Michigan Tech Water Newsletter - April 1, 2019
Please send water-related items to post in the weekly email to Carol Asiala at glrcadmin-l@mtu.edu. We would especially like to include on-campus seminar announcements, off-campus conferences and webinars, and notifications of new funding and other member highlights.

**World Water Day 2019**

*Highlights*

On-Campus/Local Seminars

New Funding Opportunities

Course Announcements

Request Contribution numbers for GLRC Publications

Reports and Action Plans

Conferences & Webinars

Open RFPs of ongoing interest

Graduate Certificate in Sustainable Water Resources Systems

Student Research Grants (August 9) and Travel Grants (April 26)

Colloquium Course – UN5100 – next offered: Spring 2020

Seminar Speaker Support Program

Job Opportunities

Student Opportunities

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1. **World Water Day 2019**

Thank you to all who participated in this year's World Water Day - all of the students who entered posters, the judges, our guest speaker, discussion facilitators, panelists, artists and the committee who pulled it all together.

The keynote lecture by Monica Lewis-Patrick from We the People of Detroit was recorded and is available here: *"Mapping the Water Crisis of Unaffordability"*

**Congratulations to the 2019 World Water Day Poster Award winners!**

**Original Research Awards**

1st: Erin Eberhard ($300)
Advisors: Amy Marcarelli

*Spatial Heterogeneity of Nitrogen Fixation and Denitrification across a Wetland-Stream-Lake Interface*

2nd: Elisabeth Stimmel ($200)
Advisors: Fengling (Frank) Liu
**The Effects of Microtopography and a Simulated Emerald Ash Borer infestation on Woody Regeneration in Black Ash Wetlands**

3rd: Laura Schaerer ($150)  
Advisor: Stephen Techtmann  
*The microbial communities of bilge water, boat surfaces and external port water: a global comparison*

**Coursework/Informational Awards**

1st: Peter Beach and Jill Poliskey ($300)  
Advisor: Kelly Kamm  
*Combating Blue Death with Clean Water*

2nd: Rose Hildebrandt, Claire Danielson and Timothy Stone ($200)  
Advisor: Kelly Kamm  
*Onchocerciasis and the Right to Clean Water*

3rd: Alex Gabe and Olivia Demaree ($150)  
Advisor: Kelly Kamm  
*Clean Water, Clear Vision*

World Water Day at Michigan Tech was sponsored by: Great Lakes Research Center, Social Sciences, Civil & Environmental Engineering, School of Forest Resources and Environmental Science, Sustainable Futures Institute, Center for Diversity and Inclusion, Visual & Performing Arts, Western Upper Peninsula Planning & Development Region.

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**2. Highlights**

**Plastics-free Challenge:** Try to Minimize Single-use Plastics for 21 days, beginning today through Earth Day, April 22, 2019  
Daily challenges will be posted on Facebook, the MTU Event Calendar, and hopefully other local news outlets. The main goal is for our community to try to reduce single-use and disposable plastics.

**IAGLR Conference**  
International Association for Great Lakes Research  
Theme: *Large Lakes Research: Connecting People & Ideas*  
**Conference: June 10-14, 2019** at the State University of New York, Brockport, NY  
Proposed Sessions: [http://iaglr.org/conference/docs/IAGLR19sessionslist.pdf](http://iaglr.org/conference/docs/IAGLR19sessionslist.pdf)

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**3. On-Campus/Local Seminars**

**Monday, April 1, 2019**  
Anya Leach, MS Student, Civil & Environmental Engineering, Michigan Tech  
*Assessing Benthic Recovery in the Torch Lake AOC*
Janna Brown, MS Student, Civil & Environmental Engineering, Michigan Tech

**A preliminary sustainability analysis of producing class A biosolids with conventional and low-cost, low-tech technologies**

Environmental Engineering Graduate Seminar

GLRC 202 3:00 pm

**Thursday, April 4, 2019**

**Master's Defense: Waad Aljohani, Biological Sciences**

Advisor: Stephen Techtmann

*Impact of Industrial Biocides on Bacterial Isolates from Hydraulic Fracturing Produced Water*

Dow 708 10:00 am

**Friday, April 5, 2019**

**PhD Defense: Emily Prehoda, Environmental & Energy Policy**

Advisor: Chelsea Schelly

*Community Solar Energy Programs: A Bright Spot or Dim Future for Just Energy Policy?*

Academic Office Building (AOB), 201 1:30 pm

**Friday, April 5, 2019**

**Master's Defense: Alexander Helman, Forestry**

Advisor: Matthew Kelly

*Northern Hardwood Silviculture: Preferences Among Family Forest Owners in the Western Upper Peninsula of Michigan*

U. J. Noblet Forestry Building, 144 2:00 pm

**Tuesday, April 9, 2019**

**Master's Defense: Abdulaziz Saud M Alrashdi, Biological Sciences**

Advisor: Stephen Techtmann

*The Impact of Household Biocides and Antibiotics on Aquatic Microbial Community Composition*

Dow Environmental Sciences and Engineering Building, 708

**Wednesday, April 10, 2019**

**Research Forum: Distinguished Lecture**

Lecture presented by **Distinguished Professor Jaroslaw Drelich: Surfaces and Interfaces: Building Blocks of Nature and my Research World**

TechTalks presented by inter-disciplinary collaborators:
- Jeremy Goldman, Biomedical Engineering
- Feng Zhao, Biomedical Engineering
- Tim Scarlett, Social Sciences
Timothy Eisele, Chemical Engineering

The Michigan Tech Research Forum is a University presentation series showcasing the work of Michigan Tech faculty, postdocs, and researchers to strengthen our community.

Mingle: 4:00 PM
Lecture: 4:30 PM
Mingle 5:00 PM

Wednesday, April 10, 2019

**AISES film & panel event: “Mikwendaagoziwag - They are remembered”**

Panel guests: Brenda Child (Red Lake Ojibwe), Bradley Harrington (Mille Lacs Ojibwe) and Thomas Howes (Fond Du Lac Ojibwe)

The short film and panel discussion will focus on the 1850 Sandy Lake Tragedy in Minnesota, and Anishinaabeg historical and present-day survivance and resilience of Lake Superior Ojibwe Nations.

GLRC 202
6:00 pm

Sponsored by Michigan Tech American Indian Science & Engineering Society (AISES) and the Great Lakes Research Center (GLRC)

Thursday, April 11, 2019

**Christel Kern, Research Forester, US Forest Service**

"Short and Long-term Effects of Prescribed Fire in Northern Dry Forest Ecosystems"

The spring seminar series is hosted by faculty in the School of Forest Resources and Environmental Science and presents talks by invited speakers and local scholars covering a wide range of topics in the fields of Forestry, Ecology, Wildlife, and Environmental Science. Light snacks and drinks will be provided after each talk with time for discussion with the speaker.

U. J. Noblet Forestry Building, G002
12:30 pm to 1:30 pm

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4. **New Funding Opportunities**

New proposals can be submitted through the Great Lakes Research Center. Director Guy Meadows’ signature will be needed on the PI signature page of the transmittal sheet.

**NASA ROSES 2019 Announcement**

**2019 Great Lakes Integrated Sciences and Assessments Small Grants Competition**

Great Lakes Integrated Sciences and Assessments (GLISA)

Letters of Intent deadline: April 12, 2019

**North American Youth Innovation Challenge**

Commission for Environmental Cooperation

Deadline: April 5, 2019
Prospective applicants, submit your science, technology or business innovations to the #Youth4Innovation Challenge and you could win $5,000 in seed funding! Challenge is open to residents from Canada, Mexico and the United States (and its territories), aged 18–30.

**FY19 and FY20 Region 9 Wetland Program Development Grants**
EPA-REG9-WPDG-19-20
Environmental Protection Agency
Deadline: April 29, 2019
States, tribes, local government agencies, universities that are agencies of a state, interstate agencies, and intertribal consortia are eligible to apply - MTU may be eligible to be a subaward

**Special Research Grants Program - Aquaculture Research**
USDA-NIFA-SRGP-006738
Department of Agriculture, National Institute of Food and Agriculture
LOI Deadline: April 29, 2019
Full proposal Deadline: May 28, 2019

**FY19 Tribal Wetland Program Development Grants**
EPA-OW-OWOW-19-02
Environmental Protection Agency
Deadline: May 3, 2019
Limited to Tribal governments and intertribal consortia - MTU may be eligible to be a subaward

**Advancing Sustainable Materials Management**
EPA-R4-RCRD-19-01
Environmental Protection Agency
Deadline: May 10, 2019

**FY19 Region 6 Aquatic Invasive Species**
F19AS00142
Department of the Interior, Fish and Wildlife Service
Deadline: May 14, 2019

**Water Resources Research National Competitive Grants Program**
G19AS00040
Department of the Interior, Geological Survey
Deadline: May 29, 2019

5. **Course Announcements**

**BL4421/5421, Lake Superior Exploration - 3 credits**
Summer 2019: August 5-16
Lake Superior Exploration is a field intensive course with significant time spent on a research vessel where you will learn the use of a variety of state-of-the-art techniques to characterize biological communities and measure important physical and biological processes. The goal will
be to spend most of the trip on the R/V Agassiz, exploring the big lake around the Keweenaw Peninsula, learning cutting-edge sampling and research techniques while we're there!

For additional information contact Amy Marcarelli, Department of Biological Sciences, ammarcar@mtu.edu

6. Request Contribution numbers for GLRC Publications

Please email Carol Asiala (glrcadmin-l@mtu.edu) when you are preparing publications. We are continuing to follow in the time-honored tradition of many Institutes by recognizing Contribution Numbers in papers that we publish in the peer-reviewed literature. You are welcome to participate. All you need to do is -

1. Contact Carol Asiala/Beth Hoy (glrcadmin-l@mtu.edu) to request a Contribution Number. Please provide as much citation info as possible - author(s), title, journal/book, etc.

2. Add to your acknowledgements section, "This is Contribution No. _ of the Great Lakes Research Center at Michigan Tech."

3. Get back to Carol when your paper is in print and give her the volume and page numbers.

Your participation is welcomed for this effort to enhance the visibility of the GLRC.

7. Reports and Action Plans

Federal Science Partners Updates

Great Lakes Connections
International Joint Commission newsletter


8. Conferences & Webinars

OneNOAA Science Seminars Series
Currently scheduled webinars: January 2019 - May 2019

Call for Sessions: CUAHSI Conference on Hydroinformatics
Hydroinformatics for scientific knowledge, informed policy, and effective response
Conference Dates: July 29-31, 2019 at Brigham Young University in Provo, UT

April 8, 2019 - January 6, 2020
CUAHSI 2019 Training Courses
• **The Role of Runoff and Erosion on Soil Carbon Stocks: From Soilscapes to Landscapes Workshop**
  Dates and Location: April 8 - 10, 2019 in Knoxville, TN
  Registration Deadlines: February 1 (Early Bird) | February 15 (Regular)

• **Master Class: Food, Energy, and Water Systems in a Global Economy**
  Dates and Location: May 13 - 16, 2019 in Flagstaff, AZ
  Registration Deadlines: March 15 (Early Bird) | March 31 (Regular)

• **Short Course: The Science and Practice of Operational Ensemble Hydrological Prediction**
  Dates and Location: May 21 - 23, 2019 in Boulder, CO
  Application Deadline: January 31

• **Short Course: Integrated Simulation of Watershed Systems Using ParFlow**
  Dates and Location: May 29 - 31, 2019 in Golden, CO
  Registration Deadlines: March 15 (Early Bird) | March 31 (Regular)

• **Training Workshop: The Community WRF-Hydro Modeling System**
  Dates and Location: June 4 - 7, 2019 in Boulder, CO
  Application Deadline: February 15

• **Open Source Urban Hydrology Sensor Bootcamp**
  Dates and Location: August 7 - 9, 2019 in Ann Arbor, MI

• **DIY Water Monitoring, Data Portals, and Watershed Modeling Workshop**
  Dates and Location: September 10 - 12, 2019 in Avondale, PA

• **Training Workshop: The Community WRF-Hydro Modeling System**
  Dates and Location: October TBD, 2019 in Boulder, CO

• **Snow Measurement Field School**
  Dates and Location: January 6 - 9, 2020 in Woodstock, NH

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**Thursday April 11, 2019**

**Technology and Integrated Water Asset Management Webinar**

The Great Lakes Commission

In this webinar our panel of experts will provide an overview of key considerations for using technology and software to manage water assets, and explore how different IWAM technology can support coordinated decision-making across different geographic scales and multiple sectors.

- Bryon Wood & Jody Caldwell, Great Lakes Water Authority
- Heather Himmelberger, Southwest Environmental Finance Center
- Steve Rozycki, Macomb County, MI Public Works

[Register](#) 10:30am-12pm EST

**IAGLR 2019**

International Association for Great Lakes Research

Theme: *Large Lakes Research: Connecting People & Ideas*

Conference: **June 10-14, 2019** at the State University of New York, Brockport, NY

Proposed Sessions: [http://iaglr.org/conference/docs/IAGLR19sessionslist.pdf](http://iaglr.org/conference/docs/IAGLR19sessionslist.pdf)

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**April 19, 2019 - Registration deadline**

**Bio5180 Molecular Aquatic Ecology** (Wayne State University summer course)

Course dates: July 16th- August 2nd, 2019, open to non-WSU and WSU upper level undergrad and graduate students
The Society for Ecological Restoration is now accepting applications to become a Certified Ecological Restoration Practitioner (CERP) or Certified Ecological Restoration Practitioner-in-Training (CERPIT). The application window will be open through April 19, 2019.

Certification is based on a combination of knowledge, professional-level experience, project experience, references, and compliance with a code of ethics. To learn more you can watch the archived webinar "Demystifying the CERP Application Process" or go to our website (www.ser.org/certification) to start your application.

May 8-9, 2019
14th Annual Great Lakes Restoration Conference
Healing Our Waters
Detroit, MI

May 21-22, 2019
2019 Emerging Contaminants in the Environment Conference
Co-hosted by: The Illinois Sustainable Technology Center and the Illinois-Indiana Sea Grant
Champaign, IL

June 5-7, 2019
LIVING BLUE: TRANSFORMING WATERFRONTS
Great Lakes and St. Lawrence Cities Initiative
2019 Annual Conference, Email jane.eagleton@glslcities.org
Sheboygan, WI

June 17-19, 2019
2019 Great Lakes Public Forum
Please join the U.S. and Canada as they host the 2019 Great Lakes Public Forum in Milwaukee, WI. This event, as required by the Great Lakes Water Quality Agreement, occurs once every three years. The Forum gives the two Parties an opportunity to update the public on the state of the Great Lakes, progress being made under the Agreement, and the Parties’ science and action priorities for the next three years.
Milwaukee, WI

July 29-31, 2019
2019 CUAHSI Hydroinformatics Conference
Hydroinformatics for scientific knowledge, informed policy, and effective response
Brigham Young University, Provo, UT

9. Open RFPs of ongoing interest

FY19 GUIDELINES FOR BROWNFIELDS MULTIPURPOSE (MP) GRANTS
EPA-OLEM-OBLR-18-08
Environmental Protection Agency

**Aquatic Invasive Species Grants to Great Lakes Tribes**
F19AS00085  
Department of the Interior, Fish and Wildlife Service  
Deadline: April 2, 2019  
limited to State governments - can Michigan Tech participate as a subaward?

**Aquatic Invasive Species Grants to Great Lakes States**
F19AS00084  
Department of the Interior, Fish and Wildlife Service  
Deadline: April 2, 2019  
limited to Native American tribal organizations or governments - can Michigan Tech participate as a subaward?

**Addressing Environmental Concerns in Vieques, Puerto Rico Through Community Participatory Research**
EPA  
Deadline: April 23, 2019

**Exploring New Aquaculture Opportunities - 2019**
NOAA-OAR-SG-2019-2005960  
Department of Commerce, NOAA  
Deadline: April 24, 2019  (must partner with Sea Grant Programs)

**Fish and Wildlife Management Assistance**
F19AS00118  
Department of the Interior, Fish and Wildlife Service  
Deadline: April 27, 2019

**FY 2019 Community-based Restoration Program Coastal and Marine Habitat Restoration Grants**
NOAA-NMFS-HCPO-2019-2005889  
Department of Commerce  
Deadline: May 15, 2019

**Michigan Sea Grant - 2020-2022 Funding Cycle**
- **Integrated Assessment** – Research that uses Integrated Assessment methods to address important social and ecological issues affecting the Great Lakes, up to $75,000 per year.
- **Core Research** – Basic core research on issues currently affecting the Great Lakes ecosystem, up to $100,000 per year.
- **Graduate Student Research Fellowships** – Graduate student (M.S. or Ph.D.) research fellowships for one or two years, up to $50,000 total per fellowship.  
  Pre-proposal Deadline (IA & Core Research): March 11, 2019  
  Full Proposal & Fellowship Deadline: May 24, 2019

**FY19 Office of Naval Research (ONR) Navy and Marine Corps Science, Technology, Engineering & Mathematics (STEM), Education and Workforce Program**
Coastal
F19AS00027
Department of the Interior, Fish and Wildlife Service
Deadline: September 30, 2019

Partners for Fish and Wildlife
F19AS00024
Department of the Interior, Fish and Wildlife Service
Deadline: September 30, 2019

FY 2018 – 2020 - Broad Agency Announcement (BAA) Announcement Type: Initial
NOAA-NFA-NFAPO-2018-2005418
Department of Commerce, NOAA
Deadline: September 30, 2020

Army Research Office BAA for Basic and Applied Scientific Research
US Army
Deadline: March 31, 2022

MI DEQ Nonpoint Source Implementation RFP
This RFP involves a long-term plan:
Year 1:  Feb - submit watershed plans, and get them 319 approved by July
        NOIs are due in August, Proposals are due in October
Year 2:  Projects are awarded in early summer

Research Associateship Programs, Fellowship Office, Policy and Global Affairs
The National Academies of Science, Engineering, Medicine
Deadlines: February 1 ; May 1 ; August 1 ; November 1

NSF Announcements:

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<tr>
<th>Program Nbr</th>
<th>Title</th>
<th>Proposal Deadline</th>
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<tbody>
<tr>
<td>16-503</td>
<td>Limited Submission –Internal Deadline: National Science Foundation Research Traineeship Program (NRT)</td>
<td>October 15, 2018</td>
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<tr>
<td></td>
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<td>LOI: December 6, 2018</td>
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<td>Proposal: February 6, 2019</td>
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<td>17-573</td>
<td>Advancing Informal STEM Learning (AISL)</td>
<td>November 7, 2018</td>
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<td>17-584</td>
<td>Discovery Research PreK-12 (DRK-12)</td>
<td>November 14, 2018</td>
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<td>17-590</td>
<td>Improving Undergraduate Science Education: Education and Human Resources (IUSE:EHR)</td>
<td>December 11, 2018</td>
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<tr>
<td></td>
<td></td>
<td>(Development and Implementation)</td>
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<td>Oct 1, 2018 - Sept 30, 2019</td>
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<td></td>
<td></td>
<td>(Exploration and Design )</td>
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<td>17-512</td>
<td>Division of Environmental Biology (core programs) (DEB)</td>
<td>Pre-Proposal: Jan. 23, 2018</td>
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<td>Full Proposal: Aug 2, 2018</td>
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<td>17-513</td>
<td>Long Term Research in Environmental Biology (LTREB)</td>
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<td>Project ID</td>
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<td>Estimated Start Date/Deadline</td>
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<tr>
<td>18-510</td>
<td>Research Coordination Networks in Undergraduate Biology Education (RCN-UBE)</td>
<td>January 22, 2019</td>
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<tr>
<td>17-537</td>
<td>Faculty Early Career Development Program (CAREER)</td>
<td>July 18, 2018: BIO, CISE, EHR; July 19, 2018: ENG; July 20, 2018: GEO, MPS, SBE</td>
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<tr>
<td>14-559</td>
<td>Opportunities for Promoting Understanding through Synthesis (OPUS)</td>
<td>August 1, 2018</td>
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<tr>
<td>15-506</td>
<td>Science, Technology, and Society (STS)</td>
<td>February 2, 2018; August 3, 2018</td>
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<td>15-577</td>
<td>Collections in Support of Biological Research (CSBR)</td>
<td>August 13, 2018</td>
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<tr>
<td>PD 98-1650</td>
<td>Biological Oceanography</td>
<td>February 15, 2018; August 15, 2018</td>
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<td>PD 98-1610</td>
<td>Physical Oceanography</td>
<td>February 15, 2019; August 15, 2019</td>
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<td>PD 98-1670</td>
<td>Chemical Oceanography</td>
<td>February 15, 2019; August 15, 2019</td>
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<td>19-531</td>
<td>Frontier Research in Earth Sciences (FRES)</td>
<td>February 20, 2019</td>
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<td>17-566</td>
<td>Geography and Spatial Sciences Program</td>
<td>September 5, 2019</td>
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<td>PD 17-7643</td>
<td>Environmental Sustainability</td>
<td>October 22, 2018</td>
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<td>PD 17-1417</td>
<td>Chemical and Biological Separations</td>
<td>Archived</td>
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<td>PD-17-1440</td>
<td>Environmental Engineering</td>
<td>October 22, 2018</td>
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<td>PD 09-6882</td>
<td>Environmental Chemical Sciences (ECS)</td>
<td>October 31, 2018</td>
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<td>13-589</td>
<td>Oceanographic Facilities and Equipment Support Ship Operations Oceanographic Technical Services Oceanographic Instrumentation Shipboard Scientific Support Equipment Ship Acquisition and Upgrade &amp; Other Facility Activities</td>
<td>November 15, 2018; December 15, 2018; December 15, 2017; December 15, 2017; Accepted Anytime</td>
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<td>15-536</td>
<td>Limited Submission – Internal Deadline: Research Experiences for Teachers (RET) in Engineering and Computer Science</td>
<td>August 8, 2018; September 19, 2018</td>
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<td>15-600</td>
<td>Integrated Earth Systems (IES)</td>
<td>November 14, 2018</td>
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<tr>
<td>18-503</td>
<td>Dynamics of Coupled Natural and Human Systems (CNH)</td>
<td>Next deadline not set</td>
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<tr>
<td>16-506</td>
<td>Improvements in Facilities, Communications, and Equipment at Biological Field Stations and Marine Laboratories (FSML)</td>
<td>December 14, 2018</td>
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<tr>
<td>15-568</td>
<td>Earth Sciences Postdoctoral Fellowships (EAR-PF)</td>
<td>October 24, 2018</td>
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<tr>
<td>15-504</td>
<td>Major Research Instrumentation Program (MRI) Limited Submission – Internal Deadline:</td>
<td>January 22, 2019; October 24, 2018</td>
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<tr>
<td>18-583</td>
<td>Improving Undergraduate STEM Education: Pathways into Geoscience (IUSE: GEOPATHS)</td>
<td>LOI: September 21, 2018; Proposal: Nov 19, 2018</td>
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<td>16-517</td>
<td>National Robotics Initiative (NRI)</td>
<td>February 5, 2019</td>
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<tr>
<td>PD 98-1680</td>
<td>Ocean Technology and Interdisciplinary Coordination</td>
<td>February 15, 2019</td>
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<tr>
<td>17-593</td>
<td>Long-Term Ecological Research (LTER) - renewal proposals only</td>
<td>March 2, 2018</td>
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<tr>
<td>17-527</td>
<td>NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)</td>
<td>March 28, 2018</td>
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<tr>
<td>18-545</td>
<td>Innovations at the Nexus of Food, Energy and Water Systems</td>
<td>September 26, 2018</td>
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<td>15-558</td>
<td>Hydrologic Sciences (HS)</td>
<td>Accepted Anytime</td>
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<tr>
<td>PD-06-5740</td>
<td>Climate and Large-Scale Dynamics</td>
<td>Accepted Anytime</td>
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<tr>
<td>15-560</td>
<td>Geomorphology and Land-use Dynamics (GLD)</td>
<td>Accepted Anytime</td>
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### NASA ROSES 2018

<table>
<thead>
<tr>
<th>APPENDIX</th>
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<th>NOI/Step 1 DUE DATE [2]</th>
<th>PROPOSAL DUE DATE</th>
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<tr>
<td>A.1</td>
<td>Earth Science Research Overview</td>
<td>N/A</td>
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<td>A.2</td>
<td>Land Cover Land Use Change</td>
<td>08/01/2018 (Step-1)</td>
<td>03/01/2019 (Step-2)</td>
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<td>A.25</td>
<td>Rapid Response and Novel Research in Earth Science</td>
<td>N/A</td>
<td>Rolling submissions through 03/29/2019</td>
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<td>A.35</td>
<td>SERVIR Applied Sciences Team</td>
<td>10/25/2018 (Step-1)</td>
<td>04/25/2019 (Step-2)</td>
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<td>A.41</td>
<td>Advanced Information Systems Technology</td>
<td>N/A</td>
<td>4/16/2019</td>
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<tr>
<td>E.2</td>
<td>Topical Workshops, Symposia, and Conferences</td>
<td>N/A</td>
<td>Rolling submissions through 03/29/2019</td>
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<td>8/1/2019 (Step-1)</td>
<td>3/3/2020 (Step-2)</td>
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<td>A.6</td>
<td>Carbon Monitoring System</td>
<td>TBD</td>
<td>TBD</td>
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<td>A.8</td>
<td>Global Ecosystem Dynamics Investigation (GEDI) Science Team</td>
<td>TBD</td>
<td>TBD</td>
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<td>A.10</td>
<td>Ocean Salinity Science Team</td>
<td>8/1/2019</td>
<td>8/29/2019</td>
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<td>A.11</td>
<td>Sea Level Change Science Team</td>
<td>TBD</td>
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<tr>
<td>A.12</td>
<td>Surface Water and Ocean Topography Science Team</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>A.13</td>
<td>Surface Water and Ocean Topography Calibration and Validation Field Campaigns</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>A.22</td>
<td>Aura Science Team</td>
<td>N/A</td>
<td>8/29/2019</td>
</tr>
<tr>
<td>A.23</td>
<td>Terrestrial Hydrology</td>
<td>9/26/2019</td>
<td>11/14/2019</td>
</tr>
<tr>
<td>A.26</td>
<td>Weather and Atmospheric Dynamics</td>
<td>8/5/2019</td>
<td>9/16/2019</td>
</tr>
<tr>
<td>A.27</td>
<td>Earth Surface and Interior</td>
<td>5/17/2019</td>
<td>6/14/2019</td>
</tr>
<tr>
<td>A.28</td>
<td>GRACE-FO Science Team</td>
<td>5/21/2019</td>
<td>6/14/2019</td>
</tr>
<tr>
<td>A.29</td>
<td>Rapid Response and Novel Research in Earth Science</td>
<td>N/A</td>
<td>Rolling submissions through 3/27/2020</td>
</tr>
<tr>
<td>A.30</td>
<td>Airborne Instrument Technology Transition</td>
<td>8/28/2019 (mandatory NOIs)</td>
<td>10/24/2019</td>
</tr>
<tr>
<td>A.32</td>
<td>Interdisciplinary Science in Earth Science</td>
<td>10/15/2019</td>
<td>11/15/2019</td>
</tr>
<tr>
<td>A.33</td>
<td>Earth Science Research from Operational Geostationary Satellite Systems</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>A.38</td>
<td>PACE Science and Applications Team</td>
<td>5/15/2019</td>
<td>7/15/2019</td>
</tr>
<tr>
<td>A.40</td>
<td>Understanding Changes in High Mountain Asia</td>
<td>4/16/2019</td>
<td>6/12/2019</td>
</tr>
</tbody>
</table>
10. Graduate Certificate in Sustainable Water Resources Systems

Currently enrolled students can download the Certificate Degree Schedule to plan their coursework. When they have completed the required courses, or are enrolled in the last ones, the certificate degree schedule should be submitted to Nancy Byers Sprague (nspr@mtu.edu) in the Graduate School.

Request from GLRC:
If you plan to complete the certificate, please email Carol Asiala (glrcadmin-l@mtu.edu)
- If you are not already on the glrc-student-community-l email list, you will be added and will receive announcements of water-related activities and the opportunity to apply for travel and research grants.
- We would like to keep a list of students working towards the certificate, and then we also have an idea of which students need to enroll in the UN5100, the Water and Society colloquium course.
- For questions about the certificate, please contact Cory McDonald or Carol Asiala (glrcadmin-l@mtu.edu)

Links to certificate degree schedule:
Grad School: http://www.mtu.edu/gradschool/documents/policies-procedures/forms/certificates-icsw.pdf

11. Student Research Grants (August 9) and Travel Grants (April 26)

Research Awards: Graduate and undergraduate research awards are now due the first Friday in December and March of each year, and the 2nd Friday in August.

December 7, 2018  March 1, 2019  August 9, 2019
Each award can be up to $750. Awards can also be used to support undergraduate research in formal class settings (e.g. Enterprise, Senior Design, Pavlis, senior thesis, capstone classes etc.).

Applications and Requirements for Research Grants are online at:
http://www.mtu.edu/greatlakes/about/documents/glrc-studentresearchgrant.pdf

The research should support the Center's mission (http://www.mtu.edu/greatlakes/about/documents/strategic-plan.pdf).

**Travel Awards:** Graduate student travel grants ($500) are also available through the Center for Water and Society to present a water related paper at a conference. Applications are reviewed on the last Friday of each month, and must be submitted at least 2 weeks in advance of planned travel.

Applications for Travel grants are online at:

Student advisors must be a faculty member of the GLRC or the students must be supported on a GLRC-affiliated research grant.

Students will also be required to indicate how they would like to provide a return on the GLRC investment. Options include:

- a. presenting a poster at World Water Day in March;
- b. assisting with preparations for World Water Day;
- c. assisting with GLRC-sponsored outreach activities;

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**12. Colloquium Course – UN5100 – next offered: Spring 2020**

**Water & Society Colloquium Course**

**Course Number:** UN5100, CRN 13023, 1 credit  
**Time/Location:** Tuesdays 3:35-4:25 in Dow 875  
**Course Organizer:** Noel Urban (nurban@mtu.edu)

Each week, participants will read a journal paper or scientific report in preparation of discussion sessions on Tuesdays. Select films from the Green Film series (held Thursday evenings) will be used in lieu of the paper/Tuesday discussions. Students not registered for the course and faculty are encouraged to participate.

Discussion sessions will be led by a group of students and faculty. This group will prepare a few questions or comments the week preceding the discussion and send these to the class as a way to begin focusing the discussion. The group will begin the discussion session with a 10-minute summary of the major issues covered by the preceding week’s reading and repeat the discussion questions.
This course (or SS 5325) is required for the CWS Graduate Certificate in Sustainable Water Resources Systems.

13. Seminar Speaker Support Program
Great Lakes Research Center members can apply for $500 in assistance in bringing seminar speakers to Michigan Tech. Lecture topics should be of interest to the GLRC, and the visit should correspond with GLRC goals. The Seminar Speaker Request form should be emailed to Carol Asiala at glrcadmin@mtu.edu.

14. Job Opportunities

Lands Program Manager
Upper Peninsula Land Conservancy. Part-time, year-round position starting in May 2019. To apply send a cover letter, references, resume, and relevant documents to uplc@uplandconservancy.org.

Climate Change Job Vacancies
International Institute for Sustainable Development (IISD) Community

IAGLR Job Board
Job Opportunities in the Great Lakes

The Stewardship Network – Job Postings

State of Minnesota
Hydrologist & Natural Resources positions
https://statejobs.doer.state.mn.us/JobPosting
Search on Job Grouping=Environmental Sciences
Or Department = Pollution Control Agency (includes summer jobs for students)

The Ohio Environmental Council – Careers & Internships

Positions posted on CUAHSI web site
(Careers/fellowships/post-docs/research assistantships/faculty positions)

15. Student Opportunities

Environmental Intern (Ann Arbor, MI)
LimnoTech
Position dates: May-August, 2019

2019 Internship Program
Charles Stewart MOTT Foundation  
Deadline: March 31, 2019  

**Position Descriptions:**  
The 10-week internships, which run from June through mid-August, are paid positions without benefits. Designed to expose students to the philanthropic and nonprofit sectors, the internship experience will help develop and strengthen the professional skills required to work in these fields. Assignments will vary, but generally include positions within the Foundation’s administrative, grantmaking or communications divisions. All internships will be based out of the Foundation’s headquarters in Flint, Michigan.

The 2019 Internship Program will be open to students who are:

- Enrolled full-time undergraduates entering their junior or senior year;
- Maintaining a minimum GPA of 3.0 or higher;
- Able to work a 35-hour week; and
- Legally authorized to work in the United States.

Candidates for these internship positions should be team players able to solve problems, organize their work, communicate effectively, pay attention to detail, and maintain a professional attitude and work habits. The Foundation is particularly interested in students majoring in areas of study related to nonprofit organizations and philanthropy. While all majors are welcome to apply, students in programs that relate to the Foundation’s interests in education, the environment, community development, and economic vitality and social change communications are particularly well suited for the program.

Please review the opportunities listed below, and indicate in your cover letter which of the following areas interest(s) you:

- Programs – Civil Society
- Programs – Education
- Programs – Environment
- Programs – Flint

Program interns will work on a variety of issues and topics relevant to the Foundation’s grantmaking interests within a team setting. Assignments will vary based on a combination of the Foundation’s needs and on the interests of the intern. All interns will, at a minimum, have the opportunity to conduct research on issues, contribute to the development of strategies, write internal recommendations and/or analyze potential grants and accompany program staff to meetings and/or events.

**How to Apply:**

Individuals interested in this position should apply by March 31, 2019, with a resume, cover letter, and grades to hr@mott.org.

The Mott Foundation is an equal opportunity employer and encourages diversity of thinking, background and perspective among its staff. All qualified individuals are encouraged to apply. Hiring decisions at the Mott Foundation are based on the qualifications of the candidate and the operational needs of the Mott Foundation.

**About the Mott Foundation:**

The Charles Stewart Mott Foundation, established in 1926 in Flint, Michigan, by an automotive pioneer, is a private philanthropy committed to supporting projects that promote a just, equitable, and sustainable society. It supports nonprofit programs throughout the United States and, on a limited geographic basis, internationally. Grantmaking is focused in four programs: Civil Society, Education, Environment, and Flint Area. In addition to Flint, offices are located in metropolitan Detroit, Johannesburg, and London. With year-end assets of approximately $3
billion in 2018, the Foundation made 358 grants totaling more than $132 million. For more information, visit www.mott.org.

**Great Lakes Fishery Commission’s Student Travel Award**
Deadline: April 12, 2019

**Graduate Research & Training Scholarship Program (GRTSP)**
NOAA
Applications accepted twice per year

**Research Associateship Programs**
The National Academies
4 application deadlines throughout the year
Participating agencies include: NOAA and EPA