Michigan Tech Water Newsletter
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.

On-Campus Seminars
New Funding Opportunities
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 11) and Travel Grants (March 31)
Colloquium Course – UN5100 – Spring 2017
Seminar Speaker Support Program
CUAHSI (Consortium of Universities for the Advancement of Hydrologic Science, Inc.)
Job Opportunities
Student Opportunities

1. On-Campus Seminars

Monday, April 3, 2017
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Masters Defense: Elizabeth Ernst, Forestry
Co-advisors: Joseph Wagenbrenner and Evan Kane
“Effects of Wildfire Severity on Early Successional Dynamics in Boreal Peatland Complexes”
Chem Sci 104B 9:00 am

Monday, April 3, 2017
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Masters Defense: Erin Eberhard, Biological Sciences
Advisor: Amy Marcarelli
“Co-Occurrence of Nitrogen Fixation and Denitrification Across a Stream Nitrogen Gradient in a Western Watershed”
GLRC 202 10:00 am

Monday, April 3, 2017
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Zhimin Song (CEE), Dr. Jennifer G. Becker (CEE)
“Characterization of kinetics and performance in a microbial fuel cell supplied with synthetic landfill leachate”
Divya Kamath (CEE), Dr. Daisuke Minakata (CEE)
“Experimental and Theoretical Investigations in Modeling Fate of Compounds in UV/Free Chlorine Advanced Oxidation processes in Aqueous Phase”
Environmental Engineering Seminar
GLRC 202
3:00 pm

Monday, April 3, 2017

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Masters Defense: Miranda Smith, Environmental & Energy Policy
Advisor: Richelle Winkler
“Impacts of Policy Implementation on Wetlands in the Upper Great Lakes States”
Academic Offices 201 3:30 pm

Thursday, April 6, 2017

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Zhaohui Wang, PhD, Electrical and Computer Engineering
“Signal Processing and Machine Learning for Underwater Acoustic Communication Networks”
Institute of Computing & Cybersystems (ICC) Seminar
Fisher 133 1:00 pm

Thursday, April 6, 2017

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Simon Carn (GMES)
“Volcanology – multidisciplinary science for a versatile campus”
Spring 2017 Distinguished Lecture
Memorial Union Ballroom 4:00 to 5:30 pm

Thursday, April 6, 2017

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Panel Discussion: Economics of Climate Change
Moderator: Brianna Koski, Economics Undergrad, VP of the Economics Club
Panelists: Dr. Gary Campbell (SBE), Dr. Sarah Green (CHEM), Dr. Nancy Langston (SS), Dr. Jessica McCarty (MTRI), Dr. Craig Waddell (HU)
EERC 100 6:00 pm

July 22-27, 2017

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Summer Keweenaw Geotours by Land and Boat
Bill Rose (GMES) and Erika Vye (GLRC)
Five different one-day geotours are offered, focusing on Keweenaw Geoheritage, and using the RV Agassiz:
July 22: Glacial Geology
July 24: Lavas and the great rift
July 25: The Keweenaw Fault
July 26: Redbed sediments filling the Rift
July 27: Mining wastes and Lake Dynamics

For registration and more information, see this link.
2. 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 2017** has been announced. The table of program elements with updated due dates will be kept current in the “Open RFPs of ongoing interest” section of this newsletter.

**Cooperative Ecosystem Studies Unit, Great Lakes Northern Forests CESU**
G17AS00052
Department of the Interior, Geological Survey
Deadline: April 14, 2017

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**Ford College Community Challenge Grant 2017**

Ford Motor Company Fund is requesting proposals for an innovative grant-making initiative: The Ford College Community Challenge. This program is designed to empower student-led projects at higher education organizations to catalyze community-building projects that address pressing local needs.

The overarching theme of the Ford College Community Challenge is “**Making Lives Better**” by:

- Changing the Way People Move Through Smart Mobility
- Driving Social Mobility
- Building Sustainable Communities

“At Ford, we understand that to be a truly sustainable organization, we must play an active role in the larger community, helping address a wide range of vital issues from education to safety to mobility.”

Winning proposals must address, in some creative way, a tangible, unmet community need that addresses the issue of **Making Lives Better**. Participants are urged to think broadly and explore a variety of potential topics including infrastructure and workforce needs, education pipeline issues, design issues, new approaches to student volunteerism, etc.

Up to 10 winning proposals will be selected to receive $25,000 each from Ford Motor Company Fund to support implementation of the proposed projects. Winning proposals must, at a minimum:

1. Describe an innovative approach to **Making Lives Better**
2. Involve students in a leadership role
3. Seek to address an urgent and unmet community need in a tangible way
4. Involve a community-based organization as a partner
5. Involve the school of business, engineering, or design in some way

Faculty and staff who would like to submit a proposal should contact Pete Cattelino, Office of Industry Relations (pjcattel@mtu.edu, 487-3486), to obtain a full RFP and further information. Please provide a 1 or 2 sentence overview of your proposal idea.

- Submission deadline of Wednesday, April 26, 2017.
- Twenty proposals from the 1st round will be selected in early June 2017 to advance to the 2nd round of the competition. These proposals will be asked to provide an additional “elevator speech” description of their projects, delivered via video.
- Award winners will be announced and projects implemented in fall 2017.

3. 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.

4. Reports and Action Plans

Federal Science Partners Periodic Update
March 26, 2017

Great Lakes Connections
International Joint Commission newsletter
March 2017

Human Health Effects of Cyanobacterial Toxins in the Great Lakes Region: A Science and Monitoring Assessment
5. Conferences & Webinars

March 31 - April 14, 2017
CUASHI Spring 2017 Cyberseminars:
Heterogeneity, Complexity and Anomalous Transport in Hydrologic Systems:
March 31, 2017
*Linking Freshwater Transport and Quality: A New Frontier?*
Antoine Aubeneau, Purdue University
April 7, 2017
*Solute Transport in Heterogeneous Aquifers and Implications for Risk Assessment*
Felipe de Barros, University of Southern California
April 14, 2017
*Biological and Chemical Activities in Confined Flows: The Role of Heterogeneity and Segregation*
Pietro de Anna, University of Lausanne

All talks take place at 3:00 p.m. ET.  [Link to Archived seminars]

April 4-6, 2017
NASA Remote Sensing Hydrology Workshop
Application Deadline: February 15, 2017
CUAHSI Training Workshop
Boston, MA

Monday, April 10, 2017
Dr. Robert Sterner, University of Minnesota-Duluth Large Lakes Observatory
*Lake Superior: A warming ecosystem*
Great Lakes Seminar Series
NOAA Great Lakes Environmental Research Laboratory
[Registration] 1:00 - 2:00 pm EDT

Tuesday, April 11, 2017
EPA Tribal Science Webinar Series
Co-hosted by the National Center for Environmental Research (NCER) and the Office of Science Policy
*Harmful Algal Blooms (HABs): Research, Collaborations, and Other Activities*
3:00 - 4:30 pm EDT

Tuesday, April 11, 2017
MNSP Shoreline Educator Train-the-Trainer workshop
Michigan Natural Shoreline Partnership
Cranbrook Institute of Science in Bloomfield Hills, MI
Thursday, April 13, 2017
Microplastics: What we know and discussion of research needs
Carlie Herring of NOAA
1:00 pm US EDT

May 15-19, 2017
International Association for Great Lakes Research (IAGLR)
IAGLR Theme for 2017: “From Cities to Farms: Shaping Great Lakes Ecosystems”
Detroit, MI

May 31 - June 1, 2017
Emerging Contaminants in the Aquatic Environment Conference
The Illinois Sustainable Technology Center (ISTC) and Illinois-Indiana Sea Grant (IISG)
Champaign, IL
Abstract Deadline: Feb 6, 2017

May 31 - June 2, 2017
Great Lakes and St. Lawrence Green Infrastructure Conference
Detroit, MI

July 20-21, 2017
2017 Naval Future Force Science and Technology (S&T) EXPO
Walter E. Washington Convention Center in Washington, D.C.

6. Open RFPs of ongoing interest

2017 National Fish Habitat Action Plan
F17AS00016
Department of the Interior, Fish and Wildlife Service
Deadline: Applications are accepted on a rolling basis

2017 Great Lakes Sediment and Nutrient Reduction Program
The Great Lakes Commission
Deadline: April 14, 2017

CUAHSI Instrumentation Discovery Travel Grant
CUAHSI
Deadline: April 1, 2017

2017 Great Lakes Restoration Initiative (GLRI) Request for Applications
U.S. Forest Service, through an agreement with U.S. EPA
Grant Focus: This program is intended to support competitive projects that implement strategic, priority actions within Forest Service authorities to restore, protect, and maintain the Great Lakes ecosystem. Projects must plant trees to improve tree cover to positively impact the quality of
water entering the lakes. Successful projects will respond to one of the following Program Areas:

1. **Mitigate Emerald Ash Borer (EAB) Impacts**: Acres treated for tree canopy restoration with non-host species in urban EAB quarantine areas to enhance and restore biodiversity and water quality.

2. **Reduce Runoff from Degraded Sites through Green Infrastructure**: Gallons of storm water runoff avoided from degraded sites through improved green infrastructure using trees and other vegetation.

3. **Enhance Wetland Filtration**: Acres treated in planting native trees and vegetation to improve coastal wetland function.

**Informational Webinar**: March 13th, 11:00 am Eastern/10:00 am Central;

**Application deadline**: April 13, 2017

**Who is eligible**: State agencies, Tribal communities, nonprofit organizations, educational institutions, and local governments.

**Grant award amount**: $50,000 - $200,000 depending on which ‘Program Area’

**Grant duration**: 2 years

**Match requirement**: None

**Geographic focus**: Proposed projects must lie entirely within the Great Lakes watershed, as mapped in RFA instructions.

**Conservation Innovation Grant**
USDA-NRCS-PR-CIG-17-01
Department of Agriculture, Natural Resources Conservation Service
Deadline: April 28, 2017

**BOEM FY 2017 Environmental Studies Program**
M17AS00012
Department of the Interior, Bureau of Ocean Energy Management
Deadline: April 28, 2017

**Cooperative Training Partnership in Aquatic Toxicology and Ecosystem Research**
EPA-G2017-ORD-E1
Environmental Protection Agency
Deadline: May 16, 2017

**Cooperative Program for Atmospheric Science Education**
NOAA-SEC-OED-2017-2005168
Department of Commerce, NOAA
Deadline: Mary 17, 2017

**2018 Urban and Community Forestry Challenge Cost Share Grant Program**
USDA-FS-UCF-01-2018
Department of Agriculture, Forest Service
Deadline: May 24, 2017 Due to Dept. Administration Hold on all grant RFP Announcements. This RFP status is pending.

**National Fish Passage Program**
F17AS00030
Department of the Interior, Fish and Wildlife Service
Deadline: September 30, 2017

Coastal Program F17AS00014
Department of the Interior, Fish and Wildlife Service
Deadline: September 30, 2017

FY2016 to FY2017 NOAA Broad Agency Announcement (BAA)
NOAA-NFA-NFAPO-2016-2004791
Department of Commerce, NOAA
Deadline: September 30, 2017

Partners for Fish and Wildlife
F17AS00015
Department of the Interior, Fish and Wildlife Service
Deadline: September 30, 2017

MI DEQ Nonpoint Source RFP schedule (based on FY2017)
-plan next year’s program in advance
Watershed Plans must be submitted for Approval: Feb 2016
Draft RFP information Released: June 2016
Implementation RFP Released: July 2016
New Watershed Plans must be 319 Approved: 7/20/16
Notice of Intent Letters due: 8/17/16
Invitations for Full Proposals sent via e-mail: 8/31/16
Proposals due: 10/16/16
Projects Awarded: Early Summer 2017

NSF Announcements:

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<th>Title</th>
<th>Proposal Deadline</th>
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<tbody>
<tr>
<td>16-509</td>
<td>Long-Term Ecological Research (LTER) New Site Competition</td>
<td>No date set for next year yet Pre-Proposal: Feb 1, 2016 Full Proposal: Aug 2, 2016</td>
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<tr>
<td>16-503</td>
<td>National Science Foundation Research Traineeship Program (NRT)</td>
<td>No date set for next year yet LOI: December 9, 2016 Prop: February 7, 2017</td>
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<tr>
<td>15-609</td>
<td>Division of Environmental Biology (core programs) (DEB)</td>
<td>Pre-Proposal: Jan. 23, 2017 Full Proposal: Aug 2, 2017</td>
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<td>16-541</td>
<td>Antarctic Research</td>
<td>April 17, 2017</td>
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<td>16-540</td>
<td>NSF Scholarships in Science, Technology, Engineering, and Mathematics (S-STEM)</td>
<td>April 20, 2017</td>
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<td></td>
<td>Limited Submission –Internal Deadline:</td>
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<tr>
<td>Program Number</td>
<td>Program Description</td>
<td>Due Date</td>
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<tr>
<td>14-559</td>
<td>Opportunities for Promoting Understanding through Synthesis (OPUS)</td>
<td>August 1, 2017</td>
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<tr>
<td>15-577</td>
<td>Collections in Support of Biological Research (CSBR)</td>
<td>August 14, 2017</td>
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<tr>
<td>PD 98-1650</td>
<td>Biological Oceanography</td>
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<td>PD 98-1610</td>
<td>Physical Oceanography</td>
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<td>Chemical Oceanography</td>
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<td>PD 98-1620</td>
<td>Marine Geology &amp; Geophysics</td>
<td>August 15, 2017</td>
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<td>PD 17-7643</td>
<td>Environmental Geology &amp; Geophysics</td>
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<td>PD 17-1417</td>
<td>Chemical and Biological Separations</td>
<td>October 20, 2017</td>
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<td>PD-17-1440</td>
<td>Environmental Engineering</td>
<td>October 20, 2017</td>
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<td>PD 09-6882</td>
<td>Environmental Chemical Sciences (ECS)</td>
<td>October 31, 2017</td>
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<td>13-589</td>
<td>Oceanographic Facilities and Equipment Support</td>
<td>November 15, 2017</td>
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<td>Ship Operations</td>
<td>November 15, 2017</td>
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<td>Oceanographic Technical Services</td>
<td>December 15, 2017</td>
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<td></td>
<td>Oceanographic Instrumentation</td>
<td>December 15, 2017</td>
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<tr>
<td></td>
<td>Shipboard Scientific Support Equipment</td>
<td>Accepted Anytime</td>
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<td></td>
<td>Ship Acquisition and Upgrade &amp; Other Facility Activities</td>
<td>November 1, 2017</td>
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<tr>
<td>15-536</td>
<td>Research Experiences for Teachers (RET) in Engineering and Computer Science</td>
<td>November 1, 2017</td>
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<td>Limited Submission – Internal Deadline:</td>
<td>not posted yet for 2017</td>
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<tr>
<td>15-600</td>
<td>Integrated Earth Systems (IES)</td>
<td>November 14, 2017</td>
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<td>14-601</td>
<td>Dynamics of Coupled Natural and Human Systems (CNH)</td>
<td>November 21, 2017</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 8, 2017</td>
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<td>15-568</td>
<td>Earth Sciences Postdoctoral Fellowships (EAR-PF)</td>
<td>January 9, 2018</td>
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<td>15-504</td>
<td>Major Research Instrumentation Program (MRI)</td>
<td>January 10, 2018</td>
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<td>Limited Submission – Internal Deadline:</td>
<td>October 25, 2017</td>
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<tr>
<td>16-517</td>
<td>National Robotics Initiative (MRI)</td>
<td>January 11, 2018</td>
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<tr>
<td>PD 98-1680</td>
<td>Ocean Technology and Interdisciplinary Coordination</td>
<td>February 15, 2018</td>
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<tr>
<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>
</tr>
<tr>
<td>15-560</td>
<td>Geomorphology and Land-use Dynamics (GLD)</td>
<td>Accepted Anytime</td>
</tr>
<tr>
<td>15-516</td>
<td>Earth Sciences: Instrumentation and Facilities (EAR/IF)</td>
<td>Accepted Anytime</td>
</tr>
<tr>
<td>16-595</td>
<td>Arctic Research Opportunities</td>
<td>Accepted Anytime</td>
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**NASA ROSES 2016**

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<tr>
<th>APPENDIX</th>
<th>PROGRAM Description</th>
<th>NOI/Step 1 DUE DATE</th>
<th>PROPOSAL DUE DATE</th>
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<tr>
<td>A.3</td>
<td>Ocean Biology and Biogeochemistry</td>
<td>02/13/2017 Step-1</td>
<td>04/13/2017 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 3/31/2017</td>
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<tr>
<td>A.51</td>
<td>Earth Science Applications: Food Security and Agriculture</td>
<td>2/17/2017</td>
<td>4/7/2017</td>
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### NASA ROSES 2017

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<th>APPENDIX</th>
<th>PROGRAM</th>
<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 Program Overview</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>A.2</td>
<td>Land-Cover/Land-Use Change</td>
<td>4/3/2017 (NOI)</td>
<td>6/8/2017</td>
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<td>A.8</td>
<td>Supporting UN Sustainable Development Goals 14 and 15 in the Context of Climate Variability and Change</td>
<td>TBD</td>
<td>TBD</td>
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<td>A.9</td>
<td>ECOSTRESS Science Team</td>
<td>TBD</td>
<td>TBD</td>
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<tr>
<td>A.10</td>
<td>Physical Oceanography</td>
<td>5/30/2017</td>
<td>6/30/2017</td>
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<td>A.11</td>
<td>Ocean Salinity Science Team</td>
<td>7/31/2017</td>
<td>8/31/2017</td>
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<td>A.14</td>
<td>Ocean Vector Winds Science Team</td>
<td>9/29/2017</td>
<td>10/30/2017</td>
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<td>A.16</td>
<td>Cryospheric Science</td>
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<td>A.17</td>
<td>IceBridge Research</td>
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<td>A.19</td>
<td>Solar Irradiance Science Team</td>
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<td>10/6/2017</td>
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<td>A.20</td>
<td>Atmospheric Composition: Laboratory Research</td>
<td>N/A</td>
<td>5/26/2017</td>
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<td>A.23</td>
<td>Fire Impacts on Regional to Global Scales: Emissions, Chemistry, Transport, and Models</td>
<td>N/A</td>
<td>6/16/2017</td>
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<td>A.24</td>
<td>DSCOVR Science Team</td>
<td>TBD</td>
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<td>A.25</td>
<td>Terrestrial Hydrology</td>
<td>5/24/2017</td>
<td>7/12/2017</td>
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<td>A.28</td>
<td>Earth Surface and Interior</td>
<td>3/31/2017</td>
<td>5/15/2017</td>
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<td>A.29</td>
<td>Rapid Response and Novel Research in Earth Science</td>
<td>N/A</td>
<td>Rolling submissions through 3/29/2018</td>
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<td>A.33</td>
<td>Science Team for the OCO Missions</td>
<td>N/A</td>
<td>9/14/2017</td>
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<td>A.34</td>
<td>Earth System Science Pathfinder (ESSP) Venture-class Science Investigations: Earth Venture Suborbital-3</td>
<td>TBD</td>
<td>TBD</td>
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<td>A.36</td>
<td>New (Early Career) Investigator Program in Earth Science</td>
<td>7/31/2017</td>
<td>8/31/2017</td>
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<td>A.37</td>
<td>The Science of Terra, Aqua, Suomi NPP, and JPSS</td>
<td>TBD</td>
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<tr>
<td>A.39</td>
<td>Earth Science Applications: Health and Air Quality</td>
<td>TBD</td>
<td>TBD</td>
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<td>A.40</td>
<td>Earth Science Applications: Disaster Risk Reduction and Resilience</td>
<td>TBD</td>
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<td>A.42</td>
<td>Advancing Collaborative Connections for Earth System Science</td>
<td>TBD</td>
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<td>A.43</td>
<td>Making Earth System Data Records for Use in Research Environments</td>
<td>4/21/2017</td>
<td>5/22/2017</td>
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<td>E.2</td>
<td>Topical Workshops, Symposia, and Conferences</td>
<td>N/A</td>
<td>Rolling submissions</td>
</tr>
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</table>

**Topical Workshops, Symposia, and Conferences**

Rolling Submissions through 3/31/2017
7. 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 CWS:
If you plan to complete the certificate, please email Carol Asiala (mtcws@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.

Links to certificate degree schedule:
CWS Web page: http://www.mtcws.mtu.edu/education_gradcert.html
Grad School: http://www.mtu.edu/gradschool/administration/academics/forms-deadlines/pdfs/Certificate-ICSW.pdf

8. Student Research Grants (August 11) and Travel Grants (March 31)

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 9, 2016 March 3, 2017 August 11, 2017

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.). The research should support the Center's mission (http://www.mtcws.mtu.edu/about.html#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 and Research** grants are online at: [http://www.mtu.edu/greatlakes/about/documents/glrc-travel-grant-app.pdf](http://www.mtu.edu/greatlakes/about/documents/glrc-travel-grant-app.pdf)

Student advisors must be a faculty member of the GLRC (**CWS Faculty**) 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:
- presenting a poster at World Water Day in March;
- assisting with preparations for World Water Day;
- assisting with GLRC-sponsored outreach activities;

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**9. Colloquium Course – UN5100 – Spring 2017**

**Water & Society Colloquium Course**  
**Spring 2017 Topic:** “**Holistic Health Assessment for a Waterborne Contaminant from Multiple Perspectives**”

**Course Number:** UN5100, CRN 13023, 1 credit  
**Time/Location:** Tuesdays 3:35-4:25 in **Dow 875 (Confirmed)**  
**Course Organizer:** Noel Urban ([nurban@mtu.edu](mailto:nurban@mtu.edu))  
[http://www.mtcws.mtu.edu/education_colloquium.html](http://www.mtcws.mtu.edu/education_colloquium.html)

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.

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**10. Seminar Speaker Support Program**

Great Lakes Research Center members can apply for 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 [mtcws@mtu.edu](mailto:mtcws@mtu.edu).
11. CUAHSI (Consortium of Universities for the Advancement of Hydrologic Science, Inc.)

Michigan Technological University is a member university of CUAHSI (http://www.cuahsi.org) through the support of the Center for Water & Society and the CEE and GMES departments. Explore their website for resources available to faculty and research.

CUAHSI Cyberseminar Schedule: https://www.cuahsi.org/Cyberseminars

12. Job Opportunities

Urban Technician
Cuyahoga Soil & Water Conservation District, Cleveland 44114
deadline: April 12, 2107

Director of the Lake Erie Center
University of Toledo
Application review in early April 2017

Director of Freshwater Research
Director of Marine Research
Shedd Aquarium

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)

13. Student Opportunities
Office of Transportation and Air Quality 2017 Summer Intern Program
EPA
We are seeking student interns in Ann Arbor, Michigan and Washington, DC.
To apply, visit www.usajobs.gov and search for vacancy announcement numbers or click the
link below:
• [LV-OAR-OT-2017-0008](https://www.usajobs.gov): Student Trainee (Information Technology) GS-07
Postings will open on Monday, March 20th and close at 11:59 pm the day the 75th application is
received (all applications received that day will be considered) or March 24th, whichever comes
first.

May 16-19, 2017
**Master Class: Water Sustainability in a Global Economy**
Early Bird Registration Deadline: February 15th
Regular Registration Deadline: February 28th
CUAHSI Master Class, Location: Northern Arizona University, Flagstaff, AZ

**Michigan Sea Grant Fellowships**
University of Michigan + Michigan State University, NOAA
Deadline: May 26, 2017

Graduate fellowships with Michigan Sea Grant or a partner organization
• [Michigan Sea Grant Graduate Student Fellowship](https://www.michigansea grant.org): May 26, 2017

May 15-19, 2017
**International Association for Great Lakes Research (IAGLR)**
IAGLR Theme for 2017: “From Cities to Farms: Shaping Great Lakes Ecosystems”
Detroit, MI

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

**Sea Change - climate change on Lake Superior through sailing experience**
• month-long voyage - May 5 - June 4, 2017
• seeking crew, ages 18-25
• includes data collection, research, citizen engagement
• also view web page: [http://www.amicusadventuresailing.com/sea-change.html](http://www.amicusadventuresailing.com/sea-change.html)

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