funding priority recommendations. Funding decisions are made by the MISG Management Team and incorporate all reviews and rankings as well as availability of funding, prior award performance of applicants, balance across institutions, focus areas, applicant diversity, and programmatic needs, objectives, and priorities. All recommendations must be approved by NOAA National Sea Grant prior to a research grant being awarded.

Applicants should directly and explicitly address the following criteria within their proposal. Each submittal will be rated under a point system with a total of 100 points possible. Applicants will be evaluated based on the quality and extent to which they address the criteria; failure to provide applicable information in the proposal will affect the score.

1) Team qualifications – 10 points
   Do the researchers demonstrate adequate awareness of significant ongoing or previous work? Does the research team have the skills and background needed to perform the work?

2) Diversity, Equity, Inclusion, Justice, and Accessibility – 10 points
   As identified above, projects are encouraged that will benefit underserved communities and/or recruit team members from underrepresented racial and ethnic groups or educationally or economically disadvantaged backgrounds. Does the team include (or have clear plans to recruit) members (e.g., students, staff, co-PIs) from underrepresented racial and ethnic groups or

economically or educationally disadvantaged backgrounds? Or does this research benefit underserved communities?

3) Project Design – 40 points

Are the project objectives clearly stated? Does the study logically relate to the stated objectives? Are the methods appropriate and feasible? Are they innovative? Will the data be analyzed in an appropriate way? Is the proposed time frame adequate to complete the project? Are facilities, management structure, and partnership arrangements sufficient to produce expected impacts? Are appropriate levels of program resources (FTEs and budget) dedicated to achieve expected impacts? Is the budget reasonable?

4) Relevance and Impacts of Proposed Research – 20 points

Does this project address one of the identified priority topics? Is the specific issue to be addressed a valid and significant one? Does it bring together innovative teams from Michigan and, where possible, leverage active programs conducted by federal, state, or local agencies, NGOs, or other relevant partners? Does the project fulfill critical needs and priorities described in the 2024-2027 Michigan Sea Grant Strategic Plan? Will the data generated by this project significantly advance the scientific body of knowledge or improve our understanding of social systems?

5) Partner or End-User Engagement – 10 points

Do the researchers clearly identify potential users of the information being developed in the project? Are the investigators in contact with these end-users or partners during project development and/or are the pathways from this project to application of its results clearly described?

6) Dissemination Plan – 10 points

Do the researchers describe effective ways to communicate results of the project, and do these plans go beyond typical conference presentations and peer-reviewed publications?

Information and Guidelines for Graduate Student Research Fellowship Proposals

Michigan Sea Grant (MISG) is offering one- or two-year fellowships from 2024–2026 for graduate students enrolled full-time at Michigan universities and colleges who are interested in natural or social science research relevant to current Great Lakes environmental issues. This fellowship will provide support for a student up to $60,000 total per fellowship that could include tuition, stipend, travel, and research expenses. Funds can be spent at any time during the two-year funding period. Note that PIs are required to provide a 50% non-federal match to MISG funding for each year of the project (see Non-Federal Match section below for more information).

Research fellows will work with an agency or non-governmental organization (NGO) sponsor and faculty member at an accredited institution in Michigan to conduct a research project that supports or expands existing Great Lakes research. Applicants should submit a brief proposal for their research as part of the selection process and are expected to have letters of support from agency/NGO and faculty sponsors. Interactions with agency/NGO and MISG professionals are expected to enhance academic and professional development opportunities.

Eligibility
Graduate Student Research Fellowships will support a student enrolled in or admitted to a full-time graduate or professional degree program at an accredited Michigan university, with support of a faculty member from that institution. Students may be working toward a degree in any discipline related to Great Lakes coastal or environmental issues. Students also must identify a sponsor from a Michigan federal, state, or local agency, office, or non-governmental organization.

Non-Federal Match
All full proposals require a 50% non-federal match. Applicants are required to document the source of the project match within the full proposal. Fellowship match may be identified through the fellow's home institution with assistance of the advising faculty, or through match from cooperating agencies or partners involved in the project. Potential sources of the match include foregone faculty and staff salary and fringe benefits (e.g., student mentoring, technical support of project); equipment; ship time; office or laboratory space; and third-party matching funds or gifts. Note that researchers are encouraged to work with their institution's business office and MISG to ensure that proposed sources of matching funds follow the federal cost policy for eligible match prior to submitting a full proposal.

Online Interview
Applicants selected as finalists will be invited to an online interview with the review panel. Each interviewee will be asked the same set of questions about the interviewee's background, research interests, and career goals. Interviews will last approximately 30 minutes. While the interviews are not scored they are considered by the MISG management team when making final award selections after the panel review.

Important Dates

- **May 22, 2023** – Questions about Graduate Student Research Fellowship proposals can be submitted to MSG-RFPinfo@umich.edu until 5 p.m. (EST). Responses will be posted on the MISG website as soon as possible after questions are received.
- **May 24, 2023** – Full fellowship proposals are due by 5 p.m. (EST). Full proposals should be submitted through the MISG website.
- **July-August 2023** – Online interviews of finalists.
- **September 2023** – Notification of final proposal funding decisions.
- **February 1, 2024** – Funding for new projects begins, pending federal appropriations.
- **February 1, 2024, through January 31, 2026** – Timeline for projects approved for funding.

Questions and Informational Webinar

Questions related to the Graduate Student Research Fellowship should be submitted to the Michigan Sea Grant Research Program (MSG-RFPinfo@umich.edu) by the deadline listed above. Responses will be posted on the Michigan Sea Grant RFP webpage. MISG also will host a webinar during early February (TBD) to introduce the Graduate Research Fellowship RFP process and answer any questions.

Application Submission Information

Fellowship applicants should complete the Fellowship Application Submission Form (available here) at least two weeks before the deadline. After applicants complete the online application form, the academic advisor and agency/NGO sponsor will receive a system-generated request for the letter of recommendation with instructions on how to log in and upload the letter as a PDF.

In addition, after completing the online application and clicking "Save", applicants will receive an email with a Fellowship Code that is required for logging in to complete the online submission. Budget Form 90-4, which outlines the proposed budget, should be included as part of the online application and is available here.

Please allow sufficient time for all application materials to be received before the deadline; late applications will not be accepted.

Full Proposal Guidelines

1) Project narrative – 1-2 pages describing the goals, approach (including theoretical background if applicable), methods, and expected outcomes, as well as how this research is relevant to the sponsor and how findings will be communicated.
2) Career goals statement – 1 page maximum describing your career objectives and how the proposed research project will help to support those objectives.
3) Undergraduate and graduate transcripts – unofficial copies are acceptable.

4) Letters of recommendation – one from your primary academic advisor and one from an agency/NGO sponsor.

5) Budget – outline of proposed expenses (e.g., tuition, stipend, research expenses, travel, supplies, indirect costs, etc.) up to $60,000 total and a timeline of up to 2 years. The budget should also indicate the source and allocation of the 50% non-federal match (e.g., $30,000 non-federal match for a $60,000 funding request from MISG for a total of $90,000 for the project).
   ○ Use Budget Form 90-4 (XLS) to develop the proposed budget. Each year must be separately detailed in the budget spreadsheet, including budget justification, with an overall project budget summary included, as well.

6) Commitment Letter confirming match requirement from university/institution.

7) Curriculum Vitae – 2 pages maximum and must include contact information for the graduate student applicant and primary advisor(s).

8) Data Management – NOAA regulations require a data management plan to make data available within two years of award completion. If you will generate new data, then you will be required to submit a data management plan as part of your final proposal. The MISG data management plan can be found here.

9) NEPA Questionnaire – All research projects are required by NOAA under the National Environmental Protection Act to submit an abbreviated Environmental Compliance Questionnaire. The form can be found here, and MISG research staff are available to assist you with filling out the form.

10) Office of Management and Budget-approved Demographics Question (optional) – National Sea Grant Office requests that all applicants answer a demographics question that will help us understand how well we engage underserved communities with our research program. Answering is optional, and all information provided will be kept separate from the proposal and not provided to reviewers. Note that this question is specifically asking about the student. To answer this question, please use this form.

Please note that applications that do not meet the requirements specified above may be rejected without review.

Proposal Evaluation Criteria
Fellowship applications will be evaluated on the six criteria listed below:

1) Quality of Proposal and Integration with Agency/NGO Needs – 25 points
   Is the proposed project clearly described and the outcomes achievable? Does the proposed topic address a relevant agency/NGO/community concern or question?

2) Research and Career Goals of the Student – 25 points
   How does the proposed project fit in with the student's stated career aspirations? Will the proposed project benefit the student's stated research or career goals?

3) Academic Ability and Relevance – 10 points
   How does the student's academic history support the proposed topic? Does the student's educational background and experience lend itself to the successful execution of the proposed topic?

4) Communication Skills – 10 points
   How well can the student communicate with a variety of partner audiences, both technical and non-technical?

5) Support from Advisors – 20 points
   What kind of support will the student receive from faculty and relevant agency/NGO advisors?

6) Diversity, Equity, Inclusion, Justice, and Accessibility – 10 points
   Will this fellowship and project advance MISG's diversity goals, for example by engaging underserved communities or increasing representation in environmental fields?

Three external reviewers, possibly including representatives from Great Lakes agencies (state or federal), NGOs, and academia, will review all qualified Graduate Research Fellowships proposals. Members of the MISG Management Team and at least two of the external reviewers will interview fellowship applicants using Zoom in mid-to-late summer 2023. The MISG Management Team will make funding decisions based on external reviews and rankings, as well as the online interview, with consideration for availability of funding, prior award performance of applicants, balance across institutions, focus areas, and applicant diversity, as well as programmatic needs, objectives, and priorities. Notification of funding decisions will occur in September 2023, and fellowship research will be conducted within the 2-year period from February 1, 2024, through January 31, 2026.

About the Michigan Sea Grant Research Program

Michigan Sea Grant-supported projects address issues affecting the Great Lakes and Michigan's coastal areas, and include Integrated Assessments and basic research. The goals are to develop information, create tools, and build partnerships that will improve decision-making for particularly challenging coastal issues in the state and to fulfill critical research needs for the Great Lakes and coastal systems. For more information, please see: www.michiganseagrant.org/research

About Michigan Sea Grant

Michigan Sea Grant helps to foster economic growth and protect Michigan's coastal, Great Lakes resources through research, education and outreach. Please see www.michiganseagrant.org for more information.