



MICHIGAN SEA GRANT UNIVERSITY OF MICHIGAN + MICHIGAN STATE UNIVERSITY

2022 Michigan Sea Grant Undergraduate Environmental Internship Program

Michigan Sea Grant hosts a summer internship program that coordinates and funds undergraduate students from any accredited community college, college, or university in Michigan to work with private businesses, state and federal agencies, environmental non-profit organizations, or university faculty to plan or implement environmental stewardship in the Great Lakes. Through this internship program, undergraduate students have two options: 1) students may propose projects they are interested in working on related to Great Lakes stewardship with sponsor organizations that will provide guidance and support for their research projects; or 2) students may apply for a project that has been proposed by one of our partners identified under Section H below. These opportunities are new for the 2022 Internship and are limited in number. In addition, we acknowledge that the ongoing coronavirus pandemic presents many uncertainties regarding the type of work that can be accomplished in lab and field environments. If applying for one of the opportunities detailed below, please keep in mind how the pandemic may impact your proposed project activities and address how you plan to modify those activities, should that become necessary.

Michigan Sea Grant encourages applicants from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from economically or educationally disadvantaged backgrounds. Michigan Sea Grant is committed to diversity and multiculturalism through staff training and organizational development for fellows, interns, and employees to help them provide effective and inclusive programs for the diverse residents of Michigan's communities.

Award Information

Students will be compensated \$5,000 for two (2) months during the Summer of 2022 for at least 24-hours of work per week. A non-Federal match of \$2,500 per application is required from the sponsor organization. This match may be in the form of selected "in-kind" services, such as office space, mentorship, or additional funds from a specified institution, agency, industry, or non-federal program. The in-kind services could include travel and poster printing for interns to present research at MISG symposium in August 2022, should in-person meetings be allowed and advisable. Sponsors of the projects in Section H will provide the required match.

Applicants can also apply separately for travel funding (up to \$500) to directly support project work for situations where support is not provided by the host. Requests will be reviewed and approved by MISG and will be distributed as a reimbursement for itemized, approved expenses.

Eligible Applicants

Applicants should be enrolled undergraduate students at any level of study or recent graduates (May 2022) at accredited universities or colleges in Michigan. Preference will be given to students who plan to pursue a career in environmental science. Additionally, preference will be given to applicants who have created an internship with an organization outside of an academic setting, including a local, state, or federal agency or NGO.



A. Application and Submission Information

If proposing your own project for consideration, a complete set of application materials must include:

- 1) A statement with a description of the proposed project (maximum two-pages, double-spaced, Times New Roman, 12-point font)
 - The statement should address the following:
 - A short description of the proposed project and how it relates to Great Lakes stewardship
 - Experiences the candidate expects to receive from this training
 - A description of how the proposed project will benefit the sponsoring organization, community, and environment
 - A description of how the proposed project relates to the candidate's future career goals
 - A brief description of how the project activities can be modified should COVID-19 impact planned lab work, field work, outreach, etc.
- 2) One letter of support from the sponsor organization's internship supervisor, on the sponsor organization's letterhead.
 - The sponsor organization's letter should include the following:
 - Name of supervisor
 - Description of how the internship will be supervised
 - A description of how the proposed project will benefit the sponsoring organization and the intern
 - A statement about the intern's skills and leadership relevant to the proposed project
 - Cost Sharing or Matching Requirement - provide sources of the match and provide adequate documentation for in-kind match. Please note, match may be in the form of selected "in-kind" services, such as office space, mentorship, or additional funds from a specified institution, agency, industry, or non-federal program. No funds from federal entities can be used as match
- 3) Undergraduate transcripts – unofficial are acceptable
- 4) A current resume (one page, single-sided)

If applying for a project that has been submitted by one of our sponsors (see Section H below for additional details), a complete set of application materials must include the following:



- 1) A statement detailing the candidate's interest in the proposed project (maximum two-pages, double-spaced, Times New Roman, 12-point font)
 - The statement should address the following:
 - The project the candidate is applying for, including the partner's name
 - A brief description of why you are interested in this project
 - The candidate's relevant qualifications
 - Experiences the candidate expects to receive from this opportunity
 - A description of how the proposed project relates to the candidate's future career goals
- 2) One endorsement letter from either a professor or advisor of the candidate that is familiar with the candidate's qualifications
 - The letter of endorsement should include the following:
 - Name of professor or advisor
 - Description of how the professor/advisor knows the candidate
 - A statement about the candidate's skills and leadership that would be relevant to the project
- 3) Undergraduate transcripts – unofficial are acceptable
- 4) A current resume (one-page, single-sided)

B. Submission Dates and Times

Applicants must submit materials by **5:00 p.m. (EST) March 4, 2022** to the MISG Undergraduate Internship [submission portal](#). The application form can also be accessed from the [MISG Environmental Internship](#) web page. Applications received after the deadline will be rejected without further consideration. No e-mailed applications will be accepted.

C. Application Review Information

Evaluation Criteria - The evaluation criteria and weighting of the criteria are as follows:

- (1) The description of proposed project or statement of interest in project (40% total)
- (2) Letter of support or endorsement (40% total)
- (3) Submitted undergraduate transcript (10% total)
- (4) Current resume (10% total)

D. Internship Contacts

Questions about the application and submission requirements may be sent to msgfellowships@umich.edu. FAQs received will be posted on the MISG Environmental Internship page by February 12, 2022.



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E. Review and Selection Process

The Michigan Sea Grant Internship Committee will review each application based on the evaluation criteria listed in the previous section. Each committee member will score each application and application scores will be averaged and ranked by the committee. MISG will also share applications that target the proposed projects with the project sponsors to help identify applicants that best fit the goals of those projects. The top scoring applicants will be notified by March 23, 2022. Michigan Sea Grant may select up to 15 applications based on the evaluation criteria. This includes students that are selected for the pre-proposed projects submitted by our partners.

F. Anticipated Announcement and Award Dates

The Michigan Sea Grant Environmental Internship Program selection process will be completed by March 23, 2022. Awards are for two months (start date-end date) during the Summer of 2022 and cannot be extended or renewed.

G. Reporting

1) A final internship narrative report will be submitted to the MISG Internship Committee by August 31, 2022. A link will be sent out to each intern upon accepting the internship. This report must include project location, project goal and objectives, and information regarding project outcomes, contributions to the partners, and overall internship experience. Advisors will also be sent a final report to complete.

2) Interns will be expected to attend and present research at the MISG Internship Symposium in August on the University of Michigan Ann Arbor campus. Depending on the circumstances, virtual attendance may also be acceptable.

H. Project Ideas

Student proposed ideas: Students are encouraged to work with local communities, NGOs, agencies and their universities to identify environmental projects related to Great Lakes stewardship. For more information on previous internship projects, please visit our [Fellows and Interns page](#) on the MISG website. To discuss ideas for potential projects, please send an email to the MISG Internships team at msgfellowships@umich.edu.



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Partner Project #1 – Supporting Two Interns

Michigan Department of Natural Resources

Undergraduate interns could help with several active projects at MDNR, including

- Role of smallmouth bass in Lake Michigan reef communities (see below)
- Native fish and reef restoration (in collaboration with lots of other agencies and non-profits)
- Coregonid life history (could include everything from looking at lake whitefish diets to working on cisco acoustic telemetry data)
- Lake Michigan salmonid management (ecology, modeling, regulations, etc)
- Recreational fisheries (MDNR charter boat and creel programs)
- Commercial / tribal fisheries (in collaboration with our Tribal Coordination Unit)

Interested students should contact David Clapp (clappd@michigan.gov) for more details and to discuss which project would best fit their interests. A description of the smallmouth bass project is given below as an example of what types of activities an internship with MDNR might include.

Project Title: Role of smallmouth bass in Lake Michigan reef communities

Project Description: An intern working on this project would collaborate with MDNR Fisheries researchers to investigate the dynamics (abundance, movement, survival, reproduction) of smallmouth bass on and around northern Lake Michigan reefs, as well as how bass affect and are affected by other reef inhabitants (both native and exotic/invasive). Work would include assisting with tagging and movement studies, sampling smallmouth bass diets, and characterizing the other (non-bass) components of the reef community including fish, invertebrates, and habitat. The intern would have the option to stay at the Charlevoix Fisheries Research Station. In addition to field work, an intern would collaborate with project partners in laboratory studies, data analysis, presentations, and publications.

Partner Organizations: MDNR

Source of Match: MDNR will serve as the source of match. Match will be provided in the form of on-site housing, office use, equipment purchase, and mentorship.

Contact Information:

David Clapp, Research Station Manager, MDNR – Fisheries Division: clappd@michigan.gov



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Partner Project #2 – Supporting Two Interns



Organization Description: Herpetological Resource and Management (HRM) is dedicated to the conservation and best management of amphibians and reptiles throughout Michigan and the Great Lakes region. HRM administers the MI Herp Atlas (MIHA) and is active in education outreach engaging the public as citizen scientists through contributing observations to the MI Herp Atlas as well as providing tools and resources to restore and create habitat in their own backyards. At HRM we have created multiple technical resources including the Michigan Amphibian and Reptile Best Management manual and the Herp Habitat Assessment Tool which will be completed in 2022. It is for these projects that HRM is seeking two interns for the summer of 2021.

Project Objectives: One student will assist HRM staff with revisions to the second edition of Michigan Amphibian and Reptile Best Management Practices manual. This technical document HRM developed in 2014 has been an integral part of conservation and management of amphibians and reptiles in Michigan and used throughout the Great Lakes region and abroad. It has also served as an important resource for U.S. Fish and Wildlife Service guidelines for Eastern Massasauga Rattlesnake best management practices (BMPs). The student would help conduct literature reviews, write content, assist with layout and formatting, and graphics work; therefore, a background in landscape architecture and graphic design is desirable. The student would also assist in promoting the document and expanding the network of users across Michigan and the Great Lakes region.

The second student would focus on assisting with the Michigan Herp Atlas project. HRM is actively working on revising the MIHA website along with the HRM website to provide greater content and resources for educators, citizen scientists, and agencies charged with conservation and management of amphibians and reptiles. The student would help review observations on the website for correct identification, engage with the contributors, and help promote the MIHA and herpetofauna enthusiasm through public outreach via social media and other outlets available making a student's background in communication, civic engagement, and graphic design valuable. The student would also assist in developing web content for the newest edition of the HRM website working through their supervisor and our web technical team. Knowledge of native Michigan herpetofauna encouraged.



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Both students will be given the opportunity to participate in conducting surveys and help develop the students' overall skill in identification and understanding of herpetofauna in Michigan.

Project Implications: Since 2014, when the first edition of the Michigan Amphibian and Reptile Best Management Practices manual was published, HRM has participated in a variety of projects that have given light to novel and creative conservation strategies that have been found to be practical and effective. One of HRM's goals is to share these tested BMPs with the organizations, agencies, companies and individuals to minimize and enhance Michigan's natural resources for amphibians and reptiles.

The Herp Habitat Assessment Tool is an index of biotic integrity that HRM has been developing in partnership with Michigan Department of Environment, Great Lakes, and Energy over the last decade to aid Michigan's wetland regulators, managers, and resource professionals in determining the functional value of a given wetland utilizing amphibian and reptile community composition. Testing is an essential step in the production of this tool that will eventually assist federal, state, and local biologists, land managers, and resource professional to better evaluate landscapes for preservation and restoration.

HRM's works with all branches of government, private sector, nonprofit, and directly with citizen science. The MIHA acts to engage people outside the field of environmental science and biology in the collection of herpetofauna observations. The MIHA data is a critical resource

HRM Investment: It is the philosophy of HRM, that we as a company and mentors should provide a personalized experience for our interns. We believe training and providing tools for interns to grow and professionally develop is critical. We strive to provide meaningful tasks that relate to the career goals or strengths of our interns. We take the time to answer questions and teach the skills necessary for applied scientists to be successful in their careers. It is because of these beliefs that previous HRM interns have found success during and after their time with HRM. Students working with HRM will work directly with senior staff as mentors. HRM will use this mentorship as partial in-kind match, along with necessary field equipment and a workspace provided to complete the projects. Because field assessments and other miscellaneous projects will require higher computing power, a GIS workstation will be provided. HRM also provides interns \$500.00 stipend per month to offset expenses and travel costs.

Source of Match: HRM will provide match for these projects.

Contact Information:

David Mifsud, President – Herpetological Resource Management: dmifsud@herprman.com



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Partner Project #3 – Supporting Three Interns



Project Description: Intern(s) working on this project would have the opportunity to develop educational programming opportunities for students and visitors to the Detroit Zoo and partner locations. The Detroit Zoo’s Education Program aims to create good stewards for the environment at an early age, therefore interns will be directly involved with assisting in the creation of programming and outreach materials that will help foster a lifelong appreciation for the environment. This experience would involve hands-on curricula development, production of promotional and learning materials, and direct outreach in the parks. While most of this activity will take place within the Detroit Zoo, Belle Isle, and the surrounding park system, there may be an opportunity for some travel to other urban areas to work with partners and collaborators. The ultimate goal of this project is to demonstrate the environmental impacts our actions have, foster a sense of stewardship in our youth, and help develop an appreciation, value for, and understanding of nature.

Source of Match: The Detroit Zoological Society will serve as the source of match.

Contact Information:

Mike Reed, Curator of Education – Informal Programs, Detroit Zoological Society:
mreed@dzs.org