Michigan Tech Water Newsletter - December 3, 2018
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.

Highlights
On-Campus/Local Seminars
World Water Day 2019: Save the Date - March 21-26
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 (December 7) and Travel Grants (November 30)
Colloquium Course – UN5100 – next offered: Spring 2019
Seminar Speaker Support Program
Job Opportunities
Student Opportunities

1. Highlights
   CUAHSI Events and Sessions at AGU Fall Meeting 2018
   December 10-14, 2018 at AGU in Washington, DC

2. On-Campus/Local Seminars

   Monday, December 3, 2018
   Lei Pan, Chemical Engineering, Michigan Tech
   New Environmental Challenge: Recycling of Spent Lithium-Ion Battery
   Environmental Engineering Graduate Seminar
   GLRC, Room 202  3:00 pm

   Monday, December 3, 2018
   Dr. Becky Alexander, University of Washington
   Climate driven changes in the oxidation capacity of the atmosphere
   EPSSI seminar
   M&M U113  4:00 pm

   Tuesday, December 4, 2018
   Masters Defense: Erica Coscarelli, Environmental Engineering
   Advisor: Daisuke Minakata
   Predicting the Organic Compound Degradations in Aqueous-Phase Ultraviolet (UV) and UV-Based Advanced Oxidation Processes
   Dillman 214  1:00 pm
**Wednesday, December 5, 2018**

Michigan Tech Geospatial Research Forum

Do you use GIS, remote sensing or other geospatial technologies in your research or teaching? Or perhaps want to?

Come for lunch, learn about how you can collaborate on geospatial focused proposals and contribute to a series of "TechTalks"-style presentations about current geospatial research across campus.

For lunch and to sign up to present a three-minute Geospatial TechTalk, fill out this form. RSVP by Wednesday, Nov. 28 so we have enough lunch for all guests.

Questions? Contact Don Lafreniere or Ryan Williams.

**Thursday, December 6, 2018**

Research Forum: TechTalks

Two minutes + two slides + interesting faculty = a research showcase at (not quite) warp speed.

TechTalks are rapid-paced samplings of work, both published and unpublished. Time before and after each event will be dedicated to mingling, with ample time to seed collaborative discussions.

The Michigan Tech Research Forum is a new 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
Location to be announced

**Thursday, December 6, 2018**

Valoree Gagnon (GLRC)

Synopsis of Workshop: "Tuyuryaq: A Model for decolonizing learning on college campuses"
GLRC 202
4:00 - 5:30 pm

**Friday, December 7, 2018**

SS 4700 Communities & Research students: Adewale Adesanya, Courtney Archambeau, Kyle Parker-McGlynn, Rob Skalitsky, Kyla Valenti, and Jack Wilson

Cultivating Community Food Resilience: Recommendations for the Western UP Food Systems Council

Social Sciences Brown Bag
Academic Office Building (AOB), 201
12:00 pm

**Monday, December 10, 2018**

Master's Defense: Michael Foster, Environmental Engineering Science

Advisor: Martin Auer

Modeling the Effects of Wastewater Infrastructure Options on Water Quality in Greater Cleveland, Ohio
GLRC 202
10:00 am
Monday, December 10, 2018
Dr. Juliana D'Andrilli, Montana State University
*Global Organic Carbon Cycling Patterns from Ancient and Modern Polar Ice Cores*
EPSSI seminar
M&M Bldg, U113 4:00 pm

Tuesday, December 11, 2018
Summer Undergraduate Research Fellowship (SURF) Workshop
SURF is a research fellowship program that offers undergraduate students a $4000 stipend to work for 10 weeks on research on campus in the summer. Applications are open to all Tech undergraduates who have at least one semester remaining after the summer. This workshop will be led by Will Cantrell.
Fisher Hall, 132 6:00 pm

Thursday, December 13, 2018
Dr. Daniel Karp, Assistant Professor
Department of Fish, Wildlife, and Conservation Biology at the University of California, Davis. His research focuses on developing innovative solutions for reconciling conservation activities with food production practices.
"Harmonizing biodiversity conservation with agricultural production across working landscapes"
School of Forest Resources and Environmental Science Seminar Series
U. J. Noblet Forestry Building, G002 12:30 pm to 1:30 pm

3. **World Water Day 2019**: Save the Date - March 21-26

Theme: *Leaving No One Behind - Human Rights: Near and Far*
Keynote Lecturer: Monica Lewis-Patrick, We the People Detroit
Thursday, March 21: Green Film: Marathon for Justice
Monday, March 25: Poster Session, Welcome to Traditional Homelands by KBIC and Woodland Singers, Keynote Lecture, Reception
Tuesday, March 26: Panel Discussion, Art Reception, Closing Ceremony

The Poster Competition includes entries from graduate and undergraduate students in 2 categories. The Original Research posters include research and student thesis work on any aspect of water. The Coursework/Informational posters include presentation of coursework or literature based research. Faculty are encouraged to assign posters in their Spring courses, if appropriate for the course.

Faculty may also want to consider assigning attendance at the World Water Day lecture and panel discussion and green film in their Spring courses if applicable.
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.

Cooperative Ecosystem Studies Unit, Great Lakes Northern Forests CESU
G19AS00023
Department of the Interior, Geological Survey
Deadline: December 17, 2018
To develop hydrodynamic models that describe the transport of Cladophora in the nearshore Great Lakes, specifically linking transport with biological and chemical mechanisms involved in the growth and proliferation of this algae

FY19 GUIDELINES FOR BROWNFIELDS ASSESSMENT GRANTS
EPA-OLEM-OBLR-18-06
Environmental Protection Agency
Deadline: January 31, 2019

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

Competition for a Cooperative Institute for Satellite Earth System Studies
NOAA-NESDIS-NESDISPO-2019-2005893
Department of Commerce, NOAA
Deadline: January 31, 2019

Fiscal Year 2019 NMFS-Sea Grant Fellowships in Population and Ecosystem Dynamics
NOAA-OAR-SG-2019-2005907
Department of Commerce, NOAA
Deadline: Feb 27, 2019

Fiscal Year 2019 NMFS-Sea Grant Fellowships in Marine Resource Economics
NOAA-OAR-SG-2019-2005909
Department of Commerce, NOAA
Deadline: Feb 27, 2019

Great Lakes Restoration Initiative
F19AS00050
Department of the Interior, Fish and Wildlife Service
Deadline: Feb 28, 2019 (limited eligible applicants)

5. Course Announcements

FW4500 A Special Topics Course: Indigenous Natural Resources Management
CRN #14626, Spring 2019, 3 credits
TUES & THURS ~ ROOM 108 NOBLET FORESTRY BUILDING ~ 11:05-12:20
Instructor: Valoree gagnon (vsgagnon@mtu.edu)
In this special topics course, students will gain knowledge in Indigenous history, culture, and policy to enhance their understanding of treaty rights, the government-to-government relationship, and the diversity of people, practices, and values within the Great Lakes basin. Students will engage with multidisciplinary scholarship of growing relevance for natural resources fields of study and the environmental sciences, and also, practical insights for engaging with Indigenous peoples in today’s shared management regime. Specifically, this course will explore dynamics of natural and cultural resources, and examine selected federal, state, and tribal institutional approaches that characterize today’s shared stewardship. Students in this course will gain a better understanding of career and higher education opportunities, Indigenous perspectives and practices, and be better prepared for engaging with and as natural resource and environmental science and policy professionals.

SS 5049 GIS for Graduate Researchers
CRN 14848, Spring 2019, 3 Credits,
Section 0A: F 01:05 pm-01:55 pm and L01: F 02:05 pm-03:35 pm in GLRC B003
Instructor: Don Lafreniere (djlafren@mtu.edu)
Introductory GIS course for students who have no and very limited experience with geography or GIS. The course introduces students to the basics of GIS including data collection, manipulation, basic spatial analysis, and how to create webmaps and basic apps for dissemination.

SS5050- Advanced GIS Methods and Projects
New Course in Fall 2019
Instructor: Don Lafreniere (djlafren@mtu.edu)
Advanced course for students who have ideally taken SS5049 or have other experience in the spatial sciences. The course will outfit students' toolbelt with expertise in advanced spatial analysis and statistics and apply those skills to a semester major project (ideally linked to their thesis or dissertations)

CRN #: 12669, Spring 2019, 3 credits
Schedule: MWF 10:05-10:55 am in GLRC B003
Instructor: Thomas Oommen (toommen@mtu.edu)
Course Objective: This course gives an introduction to Earth science and engineering applications of remote sensing. The course covers a description of the sensors, discussion of their applications, and hands-on exercises with multispectral, hyperspectral, airborne, and satellite-borne sensors measuring optical, thermal infrared responses, and active sensors, such as Light Detection and Ranging (LiDAR) and Synthetic Aperture Radar (SAR). The course will also introduce students to the photogrammetric technique using Structure from Motion (SfM). The fusion and analysis of remote sensing datasets with other geologic and geophysical data require the application of machine learning and data mining. The course will also introduce students to an open source collection of machine learning algorithms for data mining tasks using Weka.
The Scientific Profession (BL5025)  
BL 5025, CRN 13759, Spring 2019, Meeting time T 11:05 – 12:45 in Dow 708  
Instructor: Amy Marcarelli (ammarcar@mtu.edu)

This 2-credit class will be discussion-based, covering the practice of sciences for graduate students, including how to plan a research project, tips for preparing grants, conference presentations, publications, navigating the job market, and consideration of personal and social issues (e.g., diversity and bias, time management and work-life balance, etc.). It also fulfills the advanced RCR requirement for graduate students. More details can be found on the attached flier.

Although this course is offered through Biological Sciences, the topics covered are not specific to the field and I find that it works the best when students from other departments are also enrolled. In the past the class had included students from many programs across campus, including SFRES, Chemistry and Chem Eng, Civil Environ Eng, Biomed Eng, Geol Eng + Sci, Mechanical and Electrical Eng, Humanities and Cognitive and Learning Sci. We typically have a mix of new and more established students, of traditional and non-traditional students, of US and international students, and of MS and PhD students.

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: September 2018 - December 2018

Monday, December 10, 2018 - Abstract Deadline
Emerging Contaminants in the Environment Conference
Conference Dates: May 21-22, 2019 at the Hilton Garden Inn in Champaign, IL
Oral presentation abstract: December 10, 2018
Poster abstract: February 4, 2019

Tuesday, December 11, 2018
Chris Doyle, Director of Biology, Solitude Lake Management
Monitoring and Detecting Hydrilla: Three Case Studies in New York and New Jersey
Great Lakes Hydrilla Collaborative’s technical webinar series
To register, please send an email to hydrillacollaborative@ene.com
2:00 pm EST

Wednesday, December 19, 2018
Webinar on Great Lakes Coastal Wetlands: How Do We Reverse the Trends to Achieve Net Habitat Gain?
International Joint Commission
Register 3 – 5 p.m. EST

February 19-21, 2019
Wetland Science Conference
Madison, WI
Call for Abstracts

June 5-7, 2019
LIVING BLUE: TRANSFORMING WATERFRONTS
Great Lakes and St. Lawrence Cities Initiative
2019 Annual Conference, Email jane.eagleton@glslcities.org
9. Open RFPs of ongoing interest

**Cooperative Ecosystem Studies Unit, Great Lakes Northern Forest CESU**
G19AS00020 (Total Maximum Daily Load (TMDL) and watershed management plan for total phosphorus (TP) in the Rock River Basin, Madison WI area)
Department of the Interior, Geological Survey
Deadline: December 7, 2018

**16th Annual P3 Awards: A National Student Design Competition Focusing on People, Prosperity and the Planet**
EPA-G2019-P3-Q1 – Air Quality
EPA-G2019-P3-Q2 – Safe and Sustainable Water Resources
EPA-G2019-P3-Q3 – Sustainable and Healthy Communities
EPA-G2019-P3-Q4 – Chemical Safety
EPA
Deadline: December 11, 2018

**Desalination and Water Purification Research Program for Fiscal Year 2019**
BOR-DO-19-F001
Department of the Interior, Bureau of Reclamation
Deadline: December 13, 2018

**NOAA Marine Debris Research Program**
NOAA
NOAA-NOS-ORR-2019-2005817
Deadline: December 14, 2018

**Coastal Zone Management (CZM) Program 2020**
Michigan Department of Natural Resources, Office of the Great Lakes (OGL)
- Habitat
- Hazard Management
- Water Quality
- Public Access
- Community Development
Deadline: December 14, 2018

**Collaborative Science, Technology, and Applied Research (CSTAR) Program**
NOAA-NWS-NWSPO-2019-2005754
Department of Commerce, NOAA
Deadline: December 14, 2018

**FY19 Dr Nancy Foster Scholarship Program**
NOAA-NOS-ONMS-2019-2005832
Department of Commerce, NOAA
CZM Projects of Special Merit Competition - FY2019
NOAA-NOS-OCM-2019-2005819
Department of Commerce, NOAA
Deadline: December 19, 2018
Review Eligibility Requirements

FY 2018 Support of the National Estuary Program Coastal Watershed Grants
EPA-OW-OWOW-18-04
Environmental Protection Agency
Deadline: December 20, 2018

National Oceanographic Partnership Program (NOPP)
N00014-18-S-B007
Department of Defense, Office of Naval Research
Deadline: December 21, 2018

TAT Grant Program
TATFY19
Department of Agriculture, Utilities Programs
Deadline: December 31, 2018

Solid Waste Management Grant Program
SWMFY2019
Department of Agriculture, Utilities Programs
Deadline: December 31, 2018

Great Lakes Fish and Wildlife Restoration Act
F19AS00015
Department of the Interior, Fish and Wildlife Service
Pre-Proposal Deadline: January 7, 2019

FY 2019 SMALL BUSINESS INNOVATION RESEARCH (SBIR) PROGRAM
NOAA-OAR-OAR-TPO-2019-2005899
Department of Commerce, NOAA
Deadline: January 8, 2019

Special Joint Request for Proposals: Michigan, Illinois-Indiana, and Wisconsin
Sea Grant Regional RFP
Understanding and Communicating Coastal Hydrodynamics and Nearshore Sediment Transport Processes on Lake Michigan to Promote Resilient Coastal Communities
Deadline: January 11, 2019

Funding for restoring Great Lakes areas of concern
Environment and Climate Change Canada
Deadline: January 11, 2019
Fishery and Sea Lamprey Research Programs
Great Lakes Fishery Commission
Pre-Proposal Deadline: January 15, 2019

2019 Ecological Effects of Sea Level Rise Program
NOAA-NOS-NCCOS-2019-2005813
Department of Commerce, NOAA
Deadline: January 16, 2019

Research Coordination Networks in Undergraduate Biology Education (RCN-UBE)
NSF (18-510)
Deadline: January 22, 2019

2019 Summer Undergraduate Research Fellowships (SURFs)
Fellowship recipients will spend the summer on an individual research project under the guidance of a Michigan Tech faculty mentor. SURFs are open to all Tech undergraduates who have at least one semester remaining after the summer term. Awards are up to $4,000.
Deadline: January 25, 2019 by 4:00 pm
Workshop: Writing effective SURF proposals
Tuesday, Dec. 11 in Fisher 132 6:00 pm

FY19 Coral Reef Conservation Program, Domestic Coral Reef Conservation Grants
NOAA-NOS-OCM-2019-2005879
Department of Commerce, NOAA
Deadline: January 29, 2019

2020 Partners for Fisheries Monitoring Program
F19AS00022
Department of the Interior, Fish and Wildlife Service
Deadline: January 31, 2019

2018 ERDC Broad Agency Announcement
US Army
Deadline: January 31, 2019

Future Investigators in NASA Earth and Space Science and Technology (FINESST)-2019
NASA
Deadline: February 1, 2019
Note: this program succeeds the NASA Earth and Space Science Fellowship (NESSF)

National Competitive Harmful Algal Bloom Programs
NOAA-NOS-NCCOS-2019-2005810
Department of Commerce, NOAA
Deadline: February 4, 2019

National Estuarine Research Reserve System (NERRS) Land Acquisition and Construction Program for Fiscal Year 2019
NOAA-NOS-OCM-2019-2005800
Department of Commerce, NOAA  
Deadline: February 8, 2019  
Review Eligibility Requirements  

**Marshall Faculty Fellowship Program**  
NASA  
Deadline: February 8, 2019  

**ENVIRONMENTAL JUSTICE SMALL GRANTS PROGRAM**  
EPA-OP-OEJ-19-01  
Environmental Protection Agency  
Deadline: February 15, 2019  

**Commercial Fishing Occupational Safety Training Project Grants**  
RFA-OH-19-005  
Department of Health and Human Services  
Centers for Disease Control and Prevention - ERA  
Deadline: February 15, 2019  

**Regional Ocean Acidification Observing Optimization Study (OOS-OA19)**  
NOAA-OAR-OAP-2019-2005791  
Department of Commerce, NOAA  
Deadline: March 4, 2019  

**FY2019 Office of Weather and Air Quality Research Programs**  
NOAA-OAR-OWAQ-2019-2005820  
Department of Commerce, NOAA  
Deadline: March 20, 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  

**FY19 Office of Naval Research (ONR) Navy and Marine Corps Science, Technology, Engineering & Mathematics (STEM), Education and Workforce Program**  
N00014-19-S-F003  
Department of Defense, Office of Naval Research  
Deadline: September 27, 2019  

**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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<th>Program Nbr</th>
<th>Title</th>
<th>Proposal Deadline</th>
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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 (Development and Implementation) Oct 1, 2018 - Sept 30, 2019 (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 Full Proposal: Aug 2, 2018</td>
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<td>17-513</td>
<td>Long Term Research in Environmental Biology (LTREB)</td>
<td>Accepted Anytime</td>
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<td>18-510</td>
<td>Research Coordination Networks in Undergraduate Biology Education (RCN-UBE)</td>
<td>January 22, 2019</td>
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<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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<td>14-559</td>
<td>Opportunities for Promoting Understanding through Synthesis (OPUS)</td>
<td>August 1, 2018</td>
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<td>Agency Number</td>
<td>Program Title</td>
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<td>15-506</td>
<td>Science, Technology, and Society (STS)</td>
<td>February 2, 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</td>
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<tr>
<td>PD 98-1610</td>
<td>Physical Oceanography</td>
<td>February 15, 2019</td>
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<td>PD 98-1670</td>
<td>Chemical Oceanography</td>
<td>February 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>
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<td>PD 17-7643</td>
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<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</td>
<td>November 15, 2018</td>
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<td>Ship Operations</td>
<td>December 15, 2018</td>
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<td>Oceanographic Technical Services</td>
<td>December 15, 2017</td>
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<td>Oceanographic Instrumentation</td>
<td>December 15, 2017</td>
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<td>Shipboard Scientific Support Equipment</td>
<td>Accepted Anytime</td>
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<td>Ship Acquisition and Upgrade &amp; Other Facility Activities</td>
<td>Accepted Anytime</td>
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<tr>
<td>15-536</td>
<td>Limited Submission – Internal Deadline: Research Experiences for Teachers (RET) in Engineering and Computer Science</td>
<td>August 8, 2018</td>
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<tr>
<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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<td>15-504</td>
<td>Major Research Instrumentation Program (MRI)</td>
<td>January 22, 2019</td>
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<td>18-583</td>
<td>Improving Undergraduate STEM Education: Pathways into Geoscience (IUSE: GEOPATHS)</td>
<td>LOI: September 21, 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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<td>PD 98-1680</td>
<td>Ocean Technology and Interdisciplinary Coordination</td>
<td>February 15, 2019</td>
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<td>17-593</td>
<td>Long-Term Ecological Research (LTER) - renewal proposals only</td>
<td>March 2, 2018</td>
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<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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<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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<td>PD-06-5740</td>
<td>Climate and Large-Scale Dynamics</td>
<td>Accepted Anytime</td>
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<td>15-560</td>
<td>Geomorphology and Land-use Dynamics (GLD)</td>
<td>Accepted Anytime</td>
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<tr>
<td>15-516</td>
<td>Earth Sciences: Instrumentation and Facilities (EAR/IF)</td>
<td>Accepted Anytime</td>
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<tr>
<td>16-595</td>
<td>Arctic Research Opportunities</td>
<td>Accepted Anytime</td>
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<tr>
<td>18-530</td>
<td>Antarctic Research</td>
<td>Accepted Anytime</td>
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<tr>
<td>PD 98-1620</td>
<td>Marine Geology &amp; Geophysics</td>
<td>Accepted Anytime</td>
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**NASA ROSES 2018**
### APPENDIX

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<th>NOI/Step 1 DUE DATE [2]</th>
<th>PROPOSAL DUE DATE</th>
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<td>A.1 Earth Science Research Overview</td>
<td>N/A</td>
<td>N/A</td>
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<td>A.2 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.7 ECOSTRESS Science Team</td>
<td>TBD</td>
<td>TBD</td>
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<td>A.25 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 SERVIR Applied Sciences Team</td>
<td>10/25/2018 (Step-1)</td>
<td>04/25/2019 (Step-2)</td>
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<tr>
<td>A.41 Advanced Information Systems Technology</td>
<td>TBD</td>
<td>TBD</td>
</tr>
<tr>
<td>E.2 Topical Workshops, Symposia, and Conferences</td>
<td>N/A</td>
<td>Rolling submissions through 03/29/2019</td>
</tr>
</tbody>
</table>

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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:

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11. **Student Research Grants (December 7) and Travel Grants (November 30)**

**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.
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

**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 2019**

**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

Habitat Restoration Program Specialist
Great Lakes Commission
Application deadline: December 21, 2018

Water Infrastructure Project Manager
Great Lakes Commission
Application deadline: December 21, 2018

Commercial Navigation Project Manager
Great Lakes Commission
Application deadline: December 21, 2018

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

Fiscal Year 2019 NMFS-Sea Grant Fellowships in Population and Ecosystem Dynamics
NOAA-OAR-SG-2019-2005907
Department of Commerce, NOAA
Deadline: Feb 27, 2019

Fiscal Year 2019 NMFS-Sea Grant Fellowships in Marine Resource Economics
NOAA-OAR-SG-2019-2005909
Department of Commerce, NOAA
Deadline: Feb 27, 2019

David Suzuki Fellowships
Deadline: February 1, 2019

Future Investigators in NASA Earth and Space Science and Technology (FINESST)-2019
NASA
Deadline: February 1, 2019
Note: this program succeeds the NASA Earth and Space Science Fellowship (NESSF)

16th Annual P3 Awards: A National Student Design Competition Focusing on People, Prosperity and the Planet
EPA-G2019-P3-Q1 – Air Quality
EPA-G2019-P3-Q2 – Safe and Sustainable Water Resources
EPA-G2019-P3-Q3 – Sustainable and Healthy Communities
EPA-G2019-P3-Q4 – Chemical Safety
EPA
Deadline: December 11, 2018

FY19 Dr Nancy Foster Scholarship Program
NOAA-NOS-ONMS-2019-2005832
Department of Commerce, NOAA
Deadline: December 17, 2018

2019 National Water Center Innovators Program Summer Institute
CUAHSI
Application Deadline: January 15, 2019

Research Experiences for Undergraduates
Central Michigan University Institute for Great Lakes Research
Deadline: February 1, 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