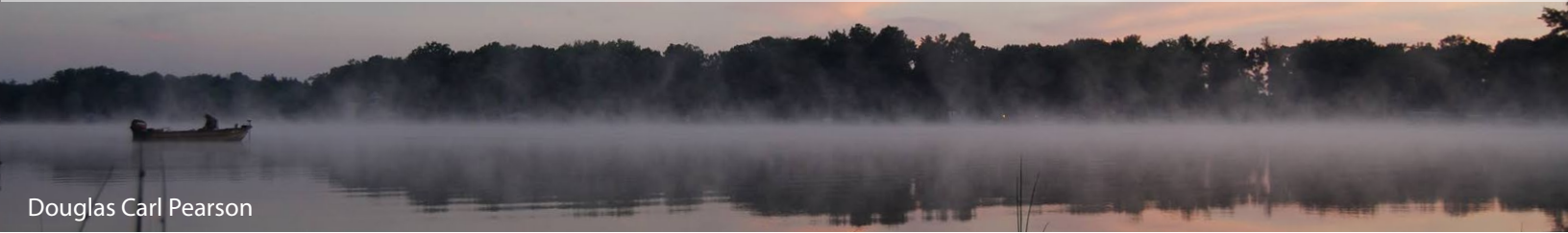


# Michigan Inland Lakes Convention: Conserving Lakes in a Changing Environment

September 16-18, 2020



Douglas Carl Pearson



Lisa Borre



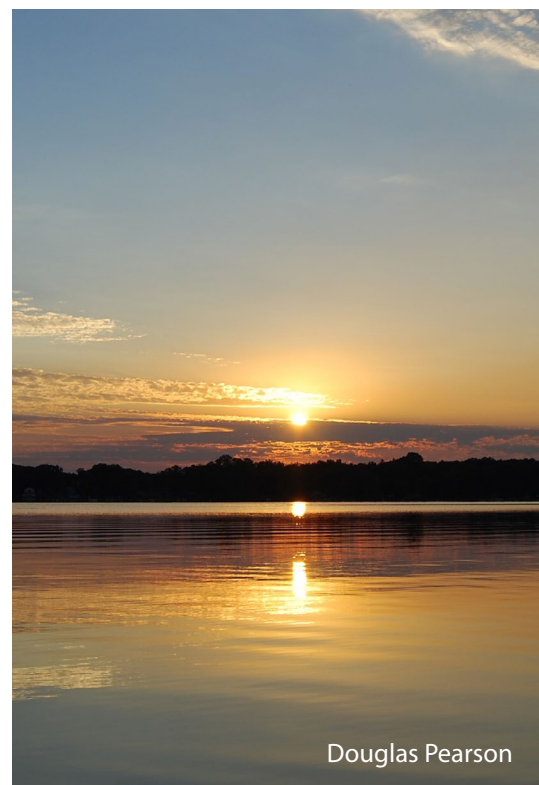
Douglas McLaughlin



Ralph Bednarz



Scott Brown



Douglas Pearson

# Welcome to the virtual 2020 Michigan Inland Lakes Convention!



The Michigan Inland Lakes Convention takes place every two years, and serves lake enthusiasts, researchers, managers, and educators. Thank you for joining us to learn and share the latest innovations and ideas in lake stewardship and to network with others who share your passion for lakes! This year's theme is "Conserving Lakes in a Changing Environment". The Convention is hosted by the Michigan Inland Lakes Partnership, a collaboration of diverse organizations with a common mission to advance stewardship of Michigan's inland lakes. Visit the Michigan Inland Lakes Partnership website to learn more: [www.canr.msu.edu/michiganlakes](http://www.canr.msu.edu/michiganlakes).

## Accessing the Convention

To join the Convention you will need to download Zoom, a free web-based software. To download Zoom visit <https://zoom.us>. We highly recommend testing Zoom before the Convention.

As a participant you will be able to speak to presenters via your microphone and use your video camera, if you have one, in most sessions. We ask that you remain muted during the presentations. You can submit questions and comments via a chat box to presenters.

Each session has a unique web address. Select it on the agenda to access the session. Zoom should automatically launch when you select the link on your computer. You can also copy and paste the web address into your web browser for access.

## Need Help?

If you need technical support during the Convention please contact the MSU IT Service Desk toll free at (844) 678-6200. Indicate you are contacting them regarding an MSU Extension conference.

## Convention Recordings

Most sessions will be recorded. If you are unable to attend, have technical issues, or would like to share recordings with others after the event please visit the Convention website.

# Agenda At-A-Glance

## Wednesday, September 16

9:00-Noon	Workshops
Noon-1:15 PM	Lunch break: Partner Organization Awards
1:15-2:30 PM	Welcome & Keynote: Dr. Robert Thorson
2:30-2:45 PM	Break
2:45-3:15 PM	Concurrent Sessions
3:15-3:30 PM	Break
3:30-5:00 PM	Concurrent Sessions
5:00-6:00 PM	Student/Mentor Networking Mixer

## Thursday, September 17

9:00-10:00 AM	Keynote: Dr. Kendra Spence Cheruvellil
10:00-10:15 AM	Break
10:15-11:45 AM	Concurrent Sessions
11:45-1:00 PM	Lunch break: Photography and Creative Writing Contest Awards
1:00-1:30 PM	Concurrent Sessions
1:30-1:45 PM	Break
1:45-5:00 PM	Workshops & Concurrent Sessions

## Friday, September 18

9:00-10:30 AM	Workshops & Concurrent Sessions
10:30-10:45 AM	Break
10:45- Noon	Workshops (cont.) & Lightning Presentations
Noon-1:15 PM	Lunch break: Trivia
1:15-2:45 PM	Concurrent Sessions
2:45-3:00 PM	Break
3:00-4:30 PM	Concurrent Sessions

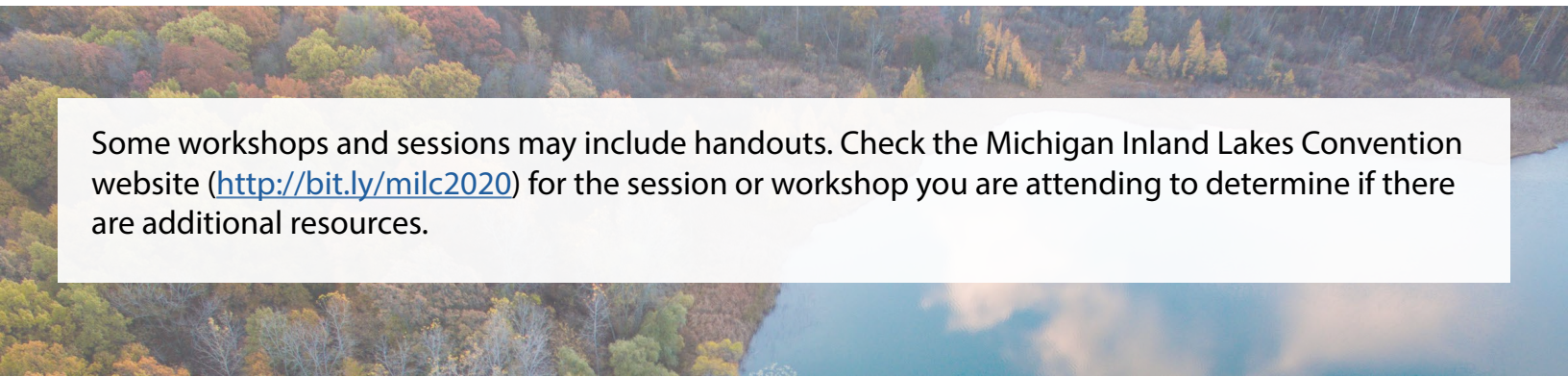


# Wednesday, September 16

All times Eastern Daylight Time

	<b>WORKSHOP: LAKE STEWARDSHIP</b>	<b>WORKSHOP: FISH IDENTIFICATION</b>	<b>WORKSHOP: COMMUNICATIONS</b>	<b>WORKSHOP: AQUATIC PLANTS</b>
<b>9:00 AM – Noon</b>	<p>The Best Conservation Tools: You and Your Lake Association</p> <p>Melissa DeSimone, Paul Sniadecki and Lon Nordeen, Michigan Lakes and Streams Association</p>	<p>Fish Identification</p> <p>Brian Roth, Michigan State University</p>	<p>Changing the Subject</p> <p>Eric Eckl, Water Words That Work, LLC</p>	<p>Aquatic Plant Identification</p> <p>Erick Elgin and Jo Latimore, Michigan State University</p>
<b>Noon – 1:15 PM</b>	Partner Organization Awards (begins at 12:30)			
<b>1:15 – 2:30 PM</b>	<p>Convention welcome by Jo Latimore and Julia Kirkwood, Convention Co-chairs Speaker introduction by Ralph Bednarz</p> <p><b>Keynote: Dr. Robert Thorson, Professor of Geoscience and Department Head, University of Connecticut</b></p> <p><b>Michigan Inland Lakes: Their Different Origins and Why This Matters for Lake Managers</b></p>			
<b>2:30– 2:45 PM</b>	Break			

Some workshops and sessions may include handouts. Check the Michigan Inland Lakes Convention website (<http://bit.ly/milc2020>) for the session or workshop you are attending to determine if there are additional resources.



# Wednesday, September 16

All times Eastern Daylight Time

<p><b>2:45 – 3:15 PM</b></p>	<p><b>SESSION: LAKE STEWARDSHIP</b></p> <p>Building Lake Organization Capacity the Wisconsin Way: 50 years of the Wisconsin Lakes Partnership</p> <p>Eric Olson, University of Wisconsin at Stevens Point</p>	<p><b>SESSION: HARMFUL ALGAE</b></p> <p>Bloom or bust: long- and short-term drivers of cyanobacterial blooms on Muskegon Lake, Michigan – a Great Lakes estuary</p> <p>Jasmine Mancuso, Grand Valley State University</p>	<p><b>SESSION: INVASIVE SPECIES MANAGEMENT</b></p> <p>Controlling Invasive Aquatic Species with ProcettaCOR on Big Pine Island Lake, Kent County, MI</p> <p>Jason Broekstra, PLM Lake &amp; Land Management Corp and Rick Buteyn, Progressive AE</p>	<p><b>SESSION: AQUATIC PLANTS</b></p> <p>Using Floating Plants in a Constructed Wetland for Phosphorus Removal from Tile Drain Runoff</p> <p>Lois Wolfson, Michigan State University</p>
<p><b>3:15 – 3:30 PM</b></p>	<p>Break</p>			
<p><b>3:30 – 5:00 PM</b></p>	<p><b>90 MINUTE SESSION: LAKE STEWARDSHIP</b></p> <p>MI Shoreland Stewards: Becoming an Ambassador</p> <p>Julia Kirkwood, Michigan Department of Environment, Great Lakes and Energy and Michigan Natural Shoreline Partnership and Jennifer Buchanan, Tip of the Mitt Watershed Council</p>	<p><b>90 MINUTE SESSION: WATER QUALITY AND LOCAL GOVERNMENTS</b></p> <p>Come HABs or High Water: Local Government Roles in Protecting Water Quality, Property, and Place</p> <p>Brad Neumann, Mary Reilly, and Erick Elgin, Michigan State University Extension</p>	<p><b>90 MINUTE SESSION: SWIMMER'S ITCH</b></p> <p>Understanding the Itch: New Findings on Swimmer's Itch in Michigan Lakes</p> <p>Ronald Reimink, Freshwater Solutions; Thomas Raffel, Oakland University; Patrick Hannington, University of Alberta; Deanna Soper, University of Dallas</p>	<p><b>90 MINUTE SESSION: AQUATIC INVASIVE SPECIES</b></p> <p>Michigan Department of Environment, Great Lakes and Energy Aquatic Invasive Species Updates</p> <p>Sarah Lesage and William Keiper, Michigan Department of Environment, Great Lakes and Energy</p>
<p><b>5:00 – 6:00 PM</b></p>	<p>Student/Mentor Networking Mixer</p>			

# Thursday, September 17

All times Eastern Daylight Time

<p><b>9:00 – 10:00 AM</b></p>	<p>Speaker introduction by Jo Latimore</p> <p><b>Keynote: Dr. Kendra Spence Cheruvellil, Professor, Department of Fisheries and Wildlife, Michigan State University</b></p> <p><b>Lessons learned from LAGOS: Creating and using big data to understand lakes at broad scales of space and time</b></p>			
<p><b>10:00 – 10:15 AM</b></p>	<p>Break</p>			
<p><b>10:15 – 11:45 AM</b></p>	<p><b>SESSION: COMMUNICATIONS</b></p>	<p><b>SESSION: INVASIVE PLANTS</b></p>	<p><b>SESSION: NATURAL SHORELINES</b></p>	<p><b>SESSION: FISH AND WILDLIFE</b></p>
	<p>Leave Space, Add Images: Visualizing the Future of Science</p> <p>Holly Wright, Northwestern Michigan College</p>	<p>Integrating genetics and herbicide studies to improve watermilfoil management outcomes</p> <p>Ryan Thum, Montana State University</p>	<p>Michigan Inland Lakes Shorelines: The Good, the Bad and the Ugly</p> <p>Ralph Bednarz, Retired, MI Dept. of Environmental Quality</p>	<p>Native bivalve mollusks in Duck Lake, Muskegon County</p> <p>Tom Tissue, Muskegon Community College</p>
	<p>Thinking Outside the Report: Using ArcGIS Web Apps and Story Maps to Share Data</p> <p>Caroline Keson, Tip of the Mitt Watershed Council</p>	<p>European Frog-bit (<i>Hydrocharis morsus-ranae</i> L.): Collaborative efforts towards an adaptive management framework</p> <p>Blake Cahill, Central Michigan University</p>	<p>Are you a Shoreland Steward?</p> <p>Julia Kirkwood, Michigan Department of Environment, Great Lakes and Energy and Michigan Natural Shoreline Partnership</p>	<p>Discovering Dragonflies</p> <p>Emily Heald, North Lakeland Discovery Center</p>
	<p>Facebook use by lake associations: Social media trends and tips</p> <p>Dr. Jo Latimore, Michigan State University</p>	<p>Monitoring and management of starry stonewort (<i>Nitellopsis obtusa</i>) in Wisconsin lakes</p> <p>Michelle Nault, Wisconsin Department of Natural Resources</p>		<p>Great Lakes Fisheries Heritage and the Coregonus Group of Fish</p> <p>Stewart McFerran, Freshwater Reporter</p>
<p><b>11:45 – 1:00 PM</b></p>	<p>Lunch Break &amp; Photography and Creative Writing Contest Awards (begins at 12:15)</p>			

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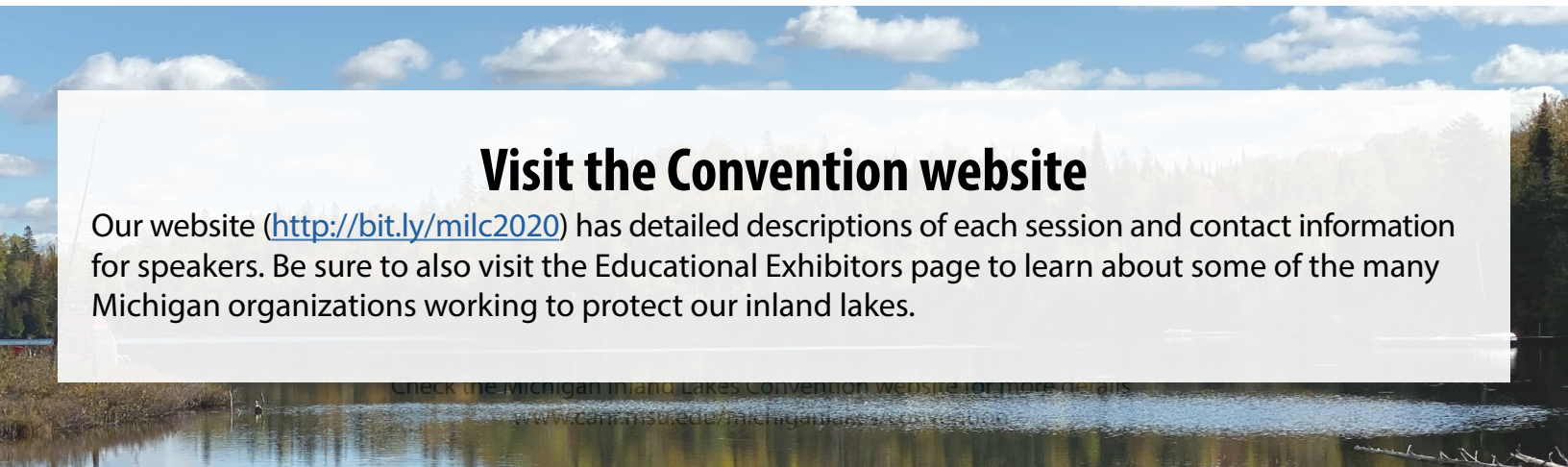
	<b>SESSION: LAKE MANAGEMENT</b>	<b>SESSION: BOAT INSPECTIONS</b>	<b>SESSION: NATURAL SHORELINES</b>	<b>SESSION: FLOODING AND LAKES</b>
<b>1:00– 1:30 PM</b>	<p>Enhancing the Capacity to Manage Inland Lakes: The Importance of Human and Cultural Capital Resources</p> <p>Jennifer Jermalowicz-Jones, Restorative Lake Sciences</p>	<p>Online Boater Led Check-In/Check-Out Alternative to In-Person Inspections: A COVID-19 Response Pilot</p> <p>Edgar Rudberg, CD3, General Benefit Corporation</p>	<p>Low Impact Development and Natural Shorelines are vital components of the “Treatment Train” approach to managing stormwater</p> <p>Nathan Griswold, Inhabitect, LLC</p>	<p>A Comparison of Flood Inundations in Michigan: Perspectives of Historical and Current Hydrological Events Affecting Two Inland Lake Systems: Crystal Lake Watershed and Tittabawassee River Watershed</p> <p>Stacy Daniels, Benzie County River Improvement Co.</p>
<b>1:30 – 1:45 PM</b>	Break			
	<b>WORKSHOP: HARMFUL ALGAE</b>	<b>WORKSHOP: CONFLICTS</b>	<b>WORKSHOP: MASS MEDIA</b>	<b>90 MINUTE SESSION: CLIMATE AND LAKES</b>
<b>1:45 – 3:15 PM</b>	<p>Gaining Control of Harmful Algal Blooms</p> <p>Patrick Goodwin, Vertex Water Features; Tom Buckowski, Lake Mission Viejo Association; and Patrick Simmsgeiger, Diversified Waterscapes, Inc.</p>	<p>Communicating through Conflict</p> <p>Jordan Burroughs, Lindsey Gardner, and Bindu Bhakta, Michigan State University Extension</p>	<p>Make the Most of Mass Media</p> <p>Eric Eckl, Water Words That Work, LLC</p>	<p>Climate Change</p> <p>Jeff Andresen, Michigan State University; Joe Nohner, Michigan Department of Natural Resources; Brian Majka, GEI Consultants</p>
<b>3:30 – 5:00 PM</b>				<p><b>90 MINUTE SESSION: HIGH WATER LEVELS</b></p> <p>High Water: EGLE’s role, response, and resources</p> <p>Luis Saldivia, Eric Calabro, and Brian Marshall, Michigan Department of Environment, Great Lakes and Energy</p>



# Friday, September 18

All times Eastern Daylight Time

	<b>WORKSHOP: ALGAL IDENTIFICATION</b>	<b>WORKSHOP: SOCIAL MEDIA &amp; SKILLS</b>	<b>WORKSHOP: INVASIVE SPECIES</b>	<b>90 MINUTE SESSION: FISHERIES MANAGEMENT</b>
<b>9:00 – 10:30 AM</b>	Collection, identification and ecology of freshwater algae with an emphasis on harmful algal bloom species	Social Skills of Social Media  Eric Eckl, Water Words That Work, LLC	An Update on Critical Aspects of the Forty Year Starry Stonewort Bio-Invasion  Scott Brown, Michigan Waterfront Alliance; David Carr, Finger Lakes Institute - Hobart and William Smith Colleges; and Wesley Glisson, Minnesota Aquatic Invasive Species Research Center	Managing Michigan's Fisheries on Inland Lakes  Matt Diana, Brian Gunderman, and Joe Nohner, Michigan Department of Natural Resources
<b>10:45 AM – Noon</b>	Ann St. Amand, PhycoTech			<b>LIGHTNING TALKS</b>  A series of 5-minute presentations highlighting lake organizations and breaking research. See next page for full list.
<b>Noon – 1:15 PM</b>	Lunch Break & Lake Trivia (begins at 12:30)			



## Visit the Convention website

Our website (<http://bit.ly/milc2020>) has detailed descriptions of each session and contact information for speakers. Be sure to also visit the Educational Exhibitors page to learn about some of the many Michigan organizations working to protect our inland lakes.



# Five Minute Lightning Talks

Each speaker will have five minutes to share their story.

Speaker	Organization	Topic
Eileen Boekestein	Lower Grand River Organization of Watersheds (Grand Valley Metro Council)	Empowering residents to protect lakes and streams in the Lower Grand River Watershed
Erick Elgin	Michigan Chapter of the North American Lake Management Society	Promoting and enhancing the protection and management of Michigan's inland lakes
Melissa DeSimone	Michigan Lakes and Streams Association	Helping to preserve and protect Michigan waters since 1961
Erick Elgin	Michigan State University Extension	Natural shoreline programs and water quality monitoring
Carol Richardson	Ore Lake Preservation Association	How to keep advocacy alive in times of apathy and anxiety
Jo Latimore	Michigan State University Extension	Introduction to Lakes Online and the Michigan Lake and Stream Leaders Institute
Jonathan Doubek	Lake Superior State University	Environmental and morphometric drivers of zooplankton community composition in lakes across the eastern Upper Peninsula of Michigan
Joe Nohner	Michigan Department of Natural Resources	What can the Midwest Glacial Lakes Partnership do for you?
Paige Filice	Michigan State University Extension	Aquatic invasive species outreach programs to protect lakes and streams
Kevin Walters	Michigan Department of Environment, Great Lakes and Energy	Protecting your lake through outreach - resources for aquatic invasive species
Heather Smith	The Watershed Center Grand Traverse Bay	Watershed nonprofit engages concerned citizens and lake associations in local decision-making around water
Erin Fuller	Van Buren Conservation District	Shoreline Living - A resource to promote natural shorelines on inland lakes
Bob Frye	Michigan Waterfront Alliance	A brief introduction to the mission and goals of the Michigan Waterfront Alliance



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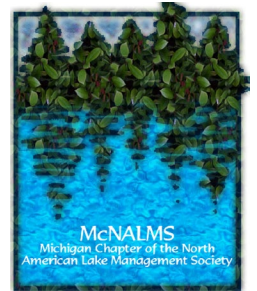
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	<b>SESSION: WATERSHEDS</b>	<b>SESSION: LAKE MANAGEMENT</b>	<b>SESSION: PEOPLE AND INVASIVE SPECIES</b>	<b>SESSION: WATER QUALITY ASSESSMENT</b>
<b>1:15 – 2:45 PM</b>	<p>Nonpoint Source Pollution Success Stories in Lake Restoration</p> <p>Ellie Flaherty, ORAU/EPA</p>	<p>Aquatic Plant Management &amp; Regulatory Compliance</p> <p>Peter Filpansick, LakePro, Inc.</p>	<p>A Comparison of Watercraft Decontamination Methods: Invasive Species Removal, Boater Outreach, and Cost</p> <p>Maria Bleitz, Michigan State University</p>	<p>Rapidly Advancing Technologies for Enhanced Water Quality Assessment</p> <p>Ronald Reimink, Freshwater Solutions, LLC</p>
	<p>Protecting Land = Protecting Lakes: How Land Trusts Can Help</p> <p>Hilary Hunt, Southwest Michigan Land Conservancy</p>		<p>Incorporating citizen science in a study of invasive watermilfoil</p> <p>Dr. Jo Latimore, Michigan State University</p>	
	<p>A forest landscape approach to lake habitat protection</p> <p>Dan Steward, Minnesota Board of Water and Soil Resources</p>	<p>Some useful sampling and statistical methods for assessing potential abundance changes in aquatic plant surveys</p> <p>James McNair, Grand Valley State University</p>	<p>Empowering pet and garden retailers to protect Michigan lakes from aquatic invasive species</p> <p>Paige Filice, Michigan State University Extension</p>	
<b>2:45 – 3:00 PM</b>	Break			
<b>3:00 – 4:30 PM</b>	<b>90 MINUTE SESSION: AQUATIC PLANTS</b>	<b>90 MINUTE SESSION: PUBLIC TRUST DOCTRINE</b>	<b>90 MINUTE SESSION: SEPTIC SYSTEMS</b>	
	<p>Value and Conservation of Aquatic Plants</p> <p>Erick Elgin, MSU Extension; Eric Calabro, Michigan Department of Environment, Great Lakes and Energy; and Joe Nohner, Michigan Department of Natural Resources</p>	<p>Legal Aspects of the Public Trust Doctrine as it Pertains to Michigan’s Lakes and Streams</p> <p>Bob Frye, Michigan Waterfront Alliance and William Carey and Dane Carey, Attorneys-at-Law</p>	<p>Protecting Inland Lakes: Septic System Maintenance, Policies, and Treatment Options</p> <p>Regina Young, Michigan Department of Environment, Great Lakes and Energy; Grenetta Thomassey, Tip of the Mitt Watershed Council; and Larry Stephens, Stephens Consulting Services, PC</p>	
<b>4:30 PM</b>	Convention adjourns. See you in 2022!			

# Convention Contributors

Thanks to all our sponsors for helping to make the Michigan Inland Lakes Convention an accessible and successful online event. Visit our Contributors webpage to learn about these organizations.

## Platinum



Institute of Water Research  
MICHIGAN STATE UNIVERSITY



## Gold



## Silver



North American Lake Management Society



## Join us for lunch!

Wednesday's lunch will include a short presentation of awards from Partner organizations. Thursday's lunch will feature winners of the Convention's creative writing and photography contests. And Friday's lunch will include a lake trivia game with prizes, accessible via your computer or mobile phone.

## Student/Mentor Networking Session

Wednesday from 5:00-6:00 PM students are invited to join informal conversations with professionals on a variety of topics, including lake-related careers, graduate school, job opportunities, lake research and management, and more.

## Give us feedback!

One challenge of a virtual event is determining the satisfaction of the audience. At the end of each workshop and session we will be sharing a link to a two-question evaluation in the chat. Please share your opinions with us.

After the Convention, please take a final survey (link below) giving your overall impression of the event and recommendations for next time. We greatly appreciate your participation and look forward to successful events in the future with the help of your input.

Michigan Inland Lakes Convention evaluation

[https://msu.co1.qualtrics.com/jfe/form/SV\\_bJm11ej9ZaWi5Ct](https://msu.co1.qualtrics.com/jfe/form/SV_bJm11ej9ZaWi5Ct)

## Need Continuing Education Credits?

By attending presentations at the Michigan Inland Lakes Convention, you can earn up to 4 Michigan Department of Agriculture and Rural Development (MDARD) pesticide applicator recertification credits (Commercial Core and Category 5-aquatic) per day. MDARD will award 1 credit per hour of training. If you would like to receive credit for your participation, please complete this online form within one week of participating in the Convention: [https://msu.co1.qualtrics.com/jfe/form/SV\\_eJQmJs3EQP1rawR](https://msu.co1.qualtrics.com/jfe/form/SV_eJQmJs3EQP1rawR)



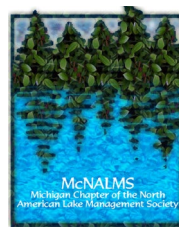
## Convention Committee

The following individuals served on the organizing committee for the Michigan Inland Lakes Convention: Ralph Bednarz (Retired, Michigan Department of Environmental Quality), Jason Broekstra (PLM Lake and Land Management Corp.), Eric Calabro (EGLE), Melissa DeSimone (Michigan Lakes and Streams Association), Erick Elgin (MSU Extension), Paige Filice (MSU Extension), Constanza Hazelwood (Northwestern Michigan College), Paul Hausler (Progressive AE), Julia Kirkwood (Co-chair, EGLE), Jo Latimore (Co-chair, MSU), Renae Latoski (MSU Extension), Skylar Lensch (intern, Northwestern Michigan College), Amy Lounds (EGLE), Joe Nohner (DNR), Sheyenne Nagy (intern, Northwestern Michigan College) and Lois Wolfson (MSU).

## Michigan Inland Lakes Partnership



The Michigan Inland Lakes Convention is organized by the Michigan Inland Lakes Partnership, a collaboration of diverse organizations with a common mission to advance stewardship of Michigan's inland lakes. The Partnership engages state and local agencies, Native American Nations, outreach institutions (universities and other educational institutions), non-governmental organizations, businesses, industries and citizens in a collaborative effort to ensure the quality, sustainability and ecological diversity of lakes, while considering society's needs. The following organizations are the decision-making body of the organization.



Extension



Institute of Water Research  
MICHIGAN STATE UNIVERSITY