



**MICHIGAN SEA GRANT UNIVERSITY OF MICHIGAN + MICHIGAN STATE UNIVERSITY**

## **2025 Michigan Sea Grant Undergraduate Environmental Internship Program**

Application Deadline : Wednesday, January 31, 2025

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, local governments, state and federal agencies, and environmental non-profit organizations to plan or implement Great Lakes stewardship and research projects. Students can work with academic faculty if their project also involves strong partnership with an organization outside the school.

The application form can be found on our [website here](#).

**Students may develop their own project proposals in partnership with a host organization of their choosing, or they may work with one of our pre-identified sponsoring organizations** (see Sponsoring Organizations Projects starting on Page 5). All types of projects will receive equal consideration in the review process.

2025 Sponsoring Organizations:

- NOAA Thunder Bay National Marine Sanctuary
- Tip of the Mitt Watershed Council
- Chippewa Nature Center
- Huron River Watershed Council
- Six Rivers Land Conservancy
- West Michigan Environmental Action Council
- Friends of the St. Clair River
- Clinton River Watershed Council
- Consumers Energy

Some examples of potential host organizations include:

- State agencies, such Michigan Department of Environment, Great Lakes, and Energy (EGLE)
- Campus sustainability offices
- Parks and recreation departments
- Watershed or river protection groups
- Tribal natural resources departments
- Museums, libraries, or nature centers
- Environmental news outlets
- Academic departments focusing on urban planning, communications, education, biology, chemistry, geography, social science, economics, etc.

Michigan Sea Grant encourages applicants from underrepresented racial and ethnic groups, individuals with disabilities, and individuals from economically disadvantaged backgrounds. Michigan Sea Grant is committed to diversity, equity, and inclusion 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.

Michigan Sea Grant also participates in the National Sea Grant's Community Engaged Internship (CEI) program, which aims to broaden participation in coastal, ocean, and marine sciences to college students from under-resourced, underrepresented, and/or indigenous and tribal populations. These communities include groups that are historically marginalized in the sciences, including Black or African-American, American Indian or Alaska Native, Hispanic or Latino, female, first-generation college students, veterans, LGBTQ+, students with disabilities, and others who have overcome educational or economic disadvantages or other hardships.

**Eligible Michigan Sea Grant interns who identify as being from an underrepresented group or are working on a project that helps an underserved community can participate in the CEI program alongside their internship project.** The CEI program includes online professional development workshops in which students can develop skills such as presenting and academic writing, learn about other programs from Sea Grant and NOAA, and meet interns from other state Sea Grant programs.

Eligible students may indicate their interest in the CEI program in the career goals statement of their internship application, by providing details about how the Michigan Sea Grant internship would help them achieve their goals and increase diversity in the environmental world.

### **Compensation**

Students will be compensated \$9,000 over three months during the Summer of 2025 for full-time work of up to 40 hours per week; up to two days per month of excused time is allowed. Compensation will be provided to the student as a stipend paid out once a month during the summer. A non-Federal match of \$4,500 per intern is required from the partner organization. "Match" is a way for an organization to contribute their own resources alongside the funding coming from Michigan Sea Grant. This match may be in the form of selected in-kind services, such as office space, mentorship, travel, or additional funds from a specified institution, agency, industry, or non-federal program. Students and/or their partner organization are encouraged to work with their institution's business office and Michigan Sea Grant ([msgfellowships@umich.edu](mailto:msgfellowships@umich.edu)) to identify sources of matching funds and to ensure that they follow the federal cost policy for eligible match prior to submitting an application.

In addition, interns may apply for up to \$1,000 in additional funding for supplies or travel needed to execute their project. These additional funds would also require the 50% match. A justification for requested supplies/travel funds should be included within the application project narrative (see below). Requests will be reviewed and approved by Michigan Sea Grant and will be distributed as a reimbursement for itemized, approved expenses with receipt documentation.

### **Eligible Applicants**

Applicants should be enrolled undergraduate students at any level of study or recent graduates (May 2025) from any accredited university or college in Michigan. Preference will be given to students who plan to pursue a career in an environmental field.

## Application Guidelines

A complete set of application materials compiled into one PDF must include the following:

- 1) Project narrative written by the student: 1-2 pages describing the background, goals, activities, and expected outcomes of the project, travel fund requests, and how this project would help the host or sponsoring organization.
- 2) Statement about student's career goals: 1 page maximum describing the student's career goals and how the proposed project would help reach them.
- 3) One endorsement letter from either a professor or mentor of the student who is familiar with the student's qualifications. For students applying to work with one of the pre-identified sponsoring organizations, the student may submit a letter from a professor or mentor (optional) in addition to the letter of support from the host or sponsoring organization (required).

The letter of endorsement should include the following:

- Name of professor or mentor
- Description of how the professor or mentor knows the student
- A statement about the student's skills and leadership that would be relevant to the project
- A statement about how the student would benefit from the internship
- How the 50% match requirement will be met (if written by the sponsoring organization)

4) Undergraduate transcripts – unofficial are acceptable

5) A current resume or CV

The following forms may be needed for internships that are selected for funding. The forms do not need to be submitted with the application, but will need to be completed and approved before the start of the internship. Michigan Sea Grant will reach out to interns with more details in April to receive the completed forms back before the start of the internship. The forms can be found on [our website](#).

*Data Management Plan:* Some interns do research projects that generate new data, such as measurements, surveys, or model outputs. MISG's host organization, the National Oceanic and Atmospheric Administration (NOAA), requires new data to be made available to the public and other researchers. If a student's proposed project will generate new data, the applicant will need to submit a data management plan as part of the application package. For help preparing this plan, please contact Michigan Sea Grant ([msgfellowships@umich.edu](mailto:msgfellowships@umich.edu)). The MISG data management plan can be found on our website.

*NEPA Questionnaire:* Some projects might involve activities that affect the outside world, such as sampling a stream or planting a rain garden. The National Environmental Protection Act (NEPA) requires all projects connected to NOAA to submit an Environmental Compliance Questionnaire. This form is meant to make sure that any changes to the environment are done carefully and without causing unnecessary harm to habitats or nearby communities. The form can be found on our website and MISG research staff ([msgfellowships@umich.edu](mailto:msgfellowships@umich.edu)) are available to assist with filling out the form.

## Submission Dates and Times

Applicants must submit materials by 5:00 p.m. (EST) January 31, 2025 at the link on our [website](#). Applications received after the deadline will be rejected without further consideration.

## Questions

Questions about the application and submission requirements may be sent to [msgfellowships@umich.edu](mailto:msgfellowships@umich.edu). Please also check the [Internship FAQ](#) for answers to some common questions at the bottom of the internship page on our website.

## Application Review Information

After applications are submitted, Michigan Sea Grant will review all materials using the evaluation criteria below. Michigan Sea Grant will convene a third-party panel who will then choose the 2025 interns based on this review, with consideration for availability of funding, balance across institutions, focus areas, and applicant diversity, as well as programmatic needs, objectives, and priorities.

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

- Project narrative is clear and shows that student understands and is helping to lead the project; project is feasible and addresses relevant environmental issue (40% total)
- Career goal statement clearly describes student's interest in internship and how experience will be meaningful (40% total)
- Letter of support or endorsement clearly describes how student will benefit from internship (10% total)
- Undergraduate transcript, resume/CV, and letter of support show that student has taken relevant courses and has other relevant experience (10% total)

## Anticipated Timeline

The Michigan Sea Grant Environmental Internship Program selection process will be completed and decisions announced in March 2025. The funding will cover three months during the Summer of 2025 and cannot be extended or renewed. The internship will likely begin during mid-May and end by mid-August, although the exact start and end dates can be chosen by the student and their partner organization. Interns will be expected to attend and deliver a short presentation about their summer work at the MISG Internship Symposium in Ann Arbor on the campus of the University of Michigan in mid-August. Recordings of previous symposia can be found on our [website](#).

## Reporting

After the internship is complete, interns will need to submit final reports to MISG by August 31, 2025. 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.

## Sponsoring organizations

Students interested in working with one of our pre-identified sponsoring organizations should email the organization's contact below to discuss possible project areas. **Please make this contact as soon as possible** because opportunities with the sponsoring organizations may be limited. Students will then need to submit the application materials described above (project narrative, etc.). Note that students should work with a sponsoring organization to identify possible project areas and learn about available facilities, equipment, etc., but it is important that the student writes the project narrative. The sponsoring

organization will need to provide a letter of endorsement including how they plan to provide the needed 50% non-federal match.

- **NOAA Thunder Bay National Marine Sanctuary | Alpena, MI**

Stephanie Gandulla, Resource Protection Coordinator, [steph.gandulla@noaa.gov](mailto:steph.gandulla@noaa.gov)

Thunder Bay National Marine Sanctuary (TBNMS) encompasses 4,300 square miles of northwestern Lake Huron and was designated in 2000 to protect a collection of historically significant, well-preserved, accessible shipwrecks. TBNMS headquarters, located in Alpena, Michigan, encompass 20,000 square feet of interactive public exhibits, office and lab space, and marine research and technology accommodations. This facility is a central part of the community and offers a multitude of opportunities to become involved in protecting the Great Lakes and its rich history. In addition to discovering, monitoring, and documenting cultural resources, TBNMS is charged with developing partnerships with multi-disciplinary researchers and organizations to study Great Lakes ecology, including the effects of climate change. While also providing much-needed and timely physical data, this project aligns well with such management efforts and contributes to the continued development of a comprehensive sanctuary research program.

An intern working on this project would collaborate with TBNMS and NOAA Great Lakes Environmental Research Lab (GLERL) researchers to support a dedicated study of freshwater acidification within TBNMS. The selected intern will facilitate water sample collections from research vessels and the outreach vessel, *Lady Michigan*. They will also be responsible for the development, production, and dissemination of resulting outreach products, including live, public interpretation aboard the *Lady Michigan* and in the sanctuary visitor center.

This project will establish a baseline data set in Lake Huron related to acidification, providing key high-frequency data to improve the scientific understanding of the system. In addition, we will be able to provide essential data and interpretation to stakeholders and inform the public of on-going threats to the Great Lakes ecosystem. Building upon a monitoring network launched in 2022, researchers will sample at dedicated cultural heritage (shipwreck) sites to record information relevant to tracking freshwater acidification and climate impacts. The monitoring network will include sensor deployment with the capability of detecting fine scale changes in freshwater pCO<sub>2</sub> and pH, as well as targeted water sampling and analysis (measurements for pH, dissolved inorganic carbon, and total alkalinity) from select locations coinciding with TBNMS resource sites to validate sensor accuracy and establish spatial variability within the region.

This project will establish the basis of a long-term, intra-agency monitoring program to measure pH, dissolved inorganic carbon (DIC), and total alkalinity levels within the TBNMS marine protected area (MPA). The project will address the critical lack of data concerning acidification in the Great Lakes, and the results gained will inform follow-up studies into climate-related impacts to sanctuary resources. It will improve our understanding of lake acidification and its potential impacts to natural and maritime heritage resources within the sanctuary and could be a model for management-focused monitoring of acidification throughout the Great Lakes. Procedures developed during project

implementation will provide a framework for expanding climate monitoring to additional MPAs in the Great Lakes Region.

**Tip of the Mitt Watershed Council | Petoskey, MI**

Lauren Dey, Associate Director

lauren@watershedcouncil.org

The Tip of the Mitt Watershed Council is seeking a Watershed Protection Intern to assist with a project focused on understanding the impact of road salt on surface waters in Northern Michigan. The intern will play a key role in supporting data analysis and community outreach efforts aimed at addressing chloride pollution, promoting sustainable salt management practices, and advancing the understanding of best practices for salt application to protect water quality.

The intern will start by engaging with key stakeholders, including township and municipal supervisors, road commission representatives, and individuals in the private sector, to gather information on current road salting practices. Through interviews, you will assess salt use, management strategies, and identify problem areas. This data will then serve as the basis for a comparative analysis of salting practices across the region, helping to identify areas for improvement, such as educational opportunities. In addition to stakeholder research, the intern will analyze existing chloride data collected by the Watershed Council. By identifying trends in surface water quality and comparing chloride levels with other nutrient data, they will assess the broader impact of road salting on water quality in Northern Michigan. The intern may also explore regional data to gauge how severe the issue is locally compared to nearby areas. These findings will help inform future policy recommendations and promote the adoption of best management practices for salt use. The intern will assist in translating findings into accessible public-facing materials. They will create social media posts, newsletter articles, and other content to raise awareness about the environmental impacts of road salting. This outreach will help educate the public and encourage better practices, making the data more relevant and actionable for local communities.

## **Clinton River Watershed Council | Rochester Hills, MI**

Lydia Nicholas, Environmental Scientist

lydia@crwc.org

The Clinton River Watershed Council (CRWC) is seeking an intern to assist in expanding our volunteer stream monitoring programs, Adopt-A-Stream and Lake Erie Volunteer Science Network (LEVSN). Adopt-A-Stream is a volunteer-based initiative that empowers community members to protect local streams and rivers by monitoring water quality. Volunteers are trained and assigned to teams that visit sites across the watershed, gathering information on streamside habitats, physical characteristics, and aquatic macroinvertebrates. LEVSN is a regional program recently adopted by CRWC that empowers community members to gather, share, and interact with water quality data to support the conservation and enhancement of the Great Lakes. The monitoring performed through the LEVSN program captures parameters that are not captured during Adopt-A-Stream, such as pH and dissolved oxygen, that are analyzed together with other tributaries across Lake Erie Basin to monitor watershed health on a larger scale. Volunteers have been monitoring waterways through the Adopt-A-Stream program for over 20 years, but the LEVSN program is relatively new to the watershed. The intern will play an important role in reinvigorating the Adopt-A-Stream program, while developing a plan to build up and integrate LEVSN into CRWC's volunteer science monitoring programs. The role will assist with data management for the Adopt-A-Stream program, including identifying macroinvertebrates, analyzing water quality data, and integrating historical data into an updated format to ensure consistency and accessibility through CRWC's new data hub. Throughout the summer, the intern will conduct the monthly water quality monitoring for LEVSN and develop a procedure based on their field experiences for volunteers to follow. Utilizing information gained from monitoring experiences and best management practices, the intern will also assist in developing an outreach plan for recruiting volunteers and sharing data collected. The intern will also be asked to evaluate existing monitoring sites and research potential new sites for Adopt-A-Stream and LEVSN. This evaluation will help identify any gaps in data across the watershed and assess site accessibility. Additional outdoor fieldwork opportunities related to water quality and watershed health, such as macroinvertebrate collection and road-stream crossing surveys, will be provided. The majority of this internship will be done under supervision of the program lead, but independent work will be encouraged and supported to allow the intern to problem solve and think creatively as much as possible. This role will allow the intern to gain experience with water quality monitoring, community science program development, and data management. It will also provide a unique opportunity to create a long-lasting impact on community science efforts within the Clinton River watershed.

- This internship will take place in person at the CRWC office in Rochester Hills, with some field experiences at local waterways. With oversight and direction from the Environmental Scientist the intern will be asked to:
- Assist in managing and analyzing water quality data, including identifying aquatic macroinvertebrates, cataloging habitat assessments, and integrating historical water quality data into updated formats for public accessibility.

- Conduct monthly water quality monitoring and develop a written volunteer protocol for the LEVSN program.
- Evaluate current monitoring sites for accessibility, research new sites to fill data gaps, and identify key monitoring sites to prioritize data collection.
- Develop an outreach plan to recruit volunteers for both programs and share collected data with the public.
- Participate in macroinvertebrate collection, road-stream crossing surveys, and other fieldwork to enhance understanding of watershed health.

### **Chippewa Nature Center | Midland, MI**

Jenn Kirts, Director of Programs

[jkirts@chippewanaturecenter.org](mailto:jkirts@chippewanaturecenter.org)

Join a team of creative, passionate naturalists and environmental educators who work together to connect children, families and adults with nature through educational, recreational, and cultural experiences. As an intern, you will work closely with full-time professionals and seasonal camp staff to deliver a variety of programs focused on the ecology of the Great Lakes Bay Region. From kayak trips, to full moon strolls, to live animal presentations and pond dipping, you will help visitors build lifelong meaningful connections while learning and practicing important skills in program planning, delivery, and evaluation as well as exhibit development and interpretive writing. This internship provides a mix of collaborative and independent work with all age groups from our youngest participants to senior citizens. Training will take place alongside the Nature Day Camp team with specialized training from our naturalist staff on animal care, recreation activities, and interpretation for adults. As an intern, you will have the opportunity to both observe and learn from our team of staff as well as conduct your own interpretive and environmental education programs. Chippewa Nature Center (CNC) is a non-profit organization located in Midland, MI with a Visitor Center, Nature Educator Center, Nature Preschool, Homestead Farm, an arboretum, 2,000 acres for forests, fields, and wetlands, and 19 miles of trails. CNC welcomes over 70,000 people to the Visitor Center annually, serves 20,000 students in school programs and 1,200 children through Nature Day Camp.

The intern will:

- Develop and deliver public programs and experiences focusing on natural history topics for audiences of all ages including recreation-based programs such as kayaking.
- Teach or assist with camp, scout, and other youth-specific programs.
- Assist with development and maintenance of a wide variety of self-guided interpretive resources.
- Serve as the naturalist on duty in rotation with other program staff.
- Assist with weekend or evening programs as scheduled.
- Assist with the care of live reptiles and amphibians.
- Be an engaged member of the CNC team, attending staff meetings and trainings as required.
- Support the safety of self, team, and visitors within training level



## **Huron River Watershed Council | Ann Arbor and the surrounding region**

Jason Frenzel; Summer Field Technician

jfrenzel@hrwc.org

The Huron River Watershed Council (HRWC) seeks a Summer Field Technician to assist with water quality, water quantity, and aquatic ecology monitoring across the Huron River watershed and Southeast Michigan. HRWC hosts an unpaid undergraduate summer intern program where students participate in a wide variety of stream-based data collection, restoration activities, and education activities. The paid Summer Field Technician would be a team leader of the unpaid interns and given the opportunity to develop people and managerial skills as well as develop their scientific skills by conducting biological and chemical stream monitoring.

### Preferred qualifications:

- Upper class undergraduate pursuing a degree in environmental science, ecology, environmental studies, environmental engineering, or a related field.
- Access to a vehicle, valid driver's license, and ability to travel to numerous monitoring sites in Southeast Michigan.
- Self-motivated, organized, and collaborative; ability to work independently.
- Experience leading groups of people.
- Able to occasionally lift and move 50 pounds, walk on uneven ground, wade in streams and rivers, and swim while wearing a personal flotation device.

### Responsibilities include:

- Conduct in-stream water quality monitoring to support volunteer programming, including measuring flow, collecting water samples, monitoring native mussels, analyzing stream habitat, and using handheld water quality meters.
- Coordinate and co-lead teams of volunteers and interns, including training, communication, scheduling, and technical support.
- Clean, process, and analyze incoming data.
- Participate in HRWC's K-12 streamside education program
- Conduct maintenance on rain gardens
- Conduct *E. Coli* sample processing in a HRWC's lab

## **Friends of the St. Clair River | St. Clair and Sanilac Counties**

Sheri Faust, Executive Director

sheri@scriver.org

- Conduct mussel surveys at wadable stretches in the Black River following MI Mussel Survey Protocols.
- Catalog suitable mussel habitat in the Black River.
- Assist with the data collection on habitat variables within the survey areas.
- Consolidate survey data to help create a comprehensive report of mussels within the Black River.
- Assist in outreach opportunities to share the learned information with the public, promoting the importance of conservation in the watershed.
- Help communicate scientific data through photographs, blogs, short videos, infographics, and other forms of communication.
- Terrestrial and aquatic native and invasive species identification, mapping, monitoring and removal.
- Facilitate other community science monitoring projects, including birds, herpetofauna, macroinvertebrates, water quality, and other projects as they arise.
- Perform additional land restoration duties, assisting with data collection, reports, programs, projects as needed.
- Must be able to maneuver in waders in riverine ecosystems, move about for extended periods of time, and tolerate a range of weather conditions.
- Intern will work closely with Friends of the St. Clair River Executive Director and staff.

## **Six Rivers Land Conservancy | Shelby Township and Washington Township**

Amanda Ruffini, LSC CISMA Director

aruffini@sixriversrlc.org

In 2021, the Lake St. Clair CISMA began trapping for Red Swamp Crayfish (RSC), a watchlist invasive species in Michigan. This crayfish outcompetes native species and degrades water and habitat quality through bank destabilization from furrowing, foraging behavior, and food source disruption. As a response effort, the LSC CISMA traps RSC on a weekly basis over a 3-day period. The project itself would be to set traps and collect RSC for data collection over this 3-day period, weekly, creating a final presentation of 2025 data compared to 2021-2024 data at end of project period to better educate residents on impacts of RSC and trapping efforts.

The protocol is as follows: Set minnow traps on the first day, collecting GIS data on location and trap rate on Survey123 and additional GIS applications. Check burrowing activity, recording old and new burrow formations. On the second day, collect RSC (track how many RSC per trap on Survey123 and

additional sheet). Check burrows for RSC or shoreline for RSC outside of the trap. Freeze RSC and conduct measurements, if possible. This will be done on both the second and third day. Third day, collect RSC data and breakdown minnow traps for transportation Decontaminate minnow traps following established protocols and store them for the following week. Create presentations on collected data that can appeal to the general public and provide educational material.

**West Michigan Environmental Action Council | Grand Rapids Metro Area**

Carlos Calderon, Director of Environmental Programs

ccalderon@wmeac.org

WMEAC and our community partners are beginning a project focused on reducing litter and other non-point source pollution concerns in the Grand River Watershed. We will be working with local watershed groups to identify priority areas for conservation and restoration work, as well as engaging middle school students to contribute their perspectives. This will include water quality-based field work, data collection and environmental education support. The intern will develop project methods, maintain accurate records and data management, and provide public presentation of findings and collaborate with local stakeholders.

**Consumers Energy | Jackson, MI and various areas in Lower Peninsula**

Jessica Spagnuolo, Sustainability Manager

Jessica.Spagnuolo@cmsenergy.com

Consumers Energy is committed to continuous improvement of our environmental practices. The preservation of biodiversity on the lands we impact is an important part of our sustainability strategy. Our company is interested in exploring emerging best practices to enhance our current practices to measure and manage biodiversity net impact. We are interested in partnering with the Michigan Sea Grant program by hosting an intern who would conduct research and preform biodiversity assessments on our land. This project would involve reviewing our current practices with the Monarch CCAA which focuses on preserving monarch habitat and also researching emerging biodiversity best practices such as those being implemented by Natural England to make recommendations. The internship position would also apply their research in the field by conducting biodiversity assessments on company owned land such as solar development sites. Consumers Energy personnel would provide support and guidance to the intern as they complete this project. This work would take place both in the office while conducting research and out in the field while conducting assessments. In office research. Field work includes traveling to sites throughout Michigan and walking company owned land and documenting biodiversity metrics observed.