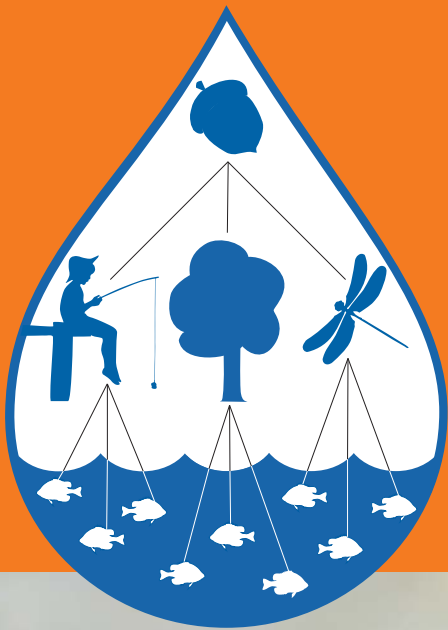


2019 Agenda

*Water Action Volunteers Symposium
and 41st Annual
Wisconsin Lakes Partnership Convention*



Pay it Forward

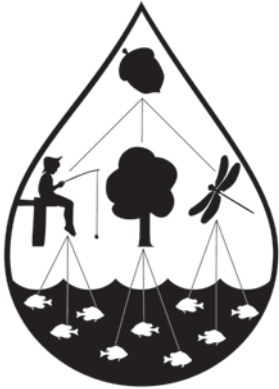


*Wisconsin
Lakes
Partnership*

**April 10-12
Stevens Point**

Welcome

to the Water Action Volunteers Symposium and 41st Annual Wisconsin Lakes Partnership Convention



Pay it Forward

“What have you done for me lately?” That’s a question I ask our dogs this time of year, as the spring melt reveals innumerable “gifts” that I am shoveling up. I know in my heart that I am cleaning up after them because they give us back something, though it’s hard to put my finger on what exactly that is. Companionship, prompts to exercise more, and entertainment are at the top of the list, but also a sense that we helped them both by rescuing them from uncertain futures in dog shelters. We adopted them because someone needed to. This spirit of taking action because it seems right and necessary infuses so much of what we celebrate and share at the Lakes Partnership Convention and Water Action Volunteers Symposium. We are participating in a grand social project summarized as *Paying it Forward*: we plant

these trees for our children and theirs, we remove these invasives for the benefit of native plants, we monitor water quality so that someone in the future can benchmark their own readings. It must come back to us one way or another because we keep it up, we press on when it’s not easy, we dig one more planting hole, pull one more invasive plant. Join us in celebrating this theme in many ways: check out the great *Pay it Forward* art projects by the students from Mercer, take in the Under the Surface photography display, attend a session you might normally not attend to expand your own understanding of lakes and rivers. You can also *Pay it Forward* at the convention by sharing your successes and progress with fellow attendees - you may well be the inspiration someone is looking for in order to start or revitalize their own efforts to protect in partnership our legacy of lakes, rivers and streams. Thank you all for once again making this such a remarkable event!

Eric Olson, *Director and Lake Specialist, Extension Lakes*

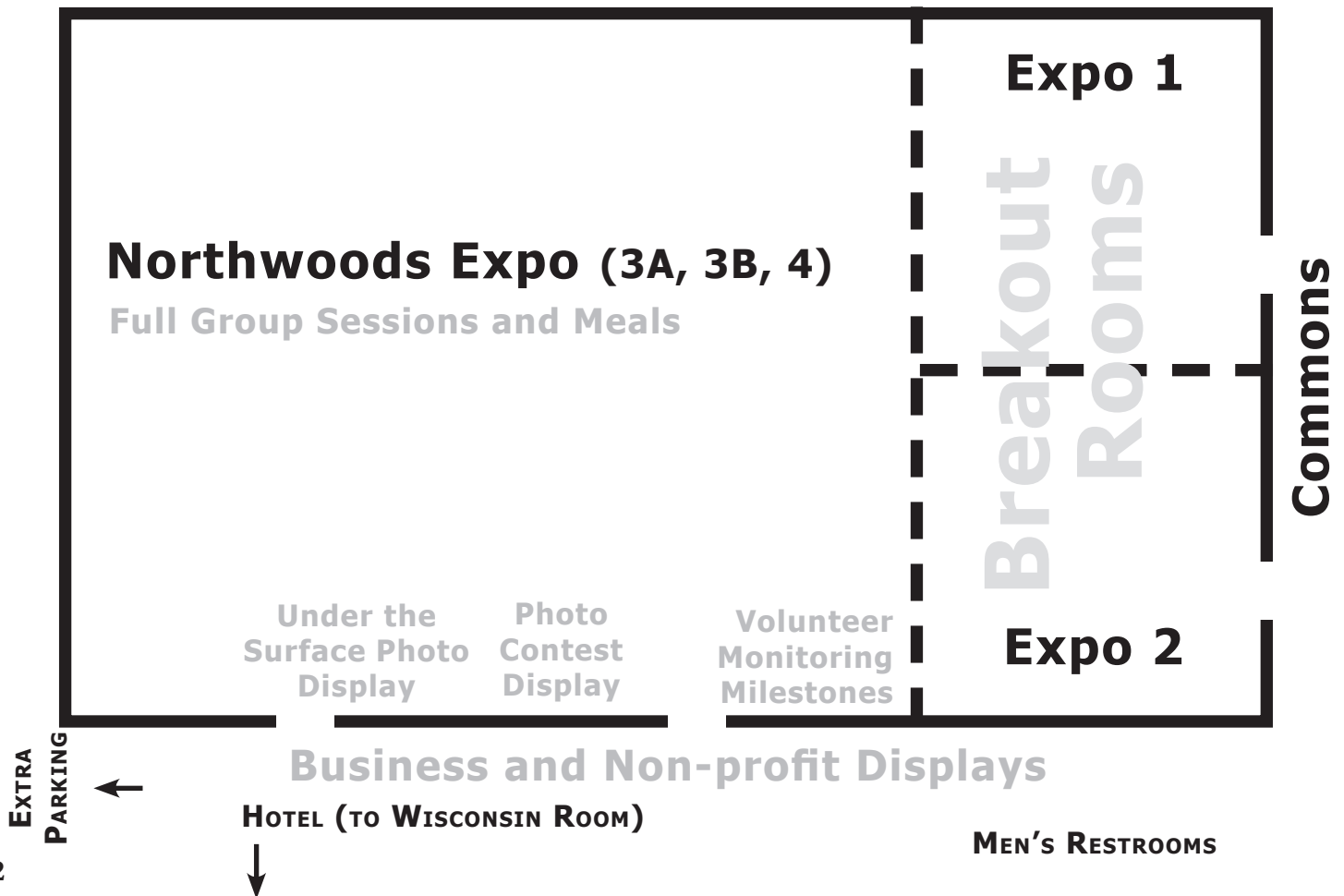
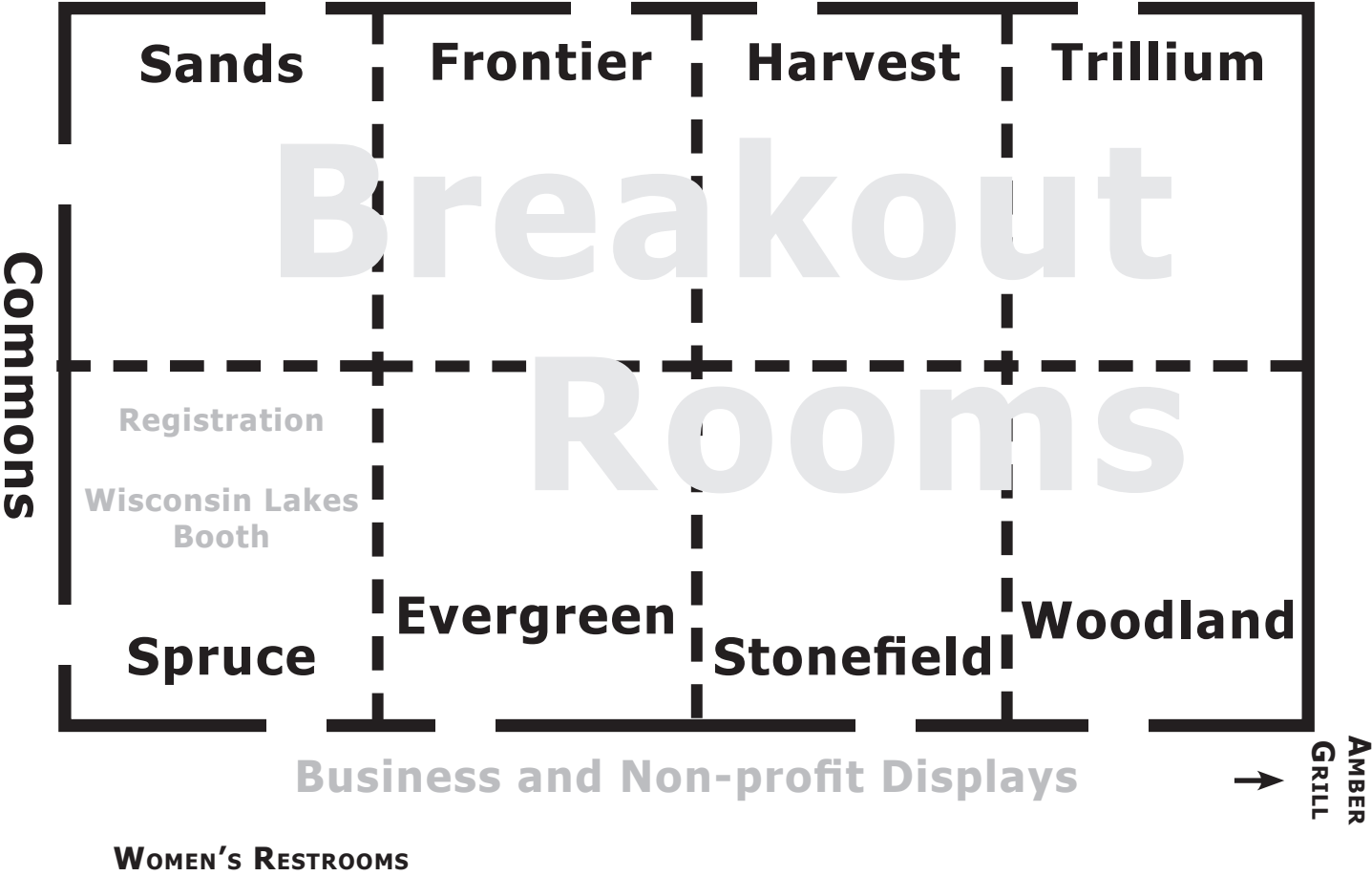


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Wednesday Agenda

April 10, 2019

Registration Open
8:00 AM-5:00 PM
Spruce

Morning Workshops - Pre-registration Required

Room →	Expo 1	Expo 2	Sands
9:00 AM-12:00 PM	Lake District Commissioner Introduction <i>Eric Olson</i>	Citizen Lake Monitoring Network Refresher <i>Sandy Wickman</i> <i>Rachel Sabre</i> <i>Kris Larsen</i> <i>Katie Hein</i> <i>SWIMS Help Team member</i>	SWIMS for Beginners <i>Jake Dickmann</i> <i>Ben Kort</i> <i>Dennis Wiese</i> <i>Jeanne Scherer</i>
10:15-10:45 AM	Refreshment Break in Commons		
12:00-1:00 PM	Lunch on your own (or pre-registered lunch in Northwoods Expo)		

Afternoon Workshops - Pre-registration Required

Room →	Expo 1	Expo 2	Sands	Frontier
1:00-4:00 PM	Advanced Lake District Commissioner Training: Major Projects <i>William O'Connor</i> <i>Mary Beth Peranteau</i>	Living Habitats <i>Heidi Natura</i> <i>Patrick Goggin</i> FULL	Advanced SWIMS <i>Jake Dickmann</i> <i>Ben Kort</i> <i>Dennis Wiese</i>	Getting the Message Out: Lake and River Communication <i>Jeanne Scherer</i> <i>Tim Campbell</i> <i>Mike Engleson</i>
2:30-3:00 PM	Refreshment Break in Commons			

All Day Workshops

Room →	Wisconsin	Off-site	Off-site
9:00 AM-12:00 PM	Lakekit.net Training and Website Construction <i>Ken Justiniano</i> <i>Karen Reynolds</i>	Beyond Free Fishing Weekend: More than Just a Weekend! <i>Theresa Stabo</i> <i>Lunch included on site.</i>	Water Action Volunteer Introductory Monitoring Training <i>Peggy Compton</i> <i>Lunch included on site.</i>
12:00-1:00 PM	Lunch on your own (or pre-registered lunch in Northwoods Expo)		
1:00-4:00 PM			

Thurs/Fri Mornings

6:30-7:15 AM

Thursday and Friday, 6:30-7:15 AM - Wisconsin Room

Sunrise Yoga

Quita Sheehan will lead participants through basic yoga poses in a mellow and relaxed environment. Participants should bring a yoga mat or bath towel with them. Comfortable clothing is recommended. Free and welcome to all ages and levels of interest.



Wednesday Agenda



Exhibits Open
12:00-6:00 PM
Commons

April 10, 2019

Morning Workshops - Pre-registration Required

Room →	Frontier	Harvest	Stonefield
9:00 AM-12:00 PM	How to Start a Lake Association, River, Watershed or Friends Group	Starting a Native Plant Growing Volunteer Program <i>Susan Sandford</i> <i>Theresa Nelson</i>	Loon Ranger <i>Erica LeMoine</i>
10:15-10:45 AM	Refreshment Break in Commons		
12:00-1:00 PM	Lunch on your own (or pre-registered lunch in Northwoods Expo)		

Afternoon Workshops - Pre-registration Required


Room →	Harvest	Trillium	Evergreen	Stonefield
1:00-4:00 PM	Introduction to Cyanobacteria: Identification, Ecology, Health Effects and Tracking <i>Gina LaLiberte</i>	Aquatic Plant Ecology and Identification <i>Susan Knight</i> <i>Paul Skawinski</i> <i>Michelle Nault</i> FULL	Lake District Treasurer Training <i>Eric Olson</i> <i>Tom German</i>	An Introduction to Lake Eutrophication Modeling <i>Paul McGinley</i>
2:30-3:00 PM	Refreshment Break in Commons			

Special Technical Sessions

Room →	Expo 1	Expo 2	Sands
4:45-5:45 PM	Preparing for and Responding to Extreme Weather Events <i>Shiba Kar</i> <i>Cathy Techtmann</i> <i>John Reimer</i> page 11	Surface Water Grants NR 193 <i>Alison Mikulyuk</i> page 11	Watercraft Cleaning and Decontamination Implementation Discussion <i>Moderators:</i> <i>Mike Engleson</i> <i>Tim Campbell</i> <i>Resource Specialists:</i> <i>Cathy Higley</i> <i>Andrew Teal</i> <i>Anna Cisar</i> page 11
5:45-7:30 PM	Networking Time (dinner on your own)		
7:00-11:00 PM	Wisconsin Lakes Partnership & WAV Symposium Welcome Reception Woodland Room and Amber Grill page 11		





Thursday Agenda

Morning Yoga
6:30-7:15 AM
Wisconsin Room 

April 11, 2019

Registration Open
7:30 AM-5:00 PM
Spruce

Concurrent Sessions

Room Stream →	Expo 1 Future of Fisheries	Expo 2 Ecology and Natural History	Evergreen Creative Concepts
8:00-8:50 AM	Common Non-game Fishes of Midwestern Lakes <i>Justin Sipiorski</i> page 12	Wisconsin's Civil War: The Battle of Southern and Northern Mammal Species Pairs <i>Chris Yahnke</i> page 12	Outdoor Photography Tips for Lake Lovers <i>Doug Moore</i> page 12
9:00-10:30 AM	Kickoff Plenary Session - Northwoods Expo Valuing Ecological Services to Make Smarter Water Decisions <i>Keynote Speaker: Dr. Kate Brauman</i> page 14		
10:40 AM-12:00 PM	Walleye Recruitment Failure on Minocqua Chain <i>John Kubisiak</i> Predation Cues Increase Growth Rate of Yellow Perch <i>Paul Hoppe</i> Bass/Sunfish Removal Effects on Walleye <i>Holly Embke</i> page 15	Wisconsin Bumble Bee Brigade: A New Statewide Monitoring Project <i>Jay Watson</i> Mussel Bioblitz: Let's See What's In Your Lake <i>Lisie Kitchel</i> <i>Jesse Weinzinger</i> page 16	Finding the Stories in Nature <i>Emily Stone</i> page 16
12:15-1:30 PM	Lunch in Northwoods Expo ~ Adrian Stocks, Wisconsin DNR page 17		
1:45-2:25 PM	Fisheries 101: Fishes in Your Lake <i>Justin Sipiorski</i>  page 18	Crayfish of Wisconsin <i>Craig Roesler</i> Rusty Crayfish in Sparkling Lake 18 Years After a Removal Experiment <i>Katie Hein</i> page 18	The Poet as Scientist <i>John Coletta</i> page 18
2:35-3:15 PM	Responses of Larval Fish and Zooplankton to 2,4-D Herbicides in N. WI Lakes <i>Dan Isermann</i> <i>Nick Rydell</i> Effects of Low Exposure of 2,4-D on Early Stages of Freshwater Game Fish <i>Gavin Dehnert</i> <i>Bill Karasov</i> page 20	The Science and Volunteers Behind Snapshot Wisconsin/ELK <i>Susan Frett</i> page 21	Under the Surface: The Intersection of Healing, Artistic Expression and Conservation <i>Ian Karl</i> <i>Toben Lafrancois</i>  page 21
3:30-5:00 PM	Poster Session in Commons <i>Stretch/Chair Yoga (3:30-3:45 in Northwoods Expo) ~ Refreshment Break (3:15-3:45 in Commons)</i> page 23		
5:30-8:00 PM	Lake Stewardship and Volunteer Stream Monitoring Awards Ceremony - Northwoods Expo 5:30 PM Socializing/Networking ~ 6:00 PM Banquet Dinner ~ awards to follow page 25		
8:00-11:00 PM	Networking After Hours - Lounge/Bar near Wisconsin Room page 25		



Thursday Agenda



Exhibits Open
8:00 AM-6:00 PM
Commons


April 11, 2019

Concurrent Sessions

Room Stream	Stonefield/Woodland People and Policy	Sands/Frontier Water and Land Health	Harvest/Trillium Lake and River Organization Capacity
8:00-8:50 AM	Using Targeted Social Media Message Testing to Prevent the Spread of AIS <i>Bret Shaw</i> <i>Tim Campbell</i> page 12	Forestry Best Practices and Erosion Vulnerability Assessment for Water Quality <i>Douglas Miskowiak</i> The Salt in Wisconsin Lakes <i>Hilary Dugan</i> page 13	Lake, River and Watershed Capacity 101 <i>Eric Olson</i>  page 13
9:00-10:30 AM	Kickoff Plenary Session - Northwoods Expo Valuing Ecological Services to Make Smarter Water Decisions <i>Keynote Speaker: Dr. Kate Brauman</i> page 14		
10:40 AM-12:00 PM	State Budget and Water Policy Update <i>Mike Engleson</i> page 16	Water and Land Health 101 <i>Rebecca Power</i> In-lake Ecology 101 <i>Susan Knight</i>  page 17	Membership Capacity <i>Eric Olson</i> page 17
12:15-1:30 PM	Lunch in Northwoods Expo ~ Adrian Stocks, Wisconsin DNR page 17		
1:45-2:25 PM	Economic Data on Oneida and Vilas County Waters <i>Thomas Kemp</i> <i>Dave Noel</i> <i>Quita Sheehan</i> page 19	Adaptation Strategies for Wisconsin Lakes Facing Climate Changes <i>Madeline Magee</i> page 19	Organizational Capacity <i>Eric Olson</i> page 19
2:35-3:15 PM	Policy Hot Topic: Wakeboats and Recreational Boating Ordinances <i>Mike Engleson</i> page 21	Lake Level Fluctuations in Wisconsin <i>Katie Hein</i> Citizen Science: Understanding Ecosystem Response to Flooding <i>Robert Bohanan</i> <i>Wade Moder</i> page 22	Relational Capacity <i>Eric Olson</i> page 22
3:30-5:00 PM	Poster Session in Commons <i>Stretch/Chair Yoga (3:30-3:45 in Northwoods Expo) ~ Refreshment Break (3:15-3:45 in Commons)</i> page 23		
5:30-8:00 PM	Lake Stewardship and Volunteer Stream Monitoring Awards Ceremony - Northwoods Expo 5:30 PM Socializing/Networking ~ 6:00 PM Banquet Dinner ~ awards to follow page 25		
8:00-11:00 PM	Networking After Hours - Lounge/Bar near Wisconsin Room page 25		




Friday Agenda

Morning Yoga
6:30-7:15 AM
Wisconsin Room 

April 12, 2019

Registration Open
7:30 AM-1:30 PM
Spruce

Concurrent Sessions

Room Stream →	Expo 1 Updates and Developments	Expo 2 Ecology and Natural History	Evergreen Creative Concepts
8:00-8:50 AM	Carpageddon: Green Lake's Battle with Bottom-feeders <i>Derek Kavanaugh</i> <i>Stephanie Prellwitz</i> The Indian Lake Rehabilitation Project <i>Dan Oele</i> <p style="text-align: right;">page 26</p>	Bryophytes from Central Wisconsin <i>Virginia Freire</i> Lichens! What's Not To Like? <i>Mary Bartkowiak</i> <p style="text-align: right;">page 26</p>	The Written Word <i>Patrick Goggin</i> <i>Alison Mikulyuk</i> <i>Ted J. Rulseb</i> <p style="text-align: right;">page 26</p>
9:00-10:15 AM	Friday Plenary Session - Northwoods Expo A Guide to Restoring the Little Things that Run the World <i>Keynote Speaker: Dr. Douglas Tallamy</i> <p style="text-align: right;">page 28</p>		
10:15-10:45 AM	Author's Corner - Northwoods Expo <p style="text-align: right;">page 29</p>		
10:45-11:45 AM	Trout in Wisconsin Lakes <i>Matthew Mitro</i> Where in the Winnebago Waterways is Water Hyacinth? <i>Chris Acy</i> <p style="text-align: right;">page 30</p>	Ecology 101 - Our Living Ancestors: The History and Ecology of Old-growth Forests in Wisconsin <i>John Bates</i>  <p style="text-align: right;">page 30</p>	Lakesploration: Memory to Movement <i>Kristi Minaban</i> <i>Alison Mikulyuk</i> <i>Katie Hein</i> <p style="text-align: right;">page 30</p>
12:00-1:15 PM	Lunch in Northwoods Expo ~ Todd Amb, Wisconsin DNR <p style="text-align: right;">page 32</p>		
1:30-2:30 PM	AIS Research Updates <i>Michelle Nault</i> <p style="text-align: right;">page 32</p>	Snakes of Wisconsin <i>Alyssa Hoekstra</i> <p style="text-align: right;">page 33</p>	Mindful Climate Action: Changing Behaviors to Enhance Health and Protect the Environment <i>Bruce Barrett</i> <i>Cathy Middlecamp</i> <p style="text-align: right;">page 33</p>
2:30-2:45 PM	Refreshment Break in Commons		
2:45-3:45 PM	Starry Stonewort Management Updates <i>Heidi Bunk</i> <i>Amy Kretlow</i> <p style="text-align: right;">page 34</p>	Birdscaping Your Shoreline Property <i>Mariette Novak</i> <p style="text-align: right;">page 34</p>	



Friday Agenda



April 12, 2019

Exhibits Open
8:00 AM-Noon
Commons

Concurrent Sessions

Room Stream →	Stonefield/Woodland People and Policy	Sands/Frontier Water and Land Health	Harvest/Trillium Lake and River Organization Capacity
8:00-8:50 AM	People and Policy 101 <i>Mike Engleson</i>  page 27	Healthy Lakes + Rivers <i>Pamela Toshner</i> A Tale of Two Gardens: Mini-Wetlands That Are Paying It Forward <i>Carolyn Aita</i> page 27	Programmatic Capacity <i>Eric Olson</i> page 27
9:00-10:15 AM	Friday Plenary Session - Northwoods Expo A Guide to Restoring the Little Things that Run the World <i>Keynote Speaker: Dr. Douglas Tallamy</i> page 28		
10:15-10:45 AM	Author's Corner - Northwoods Expo page 29		
10:45-11:45 AM	Partnership-based Restoration in the Little Plover River Watershed <i>Dan Maboney Tracy Hames</i> page 31	Blue-green Algae and What They Mean for Your Recreation in Wisconsin's Lakes <i>Gina LaLiberte Amanda Koch</i> page 31	Local Programmatic Capacity Examples: Rock Lake (Jefferson Co.) and Beaver Dam Lake (Barron Co.) <i>Patricia Cicero Tom Schroeder</i> page 31
12:00-1:15 PM	Lunch in Northwoods Expo ~ Todd Ambs, Wisconsin DNR page 32		
1:30-2:30 PM	But Really, How Do We Protect Wisconsin's Water Resources into the Future? <i>Pamela Toshner</i> Shoreland Zoning and Beyond: Options for the 2020s <i>Lynn Markham Robin Rothfeder</i> page 33	Water and Land Health 101 <i>Dan Zerr</i>  page 33	Programmatic Capacity at a County and Watershed Scale <i>Kendra Kelling</i> page 33
2:30-2:45 PM	Refreshment Break in Commons		
2:45-3:45 PM	Putting Wisconsin's Water First - Legislative and Gubernatorial Efforts to Address Water Quality in Wisconsin <i>Invited Panelists</i> page 34	Wetland Restoration at Pheasant Creek Conservancy <i>Tom Bernthal</i> page 34	Programmatic Capacity Demonstrated at a Statewide Scale <i>Eva Lewandowski Chad DuChateau</i> page 35



New 101 Sessions

New this Year: 101 Sessions

Is this your first Lakes Convention/WAV Symposium? Are you hoping to just *get the basics*? Well, you're in luck! This year each stream is offering a 101 session! Follow all of the 101 sessions (listed here), or pick and choose to your liking. Just look for this marker:



Date/Time	Room	Session	Stream
Thursday, April 11 8:00-8:50 AM	Harvest/Trillium	Lake, River and Watershed Capacity 101	Lake & River Organization Capacity
Thursday, April 11 10:40 AM-12:00 PM	Sands/Frontier	Water and Land Health 101 In-lake Ecology 101	Water and Lake Health
Thursday, April 11 1:45-2:25 PM	Expo 1	Fisheries 101: Fishes in Your Lake	Future of Fisheries
Thursday, April 11 2:35-3:15 AM	Evergreen	Under the Surface: The Intersection of Healing, Artistic Expression and Conservation	Creative Concepts
Friday, April 12 8:00-8:50 AM	Stonefield/Woodland	People and Policy 101	People and Policy
Friday, April 12 10:45-11:45 AM	Expo 2	Ecology 101 - Our Living Ancestors: The History and Ecology of Old-growth Forests in Wisconsin	Ecology and Natural History
Friday, April 12 1:30-2:30 PM	Sands/Frontier	Water and Land Health 101	Water and Land Health

Navigate the Convention "Streams"

Your Thursday and Friday convention sessions are arranged by the following topics, which we call "Streams." Follow one Stream as it flows through the convention or "Stream jump" to catch a little of everything.

Thursday and Friday Streams

- Future of Fisheries
- Ecology and Natural History
- Water and Land Health
- Creative Concepts
- Lake and River Organization Capacity
- People and Policy
- Updates and Developments



Creative Concepts - A New "Stream" this Year

We all know that sound, scientific research is necessary in protecting and preserving our water resources. But what other tools do we need? One important skill is to be able to take that science and relay it to all kinds of folks (lakefront property owners, anglers, boaters, sportsmen, policy makers, citizen scientists, etc.). Because all of these groups are different, we need to be creative in the way that we share our knowledge. That is why, this year, we included the *Creative Concepts* stream. Check out some (or all) of the sessions; they may give you the inspiration you need to *pay it forward!*

Wed. Technical Sessions



4:45-5:45 PM

4:45-5:45 PM – Expo 1 Room

Preparing for and Responding to Extreme Weather Events

Many of our lake and riverine communities have been impacted recently by flooding from extreme rain events. This session will bring together people with expertise from both northern and southern Wisconsin to share what they know about dealing with extreme weather and the preparations we can make in our communities to mitigate the effects of any future events. Ten-minute presentations followed by discussion time with the panel.

Presenters: Shiba Kar, Assistant Professor and Sustainable Energy Specialist, UW-Stevens Point, Cathy Techtmann, Environmental Resource Specialist, Extension Iron County, and John Reimer, Assistant Director of the Dane County Land and Water Resource Department

4:45-5:45 PM – Expo 2 Room

Surface Water Grants NR 193

Be part of the NR 193 Surface Water Grants code revision process. The goals for the process include supporting management at the watershed scale, uniting programs under a consistent code, updating the program to current standards and allowing for performance standards. By the end of April the code should be open for public comment, followed by public hearings in early June, with Spring 2020 as the target for rule promulgation. Your input is important, join us.

Presenter: Alison Mikulyuk, Lakes and Rivers Team Leader, Wisconsin DNR

4:45-5:45 PM – Sands Room

Watercraft Cleaning and Decontamination Implementation Discussion

Implementing aquatic invasive species prevention actions at boat landings beyond Clean Boats, Clean Waters can involve additional coordination and problem solving. This session will lead a discussion among interested stakeholders to connect interested parties, identify common issues, and to develop solutions that help groups implement these practices on the landscape.

Moderators: Mike Engleson, Director, Wisconsin Lakes and Tim Campbell, AIS Outreach Specialist, Wisconsin DNR and Extension Resource Specialists: Cathy Higley, Invasive Species Coordinator, Vilas County, Andrew Teal, Aquatic Invasive Species Coordinator, Bayfield County Land and Water Conservation Department, and Anna Cisar, Regional Aquatic Invasive Species Coordinator, Golden Sands Resource Conservation and Development Council, Inc.

Get Your Surface Water Grants Questions Answered!

Have questions about surface water grants or NR 193 in particular? Stop by the Wisconsin DNR Surface Water Grants table to get more information and find out how you can be part of the revision process.

Wednesday Evening

7:00-11:00 PM

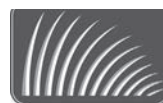
7:00-11:00 PM - Woodland Room

Lakes Partnership and WAV Symposium Welcome Reception

You are invited to the 2019 Wisconsin Lakes Partnership Convention and Water Action Volunteers Symposium Welcome Reception on Wednesday evening. Join us in a relaxed environment where we will serve up a few tasty appetizers and beverages. This informal gathering of water lovers is a great way for newcomers to “get their feet wet,” and for seasoned convention attendees to reconnect. There will be citizens and professionals who have graduated from The Wisconsin Lake Leaders Institute. Stop by to see how they are paying it forward. Share in some conversation and celebration of water lovers paying it forward. *(Included as part of your Thursday registration.)*

You're invited!

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Thursday Sessions

8:00-8:50 AM

8:00-8:50 AM — Expo 1 Room - Future of Fisheries

Common Non-game Fishes of Midwestern Lakes

Did you know that the Upper Midwest (Western Great Lakes Region) is home to over 150 species of fish? Over 70 of those species commonly occur in lakes—some are found only in lake environments! Among those 70 species, only about 20 are significantly sought for sport or for the dinner plate (gamefishes, panfishes, etc.). We are going to discuss the natural history of some of the more common non-game species in non-flowing (lentic) environments in our area, particularly lakes and backwaters of large rivers. We'll cover aspects of their biology such as their feeding habits, life cycles and habitat preferences. We will also discuss their role in the greater ecosystem including how they serve as food for gamefishes and wildlife, and how they can serve as ambassadors of overall ecosystem health.

Presenter: Justin Sipiorski, Professor of Biology, UW-Stevens Point

8:00-8:50 AM — Expo 2 Room - Ecology and Natural History

Wisconsin's Civil War: The Battle of Southern and Northern Mammal Species Pairs

John Muir wrote about least chipmunks on his farm in Marquette County in the mid-1800s, but those have been displaced by eastern chipmunks as they expand their range northward. Similar stories can be told about flying squirrels, deer mice, and jumping mice. Our local small mammal communities are dynamic and represent a snapshot in space and time. As the local environment changes, so does the ecological niche. Some, like the white-footed mouse, are marching further north and carrying with them the bacteria that causes Lyme Disease. Some, like voles, are having a hard time surviving milder winters due to a lack of snow cover. Most of this we don't even notice, but the message they are sending matters to all of us.

Presenter: Chris Yahnke, Professor of Biology, UW-Stevens Point

8:00-8:50 AM — Evergreen Room - Creative Concepts

Outdoor Photography Tips for Lake Lovers

Beauty may be in the eye of the lens. Join Doug Moore, a professional photographer, to see illustrated tips on how to improve your outdoor/nature photos for maximum impact. He will show us the building blocks of nature photography, and we will take some time to explore and “critique” the 2019 photo contest submissions.

Presenter: Doug Moore, Retired Naturalist, Photographer and Geology Enthusiast

8:00-8:50 AM — Stonefield/Woodland Room - People and Policy

Using Targeted Social Media Message Testing to Prevent the Spread of AIS

The prevention of aquatic invasive species (AIS) requires strategic outreach informed by social science. One idea that is relevant to strategic outreach designed to prevent the spread of AIS is message framing, which relates to how the composition of a message influences how individuals respond to the message by making certain parts of an idea more salient. Using a paid targeted messaging test on Facebook focused on learning more about preventing the spread of zebra mussels, we compared five message frames to determine which messages people were most likely to click on to learn more, targeting people who had shown previous interest in boating or fishing. In this session, we will share results of which message frames were most effective in terms of cost per click and which produced the most engagement. We'll also discuss the implications of these results on preventing the spread of AIS in Wisconsin.

*Presenter: Bret Shan, Environmental Communication Specialist, Division of Extension and UW-Madison
Tim Campbell, AIS Outreach Specialist, Wisconsin DNR and Extension*

Thursday Sessions, cont.



8:00-8:50 AM

8:00-8:50 AM — Sands/Frontier Room - Water and Land Health

(Two 25-minute presentations)

Forestry Best Practices and Erosion Vulnerability Assessment for Water Quality

Lac Courte Oreilles lake is home to a rare and simultaneously fragile two-story fishery that is vulnerable to pollution, exacerbated by climate change. The primary concern affecting the fishery is sediment erosion and phosphorus transport from land to water, from various land uses including silviculture. Geodesign methods index individual forested parcels in the watershed for their sensitivity to timber harvest. Moreover, freely available storymaps provide owners of forested land with a better understanding of the challenge on this lake and how they can partner to protect water quality and the fishery. Additionally, online GIS mapping tools provide landowners with the ability to better plan for timber harvest. These tools are designed specifically for landowners who are not required to create a timber harvest plan or use best management practices.

Presenter: Douglas Miskowiak, Senior GIS Education Specialist, UW-Stevens Point

The Salt in Wisconsin Lakes

Road salt (sodium chloride) is often thought of as an ‘environmentally safe’ chemical. However, at high concentrations, chloride can alter aquatic ecosystems by stressing freshwater species and can deteriorate drinking water sources. For over 70 years, we have applied road salt to paved surfaces, without any regard for the environmental consequences. This session will focus on long-term chloride trends and the state of Wisconsin’s lakes with regard to chloride contamination. We will discuss which lakes are at risk, and what is currently being done locally to curtail further environmental damage.

Presenter: Hilary Dugan, Assistant Professor, Center for Limnology, UW-Madison

8:00-8:50 AM — Harvest/Trillium Room - Lake and River Organization Capacity



Lake, River and Watershed Capacity 101

Local organizations such as lake associations and lake districts are at the heart of Wisconsin’s 40+ year history of, “protecting in partnership our legacy of lakes.” This session will explain why local organizations play such a critical role in protecting and restoring Wisconsin lakes. We will explore the overarching model that shows the relationship between lake groups and other partners like the Wisconsin DNR and Extension Lakes. The session concludes with an overview of the four dimensions of capacity we are focusing on: membership, organizational, relational, and programmatic.

Presenter: Eric Olson, Director and Lake Specialist, Extension Lakes

“Gardens and the greater landscapes that surround them occupy such enormous areas of the country that they have great potential to address many of the environmental challenges facing us today if given half a chance. Gardens are made of plants and plants deliver, either directly or indirectly, many of the ecosystem services that support human populations.”

- Rick Darke and Doug Tallamy

The Living Landscape: Designing for Beauty and Biodiversity in the Home Garden



Thursday Keynote

9:00-10:30 AM

Thursday Welcome and Kick-off Keynote - Northwoods Expo - 9:00-10:30 AM

Thursday Keynote

9:00-10:30 AM

Valuing Ecological Services to Make Smarter Water Decisions



Dr. Kate Brauman

GLOBAL WATER INITIATIVE LEAD SCIENTIST

Valuing Ecological Services to Make Smarter Water Decisions

On Thursday, we will be joined by Dr. Kate Brauman. Dr. Brauman is the lead scientist for Global Water Initiative at the University of Minnesota's Institute on the Environment, where she studies the coupled interaction of land-use change and water resources. Kate brings together the study of hydrology and plant-water relations with economics and policy to explore the effects of land cover on water delivery to downstream users. She is focused on hydrologic ecosystem services and global water availability and use, particularly

by agriculture. Kate received her doctorate from the Interdisciplinary Program in Environment and Resources at Stanford University, where she designed and led a project on the Big Island of Hawai'i quantifying the effects of pasture and forest on groundwater recharge and calculating the associated costs of water extraction.

Digital Production "Pay it Forward with Native Plants"

Northwoods Expo - 9:00 AM



"Landscape designers, landscape architects, gardeners, and even homeowners who have no interest in gardening have within their power the ability to protect our watersheds, cool and clean the air we breathe, build and stabilize top soil, moderate extreme weather, sequester carbon, and protect the biodiversity that drives ecosystem function."

- Rick Darke and Doug Tallamy

*The Living Landscape:
Designing for Beauty and Biodiversity in the Home Garden*

"You can't run a supermarket on just bread, and you can't run an ecosystem on just lawn...Lawns and foundation plantings are a lot simpler than the wild landscapes they replace."

- Sara Stein

Noah's Garden:

Restoring the Ecology of Our Own Back Yards

Listen to a child remind us of many great reasons to plant native gardens: layers of vegetation that help capture nutrients and clean water, provide wildlife habitat, give us a sense of place and an outlet for creative expression, and allow us to slow down and be mindful. We can all *pay it forward* by taking out a part of our own lawn and replacing it with native plants. This simple act can help sustain what Doug Tallamy calls, "the little things that run the world." Do your part to *pay it forward* and plant a native garden this year!

"What we contemplate here is more than ecological restoration: it is the restoration of relationship between plants and people...We are dreaming of a time when the land might give thanks for the people."

- Robin Wall Kimmerer

Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants

Thursday Sessions



10:40 AM-12:00 PM

10:40 AM-12:00 PM — Expo 1 Room - Future of Fisheries

(Three presentations)

Biological and Social Responses to Walleye Recruitment Failure on Minocqua Chain, Wisconsin

The Minocqua Chain is a 5,800-acre lake chain in northern Wisconsin. Walleye historically exhibited above-average adult densities with excellent size structure, despite weak to moderate levels of recruitment. Natural recruitment of walleye declined dramatically after the early 2000s, and size- and age-structure became skewed towards larger, older individuals. A strong public push to rehabilitate the fishery brought together biologists, tribal interests, anglers, fishing clubs and local businesses. These groups brought diverse perceptions to the table. The public effort resulted in local acceptance of much stricter measures than agency biologists originally proposed, including five years of no tribal walleye harvest coupled with catch-and-release angling regulations. Stocking of extended-growth walleye and liberalized bass harvest regulations were also implemented. Initial responses of the fishery to these measures are positive, but significant natural reproduction has not yet returned.

Presenter: John Kubisiak, Fisheries Biologist and Team Supervisor, Wisconsin DNR

Predation Cues Increase the Growth Rate of Yellow Perch

Predation has been shown to change the body conformation of prey fish, but to our knowledge this is the first study to demonstrate that predators can increase the overall growth rate of an important aquaculture species. Water-soluble factors associated with walleye (*Sander vitreus*) predation on either yellow perch (*Perca flavescens*) or fathead minnows (*Pimephales promelas*) significantly increased the mass and growth rates of *P. flavescens*. The findings suggest that *P. flavescens* possess an inducible growth-promoting mechanism regulated by water-born chemicals and could have important practical implications for the developing *P. flavescens* aquaculture industry, which is constrained by the relatively slow growth rate of this species in culture.

Presenter: Paul Hoppe, Ph.D. Student, UW-Madison

Effects of Whole-lake Bass and Sunfish Removal on Walleye in a North Temperate Lake

Walleye, a cool-adapted piscivorous species, have experienced abundance declines in northern Wisconsin over the past decade, but the cause is not understood. Multiple factors have been proposed as explanations for these declines, including rising lake temperatures, habitat degradation, harvest, and species interactions. Others have documented the rise of warm-adapted fish species, such as basses and sunfishes (i.e., centrarchids), indicating that competition and/or predation may be contributing to declines in cool-adapted species. To investigate these interspecies relationships, we are conducting a whole-lake manipulation to remove as many centrarchids as possible from an experimental lake in northern Wisconsin while measuring the response of walleye. A reference lake nearby is also being monitored. This project began with baseline monitoring of both lakes in 2017, fish removals in 2018, and will continue until 2021. This research will be used to establish an understanding of the conditions necessary to foster self-sustaining walleye populations.

Presenter: Holly Embke, Ph.D. Student, Center for Limnology, UW-Madison

(Continued on pages 16-17)

Reusable Water Bottles

Pick up a water bottle for only \$5 at the Wisconsin Lakes booth to show your connection with the Wisconsin Lakes Partnership! Proclaiming "All water is lake water," these bottles help remind us why we work so hard to protect in partnership our legacy of lakes!

Single-wall aluminum, holds 17 oz., limited quantity





Thurs. Sessions, cont.

10:40 AM-12:00 PM

10:40 AM-12:00 PM — Expo 2 Room - Ecology and Natural History

(Two 40-minute presentations)

Wisconsin Bumble Bee Brigade: A New Statewide Monitoring Project

The Wisconsin Bumble Bee Brigade is the DNR's newest citizen-based monitoring project. We're partnering with the public to improve our understanding, management, and conservation of Wisconsin's 20 native bumble bee species, many of which are in decline. Volunteers can participate by submitting incidental observations or conducting surveys. By working with volunteers throughout the state, we'll be paying it forward to develop an accurate map of species distributions, identify species-habitat associations, monitor population trends over time, and more! In 2018, we piloted the program by training over 80 volunteers to identify, photograph, and report our native bumble bees. We'll report the results of our first year and share how you can get involved when the project fully rolls out in 2019.

Presenter: Jay Watson, Terrestrial Invertebrate Ecologist and Pollinator Conservation Coordinator, Bureau of Natural Heritage Conservation, Wisconsin DNR

Mussel Bioblitz: Let's See What's in Your Lake

Our native mussels are important to water quality and lake ecology. A "Mussel Blitz" was recently conducted in the Three Lakes/Eagle River Chain in Oneida and Vilas Counties by citizen volunteers and Department of Natural Resources mussel biologists in order to determine where our native mussel species occur. In 2014, a new Wisconsin mussel species, the Eastern Pondmussel, was discovered in Medicine Lake. Volunteers waded and snorkeled in the shallow lake edges and helped confirm the Eastern Pondmussel, as well as 10 other species, in four new lakes! We encourage anyone living on a lake to look for Eastern Pondmussels and other mussel species, and report them to the Mussel Monitoring Program.

Presenters: Lisie Kitchel, Aquatic Ecologist, Bureau of Natural Heritage Conservation, Wisconsin DNR and Jesse Weininger, Conservation Biologist, Bureau of Natural Heritage Conservation, Wisconsin DNR

10:40 AM-12:00 PM — Evergreen Room - Creative Concepts

Finding the Stories in Nature

Stories are powerful tools for engagement, learning, and relating. But we don't need to invent anything—nature has already done it for us. Scientists are busy translating. These stories can make natural phenomena come alive for any audience! During this session, Emily will share some of her favorite stories and photos, including readings from her *Natural Connections* books. Then, through a series of props, writing, and speaking exercises, participants will have a chance to practice finding and telling the stories in nature.

Presenter: Emily Stone, Naturalist/Education Director, Cable Natural History Museum

10:40 AM-12:00 PM — Stonefield/Woodland Room - People and Policy

State Budget and Water Policy Update

With recent changes in the makeup of state government and new momentum to improve Wisconsin's waters, this session will review the current state of water policy in the legislature and Governor's office. We'll take a deep dive into the budget process, possibilities, and unique problems this year, as well as look at standalone legislation impacting Wisconsin's waters. We'll also discuss larger movements by the Wisconsin Legislature, Governor Evers, and how water and conservation groups are reacting to the many threats and opportunities presented in 2019.

Presenter: Mike Engleson, Director, Wisconsin Lakes

Thurs. Sessions, cont.



10:40 AM-12:00 PM

10:40 AM-12:00 PM — Sands/Frontier Room - Water and Land Health

(Two 40-minute presentations)



Water and Land Health 101

It's often said that a waterbody's health reflects the condition of its watershed. This session will cover the fundamental concepts underlying this important relationship between the land and the water. We'll discuss the basics of what watersheds are, how we measure their condition, and how watershed activities influence the health of lakes and surrounding streams. You'll learn why it is so important for lake advocates to take an interest in promoting healthy watersheds. We will also share some of the most prominent tools you can use to engage partners in your watershed to both protect and restore the landscapes that shape lakes and rivers.

Presenter: Rebecca Power, Director, North Central Region Water Network

In-lake Ecology 101

Lake ecology is a fascinating discipline, with biology, chemistry and physics all playing a role in every lake. The plants in the shallow littoral zone are at the *root* of a healthy lake. Animals of all kinds, from fish to loons are favorite lake residents. Lake microorganisms perform all kinds of critical processes and are the invisible heroes of the lake. From Al (aluminum) to Zn (zinc), chemistry is elemental to a well-functioning lake. Lake physics, including fall and spring turnover and ice duration help define the annual rhythm of a lake. Altogether, lakes are dynamic ecosystems with many moving parts - all interacting to keep the lake humming. The more you know about your lake, the more you will appreciate it, so come and learn all about lake basics.

Presenter: Susan Knight, Interim Director, Trout Lake Station Center for Limnology

10:40 AM-12:00 PM — Harvest/Trillium Room - Lake and River Organization Capacity

Membership Capacity

Membership capacity represents the fuel that feeds a lake organization. It is reflected in the number of members a group has, the funds and volunteer time it can attract for projects, and the general community awareness of lake issues. We'll explore the different ways that lake groups can measure and grow membership capacity, including some ideas borrowed from other non-profits facing similar challenges. We will also brainstorm a new campaign that Extension Lakes and Wisconsin Lakes are planning to promote greater participation in lake association activities statewide.

Presenter: Eric Olson, Director, Extension Lakes

Thursday Lunch

12:15-1:30 PM



Thursday Lunch Speaker - Northwoods Expo - 12:45 PM

Adrian Stocks, Water Quality Program Director, Wisconsin DNR

In December, Adrian Stocks began his new role as Water Quality Program Director for the Wisconsin DNR. He has worked in New Mexico as an analytical chemist working with the New Mexico Environment Department. Adrian returned to the Midwest where he worked for a regional utility where he was responsible for compliance and reporting as a licensed wastewater operator and then for a bio-tech start-up company in Madison developing biofuels. He started with the DNR as the Wastewater Permits Section Chief in 2014.

Adrian says, "I am thrilled and humbled to be starting in this role. Wisconsin is fortunate to have an abundance of precious water resources. I believe it is the Water Quality Program's responsibility to maintain and protect these vital resources and ensure Wisconsin is a healthy place to live for generations to come. Wisconsin has long been a leader in natural resource protection and innovative solutions to address environmental challenges. We have developed the regulatory permitting framework, a robust monitoring and assessment strategy and an extensive network of partnership programs across the state that allows the water quality program to preserve and restore these incredible riches. I hope to continue and enhance these efforts and allow Wisconsin to maintain its status as a leader in effective environmental policy."



Thursday Sessions

1:45-2:25 PM

1:45-2:25 PM — Expo 1 Room - Future of Fisheries



Fisheries 101: Fishes in Your Lake

There are over 70 fishes that inhabit non-flowing (lentic) waters in the Upper Midwest—ecosystems such as glacial lakes, wetlands and river backwaters. Some of these species only occur in lentic environments. From the largest predatory species down to the smallest plankton and insect eating species, we will provide a brief introduction to fishes common in food webs in lentic environments in your backyard. After a brief introduction to the major groups of Midwestern lake fishes and to the lake aquatic food web, we will open the forum to a question and answer session driven by you! Ever wonder about those other fish in your lake? Bring your questions and ideas to the discussion. We are likely to do some myth-busting along the way!

Presenter: Justin Sipiorski, Professor of Biology, UW-Stevens Point

1:45-2:25 PM — Expo 2 Room - Ecology and Natural History

(Two 20-minute presentations)

Crayfish of Wisconsin

Crayfish are an interesting component of biological communities in Wisconsin lakes and streams. This session will explore the basic components of crayfish biology, and you'll learn ways to identify the various Wisconsin crayfish species. We'll also discuss the ecological impacts of the invasive rusty crayfish and the influence that a trematode parasite has on their populations.

Presenter: Craig Roesler, Water Resources Management Specialist, Wisconsin DNR

Rusty Crayfish in Sparkling Lake 18 Years After a Removal Experiment

Rusty crayfish invaded Sparkling Lake in the late 1970s and caused declines in aquatic plants, the native virile crayfish, and panfish like bluegill and pumpkinseed. In 2002, researchers from UW-Madison's Center for Limnology began removing hundreds of thousands of rusty crayfish with traps. The population crashed within a few years, and in 2008, the researchers stopped removing the few rusty crayfish that remained. Though some rusty crayfish can still be found in Sparkling Lake today, the lake has changed. Aquatic plants and panfish are now abundant. Come and listen to the story of rusty crayfish in Sparkling Lake, from the old days of trapping thousands of crayfish a day to more recent adventures SCUBA diving through schools of panfish.

Presenter: Katie Hein, Lake Water Quality Lead, Wisconsin DNR

1:45-2:25 PM — Evergreen Room - Creative Concepts

The Poet as Scientist

Why was Henry David Thoreau (poet, philosopher, and journalist) the first person to deliver a paper on ecological succession--instead of a scientist? Why was Thoreau, as Darby Nelson writes, "America's first limnologist?" Here's why: Thoreau counted his emotional and aesthetic responses to natural phenomena as actual data about those phenomena. He refused to separate beauty and feeling (poetry) from other recorded responses to the natural world (science). Come join us to learn practical tips for writing the poetry of science and for keeping a journal in which aesthetic and emotional responses count as data about the natural world!

Presenter: John Coletta, Professor of English, UW-Stevens Point

Thursday Sessions, cont.



1:45-2:25 PM

1:45-2:25 PM — Stonefield/Woodland Room - People and Policy

Economic Data on Oneida and Vilas County Waters (Two 20-minute presentations)

The Impact of Water Clarity on Home Prices in Vilas and Oneida Counties, Wisconsin

This session will discuss the results of a study done on property values in northern Wisconsin. This study estimated the residential property value gains associated with improvements in water clarity on 60 different lakes across Vilas and Oneida counties. From this study, we were able to conclude that a one-meter improvement in water clarity would produce an \$8,090.87 to \$32,171.12 improvement in the market price of an average residential property on a lake within the study area.

Presenter: Thomas Kemp, Department Chair and Professor of Economics, UW-Eau Claire

Economic Data for the Surface Waters of Oneida and Vilas Counties

In this session, we'll explore how property values, tax revenues, and visitor spending affect local economies, and we'll examine the effects of protection and remediation of degraded water quality on the local economy. We will also discuss how Oneida and Vilas counties have collected these data, and how they have gone about disseminating their findings.

Presenters: Dave Noel, retired Engineer, member of Oneida County Lakes and Rivers Association and Quita Sheehan, Conservation Specialist, Vilas County Land and Water Conservation Department

1:45-2:25 PM — Sands/Frontier Room - Water and Land Health

Adaptation Strategies for Wisconsin Lakes Facing Climate Changes

Wisconsin's 15,000 inland lakes are a vital economic and cultural natural resource statewide, but are threatened greatly by climate change. Recent harmful algal blooms, flooding, and fish kills can all be attributed to a warmer, wetter climate. To evaluate and compile adaptation strategies, the Wisconsin Initiative on Climate Change Impacts gathered researchers and managers with expertise on Wisconsin's inland lakes. In this session, we'll discuss the climate change impacts identified and possible adaptation strategies for four thematic areas relevant to inland lakes: water levels, water quality, aquatic invasive species, and fisheries. While adaptation strategies for each theme differ, there is consensus around the need for a multifaceted approach that incorporates communication and outreach, policy and regulation changes, traditional resource conservation approaches, and novel engineering designs. This approach focuses on protecting high-quality lakes, building lake resilience, and retaining beneficial ecosystem services. Thoughtful, strategic interactions with stakeholders are key to implementing these strategies.

Presenter: Madeline Magee, Office of Great Waters Monitoring Coordinator, Wisconsin DNR

1:45-2:25 PM — Harvest/Trillium Room - Lake and River Organization Capacity

Organizational Capacity

Organizational capacity is a reflection of a lake group's internal operations. There are numerous ways that lake organizations can structure themselves: some operate under fairly loose principles, while lake districts must follow Wisconsin state statute to answer questions of leadership, meeting scheduling and budget development. We'll focus mostly on the options facing lake associations and look at the pros and cons of different approaches to budgeting, planning and leadership.

Presenter: Eric Olson, Director, Extension Lakes



Thursday Sessions

2:35-3:15PM

2:35-3:15 PM — Expo 1 Room - Future of Fisheries

(Two 20-minute presentations)

Responses of Larval Fish and Zooplankton to Application of 2,4-D Herbicides in Northern Wisconsin Lakes

In this session, we will examine the results of a study done on the responses of larval fish and zooplankton to application of 2, 4-D herbicides in northern Wisconsin lakes. The objectives of this study were to determine if whole-lake 2, 4-D herbicide treatments used to control Eurasian watermilfoil affected: 1) abundance, diversity and size of zooplankton and 2) feeding, growth and size of larval fishes. Sampling occurred over three years (2015-2017) on six lakes in northern Wisconsin; three lakes served as references where no herbicide was applied. No statistically significant responses to the herbicide treatments were detected in any of the zooplankton or larval fish metrics we measured, but trends varied among lakes. We will discuss what these results mean and why potential effects may be difficult to detect in a lake setting.

Presenters: Dan Isermann, Wisconsin Cooperative Fishery Research Unit, UW-Stevens Point and Nick Rydell, Wisconsin Cooperative Fishery Research Unit, UW-Stevens Point

Effects of Low, Subchronic Exposure of Commercial 2,4-D Formulation on Early Life Stages of Freshwater Game Fish Species

Aquatic herbicides are used worldwide to eradicate nuisance and invasive plants despite limited knowledge of their toxicity to non-target organisms. 2,4-Dichlorophenoxyacetic acid (2,4-D) is a common active ingredient in commercial herbicide formulations. Application practices typically coincide with yearly freshwater fish spawning, exposing fish to xenobiotics during their vulnerable larval stages. However, the physiological impacts of 2,4-D on larval fish remain poorly understood. We conducted a series of experiments to determine the effects of low concentrations of commercial amine salt herbicide formulation DMA®4IVM on the development and survival of nine freshwater fish species at various life stages. We observed reduced survival in embryo assays for four out of nine species tested, reduced survival in 30-day larval assay for four out of six species tested, and no reduced survival in a 90-day juvenile assay in the two species tested. Altogether, the results indicate that the use of 2,4-D herbicide DMA®4IVM for weed control in aquatic ecosystems at current recommended concentrations could reduce fitness and survival of freshwater game fish species.

Presenters: Gavin Dehnert, Ph.D. candidate, UW-Madison and Bill Karason, Professor and Researcher, Department of Forest and Wildlife Ecology, UW-Madison

2:35-3:15 PM — Expo 2 Room - Ecology and Natural History

The Science and Volunteers Behind Snapshot Wisconsin/ELK

Snapshot Wisconsin is a volunteer-based wildlife monitoring project from the Wisconsin Department of Natural Resources. We recruit volunteers to host trail cameras on public or private land of at least 10 acres or more across the state, including the areas of elk reintroduction. The photos are posted online at www.SnapshotWisconsin.org for crowd-sourced classification. The goals of the project are to provide efficient information for wildlife management decision support and to involve the public in the process. Snapshot Wisconsin is a great opportunity for people of all ages to get involved and learn more about Wisconsin's wildlife. This presentation will share some results from the first two years, lessons learned from and how to get involved in the project, and tools we are using for statewide outreach.

Presenter: Susan Frett, Natural Resource Educator, Snapshot Wisconsin, Wisconsin DNR



Thursday Sessions, cont.

2:35-3:15PM

2:35-3:15 PM — Evergreen Room - Creative Concepts



Under the Surface: The Intersection of Healing, Artistic Expression and Conservation

Northwest Passage, a residential mental health treatment program for youth, is located in the watersheds of the St. Croix and Namekagon Rivers. Since its inception in 1978 it has used the woods and water of the region as a setting for psychological healing. Over the last five years, they have delved into the world of underwater exploration and photography as a means of connecting at risk youth to nature and guiding them to discover their own creative talents. In this presentation, Program Leaders Ian Karl and Dr. Toben Lafrancois will share artwork from the students and discuss details of the program. They will also provide examples of how the water is a healing and inspirational force in the lives of marginalized youth and how this program is helping to create the next generation of conservationists in our state.

Presenters: Ian Karl, Experiential Programming Coordinator, Northwest Passage and Toben Lafrancois, Invertebrate Biologist, Aquatic Ecologist and Adjunct Professor, Northland College

2:35-3:15 PM — Stonefield/Woodland Room - People and Policy

Policy Hot Topic: Wakeboats and Recreational Boating Ordinances

Many lakes in Wisconsin are witnessing a dramatic uptick in the presence of wakeboats - the powerboats that create a large wake to allow for “wakesurfing.” Stories are surfacing from across the state of damage to shorelines and habitat, as well as the safety hazards to other boaters and lake users. There are also concerns that the large ballast tanks of these boats may transport aquatic invasives from one lake to the next. This session will look at these issues, discuss successes and failures in local ordinance development and enforcement, as well as the potential and limitations for statewide solutions.

Presenter: Mike Engleson, Director, Wisconsin Lakes

(Continued on page 22)



2019 Convention T-shirts



2 for \$25



Available at the Wisconsin Lakes booth - Spruce Room



Thursday Sessions, cont.

2:35-3:15 PM

2:35-3:15 PM — Sands/Frontier Room - Water and Land Health

(Two 20-minute presentations)

Lake Level Fluctuations in Wisconsin

Lake levels fluctuate over time and can influence everything from recreation to fish growth to mercury contamination. Unfortunately, water levels are rarely monitored on lakes. We compiled lake and groundwater level records from approximately 2000 locations around the state and found that the accumulation of precipitation over a 10-year window is a good predictor of lake levels. We also learned that lakes in the north were very low at the same time as lakes in the south were very high. Come to this session to learn how lake levels fluctuate over time across the state, how these fluctuations influence the lake, and how to manage lake levels.

Presenter: Katie Hein, Lake Monitoring Technical Lead, Wisconsin Department of Natural Resources

Citizen Science: Understanding Ecosystem Response to Flooding

Flooding due to unprecedented rainfall during August 2018 affected many areas in Dane County, Wisconsin. Much of the focus was on the immediate aftermath, especially related to property damage and loss. Less obvious are the ecological effects within watersheds. The Upper Sugar River Watershed Association, UW-Madison North Temperate Lakes Long Term Ecological Research, and Wisconsin Institute for Science Education and Community Engagement have collaborated on a new study using USGS hydrology data from the National Water Information System: Web Interface. We found that flooding due to an extreme rainfall event on August 20, 2018 resulted in dramatic changes in gage height, discharge, conductivity and dissolved oxygen that were elevated longer than expected. Though hydrology data have since recovered, implications for changes in habitat and biological diversity may persist for a number of years. In this session, we will describe results from the study and related educational resources for citizen scientists and educators.

Presenters: Robert Bohanan, Ecologist and Science Educator and Wade Moder, Director, Upper Sugar River Watershed Association

2:35-3:15 PM — Harvest/Trillium Room - Lake and River Organization Capacity

Relational Capacity

The entire Wisconsin Lakes Partnership is premised on the idea that no one group can adequately care for lakes and watersheds. We need to develop and strengthen techniques for collaboration, allowing partners to focus on their strengths and complementing each other as much as possible. For example, lake organizations and land trusts each have niche roles that they can play in caring for lakes. In this session, we will discuss some of the key best practices for partnering.

Presenter: Eric Olson, Director, Extension Lakes



Thursday Stretch/Chair Yoga

Northwoods Expo - 3:30-3:45 PM

Need a brain break and time to stretch after all of the great sessions this morning? Use 15 minutes of your refreshment break to do just that, REFRESH! Stop over to the Northwoods Expo for a quick 15-minute stretch/chair yoga session with Quita Sheehan. Just bring yourself and leave rejuvenated!

Thursday Lakes Posters



Commons

3:30-5:00PM

Listed by topic, then alphabetically

Topic: Ecology (Plants & Animals)

Watershield “Fairy Rings” in the Huron Mountain Club

Susan Knight, UW Trout Lake Station seknight@wisc.edu
Michelle Nault, Wisconsin DNR michelle.nault@wisconsin.gov
Carol Warden, UW Trout Lake Station warden@wisc.edu
Barb Gajewski, Many Waters, LLC

What’s this Green Stuff Floating in the Lake?

Gina LaLiberte, Wisconsin DNR gina.laliberte@wisconsin.gov

Topic: Education/Outreach Projects

Engaging Students in Stream Monitoring

Max Grueneberg, UW-Whitewater Sustainability@uwv.edu

Frozen Down Under: A 4-Year Assessment of Ice Anglers and Aquatic Invasive Species in Oneida County

Stephanie Boismenu, Oneida County Land and Water Conservation
Department sboismenu@co.oneida.wi.us
Thomas Boisvert, Oneida County Land and Water Conservation
Department tboisvert@co.oneida.wi.us
Michele Sadauskas, Oneida County Land and Water Conservation
Department msadauskas@co.oneida.wi.us

Volunteer AIS Monitoring

Ilana Haimes, Wisconsin DNR ilana.haimes@wisconsin.gov

Wisconsin Mussel Monitoring Program

Jesse Weinzinger, Wisconsin DNR jesse.weinzinger@wisconsin.gov

Topic: Other

Mobile Data Collection Via Survey123

Ben Kort, Wisconsin DNR benjamin.kort@wisconsin.gov

Topic: Research/Case Studies

Advances in Water Level Monitoring by Citizen Scientists

Jim Michler, Consultant jrmichler@gmail.com
Jeff Rubsam, Center for Limnology jeffatwvl@hotmail.com
Emily Heald, North Lakeland Discovery Center water@discoverycenter.net
John Lenters, UW-Madison jlenters@wisc.edu
Carl Watras, UW-Madison cjwatras@wisc.edu

Dane County Yellow Floating Heart

Amanda Smith, Wisconsin DNR amanda.smith@wisconsin.gov

The Importance of Nutrients on the Species Composition of the Epipsammic Community of Douglas Lake, MI

Brenna Glas, UW-Oshkosh brenna.glas@gmail.com

The Role of Microbes and Sunlight in the Degradation of 2,4-D

Amber White, UW-Madison amwhite24@wisc.edu
Dr. Christina Remucal, UW-Madison remucal@wisc.edu
Dr. Trina McMahon, UW-Madison trina.mcmahon@wisc.edu

Topic: Success Stories

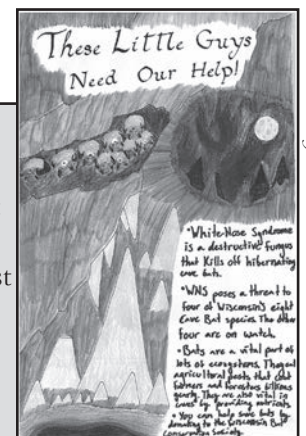
A Collaborative Response to Water Hyacinth (*Eichhornia crassipes*) along Mississippi River - Pool 8

Alex Selle, Wisconsin DNR alexander.selle@wisconsin.gov
Scott Caven, River Alliance of Wisconsin scaven@wisconsinrivers.org
Kristen Rathbun, Wisconsin DNR kristen.rathbun@wisconsin.gov

Northwoods Students Pay it Forward through Posters

Make sure to check out some of the posters from the Northwoods’ Invasive Species Poster Contest during the Poster Session this year. The Oneida County Land & Water Conservation Department and the Lumberjack Resource Conservation & Development Council hold this annual poster contest with the intent of educating students about aquatic and terrestrial invasive species in Wisconsin’s Northwoods counties. *Pay it forward* and help students (grade 4-8) in your area get involved. The deadline is May 1, 2019!

<https://www.oclw.org/2019-northwoods-invasive-species-poster-contest.html>



Hand-drawn poster



Northwoods Expo Displays

Under the Surface Photo Display A Sample from the In A New Light Gallery

In A New Light is a therapeutic nature photography program at Northwest Passage, a residential mental health treatment program for youth. In this particular gallery sample, we will display pieces which showcase the artwork of Northwest Passage clients who are learning for the first time to navigate their lives base on the talents they hold, instead of the perceptions of weakness thrust upon them by societal norms.



In a New Light: Under the Surface - Alexis, 17 - "Peekaboo"

Pay it Forward with Stunning Water Photos

Check out the west wall in the Northwoods Expo and admire the beautiful, striking and fun images that were submitted to our 17th Annual Lakes Partnership Photo Contest! This photo, "A Ricing Tradition," depicts a perfect example of *paying it forward!*

Carol Warden



VOTE FOR YOUR FAVORITE!

Tell us which photo you think is the best by voting for your favorite image. A ballot box and paper slips are next to the photo display – we will count the ballots and award a ribbon for the People's Choice. We will also reveal the winners selected by our panel of professional photographers.



Water Action Volunteers



Lake and River Monitoring Milestones

Volunteering as a citizen scientist is a big deal! Recording data on water quality and native plant communities, completing watercraft inspections and looking for invasive species are some of the ways citizens help protect and preserve our water resources. In many cases, volunteer data are the only data that exist for a specific waterbody. These baseline data are extremely important in helping natural resource specialists manage our public waters.

So, to each volunteer, from all of us, we would like to extend a heartfelt THANK YOU!

Check out the southwest corner of the Northwoods Expo for our lake and river monitoring milestones.

Thursday Evening



**Want to attend, but didn't sign up?
\$25 at the door**

5:30-8:00PM – Northwoods Expo
**Wisconsin Lake Stewardship and
Volunteer Stream Monitoring Banquet
and Awards Ceremony**

5:30 PM - Socializing/Networking
6:00 PM - Banquet dinner (awards to follow)

Please join us in celebrating the 2019 Wisconsin Lake Stewardship and Volunteer Stream Monitoring Award winners at our banquet and awards ceremony on Thursday evening.

Lake Stewardship

The Wisconsin Lakes Partnership presents the annual Lake Stewardship Awards to recognize the extraordinary volunteer and professional efforts of individuals and groups who protect and improve our lakes. People are nominated for Stewardship Awards by their peers - what a meaningful way to say, "Thank you!" to the people in your community who work so hard to care for our lakes. Winners of these awards join a select group of women, men, students, and organizations whose unmatched dedication, vision, and commitment ensure that Wisconsin's legacy of lakes will be safe and secure for generations to come.

Volunteer Stream Monitoring

The Division of Extension at UW-Madison and the Wisconsin Department of Natural Resources recognize a small selection of individuals and organizations every year for their efforts leading to increased participation in stream monitoring, collecting stream data and sharing their knowledge and data.

If you pre-registered for the banquet and awards ceremony, the word "Banquet" will appear on your name tag. If you haven't registered, but would like to attend, you are welcome to pay \$25 at the door.

Congratulations 2019 Award Winners!

Wisconsin Lake Stewardship:

Citizen: Nate and Jessica Rice
Regional Group: North Lakeland Discovery Center
Small Group: Beaver Dam Lake Management District
Youth/Educator: Communities at Oshkosh North, Fall of 2017
Public Service: Sandy Wickman

Volunteer Stream Monitoring:

Employee Category: Bob Sampson (Grande Cheese)
Rookie Category: Green Lake Watershed Water Action Volunteers
Pioneer Category: Ron Martin (Posthumously)
Group Category: UW-Whitewater Sustainability Office
Student Volunteers
Adult Category: Linda and Bob Merline

Networking After Hours

8:00-11:00PM – Lounge area next to Wisconsin Room

Pay it forward by sharing your voice with songs, poems and stories. If you have an acoustic instrument, bring it with you! Bring along your knitting or use the provided crayons and colored pencils to color your favorite water critter (it's very relaxing)! Anyone is welcome to just hang out and listen.





Friday Sessions

8:00-8:50 AM

8:00-8:50 AM — Expo 1 Room - Updates and Developments

(Two 25-minute presentations)

Carpageddon: Green Lake's Battle with Bottom-feeders

Green Lake has long struggled with water quality problems caused by the common carp, and has been embattled with the bottom feeders for decades. The combined efforts of several agencies have implemented commercial netting, trapping, exclusion barriers, electric gates, bubble barriers, electric shocking and more. Come learn about Green Lake's successes and hard-learned lessons clashing with the fish which everyone loves to hate.

Presenters: Derek Kavanaugh, Soil Conservationist II, Green Lake County Land Conservation Department and Board of Directors, Wisconsin Lakes, and Stephanie Prellwitz, Executive Director, Green Lake Association

A Brief History and Current Status of the Indian Lake Rehabilitation Project

Shallow lakes pose a unique challenge to resource managers charged with balancing public interests and resource limitations. These lakes are, by definition, shallow, relatively small, and susceptible to alternating between clear and turbid states with cascading impacts to water clarity, quality, and ability of the public to utilize the resource. Land use, managing aquatic invasive species, and fisheries composition are important elements to maintaining or flipping from one stable state to another. Indian Lake, situated in Northwest Dane County, is a very popular recreational property and has undergone several clear/turbid states due to, and in spite of, intensive management efforts. Here, we offer a brief history of the lake and watershed, the outcomes of various management actions and status of Indian Lake with detailed reports of how the aquatic plant and fisheries communities have changed over time with an eye towards future management efforts yet to come.

Presenter: Dan Oele, Fisheries Biologist, Wisconsin Department of Natural Resources

8:00-8:50 AM — Expo 2 Room - Ecology and Natural History

(Two 25-minute presentations)

Bryophytes from Central Wisconsin

Bryophytes will be introduced with information about their structure, life cycle, evolution and ecology. Examples of local bryophytes will be highlighted.

Presenter: Virginia Freire, Professor of Biology and Curator of Bryophytes for the Museum of Natural History, UW-Stevens Point

Lichens! What's Not To Like?

We'll review the biology and ecology of these amazing organisms. Since they are terrific indicators of air quality and often used in forest health, perhaps they can tell us something about our little corner of the world.

Presenter: Mary Bartkowiak, Invasive Plant Specialist, Wisconsin DNR

8:00-8:50 AM — Evergreen Room - Creative Concepts

The Written Word

Presenters will read aloud inspiring and interesting passages from water-related literature and the written word relating to natural history and life around water. Participants can just sit back and relax in this session, as readers will share the writing of some of our most famous Wisconsin conservation writers along with other authors and poets from beyond the badger state. Titles from each work read will be shared in an effort to reconnect attendees to some of their favorite writers and to expose them to new possibilities in their exploration of the written word.

Presenters: Patrick Goggin, Lake Specialist, Extension Lakes, Alison Mikulyuk, Lakes Team Leader, Wisconsin DNR and Ted J. Rulseb, Author, Lake Leader and Founder of TJR Communications



Friday Sessions, cont.

8:00-8:50 AM

8:00-8:50 AM — Stonefield/Woodland Room - People and Policy



People and Policy 101

Learn the basics of the legislative and rulemaking process and how you can best influence water policy from the local level to halls of the state Capitol. We'll discuss topics such as how a bill or ordinance gets created and passed into law as well as the procedure DNR and other state agencies must follow to create new or change existing rules and guidance. You'll also learn the best ways and right timepoints to influence the decision makers as they govern in this basic level session.

Presenter: Mike Engleson, Director, Wisconsin Lakes

8:00-8:50 AM — Sands/Frontier Room - Water and Land Health

(Two presentations)

Healthy Lakes + Rivers

We are building on the success of Healthy Lakes, a statewide initiative to improve habitat and water quality with simple and inexpensive projects for lakeshore properties, to engage more property owners. From 2015-2018 the Wisconsin Department of Natural Resources funded 559 best practices on 353 properties along 66 lakes! Exciting Healthy Lakes updates, including expansion to rivers and shoreland properties, a new ambassador program and improved promotional tools will be shared. Share your feedback and ask questions so that we can continue to learn and create Healthy Waters together!

Presenter: Pamela Toshner, Statewide Healthy Waters Coordinator & Northwest Lakes Biologist, Wisconsin DNR

A Tale of Two Gardens: Mini-Wetlands that are Paying It Forward

We will discuss two gardens funded by the DNR through the Beaver Dam Lake Improvement Association. These gardens: a three-year-old, 250 sq. ft rain garden and a two-year-old, 750 sq. ft. lakeshore buffer, are DIY projects on our one-acre residential property on Beaver Dam Lake at the northwest edge of the Upper Rock watershed. Our overarching goal was to establish “mini-wetlands” to collect and filter rain and lawn run-off and return this captured water to the aquifer. To this end, we chose plantings found in the wet and wet-mesic prairies and sedge meadows of southern Wisconsin. The common element of the two differently-planted gardens is a diversity of root structure essential for a successful wetland. We show how these robust gardens flourished in the typical wet-dry cycle of a Wisconsin spring-summer, and how they mitigated the detrimental effects of the atypical late summer 2018 flooding.

Presenter: Carolyn Aita, Distinguished Professor Emerita of Physical Chemistry, UW-Milwaukee, Gardener and Citizen Activist

8:00-8:50 AM — Harvest/Trillium Room - Lake and River Organization Capacity

Programmatic Capacity

Organizations and collaboratives demonstrate the depth and breadth of their capacity every time they embark to carry out specific projects and programs. Whether installing a rain garden, holding an educational lake fair, or taking on aquatic plant management challenges, they are getting things done that help protect and restore lakes. There are some key ways that groups can improve their programmatic capacity and truly leverage their other three capacities in order to maximize effectiveness. We'll discuss some of the basic strategies that groups can use, and this session will also be a springboard for a series of case studies and examples that highlight strong organizations operating at the local, regional and state scales.

Presenter: Eric Olson, Director and Lake Specialist, Extension Lakes



Friday Keynote

9:00-10:15 AM

Friday Keynote

9:00-10:15 AM

**A Guide to
Restoring the
Little Things that
Run the World**

Dr. Douglas Tallamy

PROFESSOR OF ENTOMOLOGY



Friday Keynote - Northwoods

Expo - 9:00-10:15 AM

A Guide to Restoring the Little Things that Run the World

Friday's keynote takes a closer look at how nature can (and does!) provide for itself through the complex web of life that is most often based on the relationship between plants and insects. Dr. Douglas W. Tallamy is a professor in the Department of Entomology and Wildlife Ecology at the University of Delaware, where he has taught for nearly forty years. Dr. Tallamy

is the author of the best-selling garden book, *Bringing Nature Home: How You Can Sustain Wildlife with Native Plants*, and was awarded the 2008 silver medal by the Garden Writers Association. His research demonstrates the enduring connections between plants and the insects that feed on them. Though we may think of these insects as pests, they are in fact critical food sources for native birds and small mammals. Doug argues that we all can “pay it forward” to nature by including many more native plants in our domesticated landscapes, whether at an “up north” cabin or in the middle of Milwaukee; our deeds will be multiplied and eventually will return to us in the form of a more diverse and resilient natural community.

“Biodiversity is a natural treasure that we have abused terribly, partly because we have not understood the consequences of doing so. Our understanding of such consequences is far from perfect, but we now know enough to behave responsibly toward the plants and animals on which we ourselves depend.”

- Doug Tallamy

Bringing Nature Home: How You Can Sustain Wildlife with Native Plants

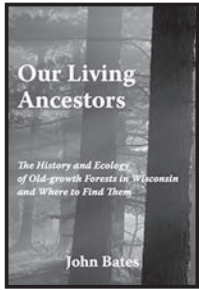


Friday Author's Corner

10:15-10:45 AM

Author's Corner - Northwoods Expo - 10:15-10:45 AM

Lucky for us, there are several authors attending and presenting at this year's Lakes Convention/WAV Symposium. Many will have their publications for sale and be available to sign books or have a chat directly after the Friday plenary talk. Take this opportunity to get to know them!

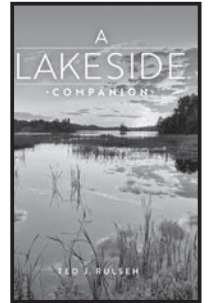


John Bates

Our Living Ancestors: The History and Ecology of Old-growth Forests in Wisconsin (and Where to Find Them)

Ted Rulseh

A Lakeside Companion
On the Pond: Lake Michigan Reflections

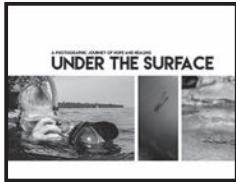


Ian Karl

Under the Surface: A Photographic Journal of Hope and Healing

Paul Skawinski

Aquatic Plants of the Upper Midwest: a photographic field guide to our underwater forests

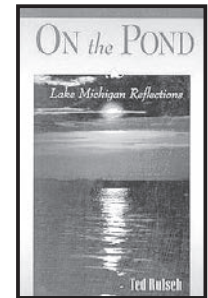


Lynn Markham

Magic Goggles
Fish Hotel

Emily Stone

Natural Connections: Exploring Northwoods Nature through Science and Your Senses
Natural Connections 2: Dreaming of an Elfin Skimmer

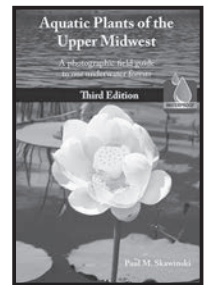
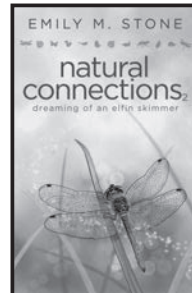
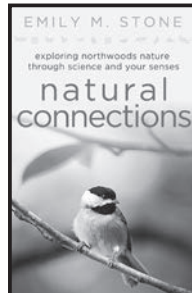
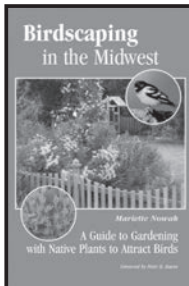


Mariette Nowak

Birdscaping in the Midwest: A Guide to Gardening with Native Plants to Attract Birds

Douglas Tallamy

Bringing Nature Home: How You Can Sustain Wildlife with Native Plants





Friday Sessions

10:45-11:45 AM

10:45-11:45 AM — Expo 1 Room - Updates and Developments

(Two 30-minute presentations)

Trout in Wisconsin Lakes - Changing Landscapes, Changing Demographics: Trends and Their Implications for Wisconsin Trout Fisheries

Wisconsin's inland trout fisheries exist in a dynamic landscape and climate that provides cold water to streams, spring ponds and lakes supporting trout. Wisconsin also has a growing human population, which affects land use, and its trout fisheries have an ever-changing user base, which provides support for trout management. Human alterations to the landscape and groundwater resources, along with a changing climate, currently threaten wild trout fisheries. What do trends in land use, climate, and demographics portend for trout in Wisconsin? The history of land use and conservation in Wisconsin shows how fragile our coldwater resources are, and how concerted efforts to improve how we live on the land can benefit trout. In this session, we'll discuss the history of inland trout fisheries in Wisconsin, the implications of current trends for the future of our state's wild trout, and ways the public can help protect, restore, and rehabilitate trout habitat and fisheries.

Presenter: Matthew Mitro, Fisheries Research Scientist, Wisconsin Department of Natural Resources

Where in the Winnebago Waterways is Water Hyacinth?

In October of 2015, water hyacinth (NR40 Prohibited) was found and reported by a citizen volunteer on Lake Winneconne, Wisconsin. With local partners, the Wisconsin Department of Natural Resources coordinated efforts in early November 2015 to remove all water hyacinth plants. As a sub-tropical plant, there was hope that the Wisconsin winter would eliminate any plants missed by removal efforts. However, in September 2016, more water hyacinth plants were located in the same area of Lake Winneconne. Subsequent monitoring and removal occurred in 2016 and 2017. In October of 2018, the Fox-Wolf Watershed Alliance, UW-Stevens Point, UW-Oshkosh, WI DNR, and citizen volunteers teamed up and once again located a population of water hyacinth. This is the fourth consecutive year that water hyacinth has been found in this same spot on Lake Winneconne in the late summer/fall. This session will provide updates on the water hyacinth situation and the outreach being conducted in the Winnebago system.

Presenter: Chris Agy, AIS Coordinator for Fond du Lac, Calumet, and Winnebago counties, Fox-Wolf Watershed Alliance

10:45-11:45 AM — Expo 2 Room - Ecology and Natural History

Ecology 101 - Our Living Ancestors: The History and Ecology of Old-growth Forests in Wisconsin



With less than 1% of our original pre-settlement forests still intact in Wisconsin, old-growth forests are a treasure to explore. But where can you find them? Join John Bates to explore the history of old-growth forests in Wisconsin, discover where the best sites still remain, and learn what makes old-growth so ecologically and aesthetically remarkable.

Presenter: John Bates, Author and Naturalist

10:45-11:45 AM — Evergreen Room - Creative Concepts

Lakesploration: Memory to Movement

Memories are held in the mind and body, and expression doesn't necessarily require words. Join us for an hour-long improvisational movement workshop where we will weave movement and memory together to celebrate our experience of water. Bring your playful side and be ready to engage creatively in a supportive space. Guidance, instruction and improvisational music will be provided. Please come as you are to enjoy a low-key break for the left brain. No special equipment or attire is required. All ages and abilities are encouraged to attend.

Presenters: Kristi Minaban, Water Resources Specialist, Wisconsin DNR, Alison Mikulyuk, Lakes Team Leader, Wisconsin DNR and Katie Hein, Lake Monitoring Technical Lead, Wisconsin DNR

Friday Sessions, cont.



10:45-11:45 AM

10:45-11:45 AM — Stonefield/Woodland Room - People and Policy **Partnership-based Restoration in the Little Plover River Watershed**

The water resources of the Little Plover River (LPR) watershed have been extensively studied for decades. In spite of this, controversy remains regarding how municipal, agricultural and industrial water use affects the health of groundwater, surface water and habitat resources in the watershed. In 2017, a partnership was established bringing together governmental, agricultural and conservation organizations to begin the process of identifying and addressing the water resource issues of the LPR watershed using voluntary actions guided by science. In the two-year time period since its inception, the Little Plover River Watershed Enhancement Project has raised over \$2.6 million for on-the-ground restoration action aimed at improving river flow, reducing storm water runoff, and enhancing fish and wildlife habitat. This presentation will discuss the development of this unique partnership-based approach to addressing water resource issues in the Little Plover River watershed.

Presenters: Dan Mahoney, Administrator, Village of Plover and Tracy Hames, Executive Director, Wisconsin Wetlands

10:45-11:45 AM — Sands/Frontier Room - Water and land Health

Blue-green Algae and What They Mean for Your Recreation in Wisconsin's Lakes

Blue-green algae, also known as cyanobacteria, are in every water body in Wisconsin. Their populations grow to nuisance levels, called blooms, in certain conditions or if wind and currents concentrate them in a small area. In this session, you'll learn how to identify blue-green algae and other kinds of common lake algae and learn what conditions cause blue-green algae to grow to nuisance levels. Some blue-green algae can make toxins, and we will discuss the health impacts of these toxins on animals and people who ingest, inhale, or have skin contact with blue-green algae. We will review new federal swimming advisory levels for two cyanobacterial toxins, discuss what they mean for water recreation in Wisconsin, and show you how to determine safe levels of blue-green algae in our lakes.

Presenters: Gina LaLiberte, Applied Limnologist, Wisconsin DNR and Amanda Koch, Epidemiologist, Wisconsin Department of Health Services

10:45-11:45 AM — Harvest/Trillium Room - Lake and River Organization Capacity **Local Programmatic Capacity Examples: Rock Lake (Jefferson Co.) and Beaver Dam Lake (Barron Co.)**

Rock Lake in Jefferson County has been the subject of several research and monitoring projects including a shoreland and shallows survey, research into sediment and phosphorus loads from an inlet stream, aquatic plant surveys, water quality monitoring, and a public input survey. Learn how all of this information (or sometimes lack of information) was considered and used by a team of community members to recommend a vision for the lake that strives to pay it forward by protecting the lake for future generations. The goals of the plan will be covered: water quality, water quality sampling, habitat, lake recreation, and education. Also learn how this plan has re-invigorated the community and lake association and the steps that have been taken to implement the plan. Beaver Dam Lake in Barron County is a deep, clear lake adjacent to the City of Cumberland. The Beaver Dam Lake Management District has been carrying out a multi-faceted lake protection and improvement program that covers citizen education, aquatic plant management, and water quality restoration in several bays through improved stormwater management. These efforts have leveraged tax district funds through matching grants from the Wisconsin DNR to exemplify the Wisconsin Lakes Partnership.

Presenters: Patricia Cicero, Water Resource Management Specialist, Jefferson County and Tom Schroeder, Chair, Beaver Dam Lake Management District



Friday Lunch

12:00-1:15 PM



Friday Lunch Speaker - Northwoods Expo - 12:30 PM

Todd Ambs, Assistant Deputy Secretary, Wisconsin DNR

Before being named to the DNR Secretary's leadership team, Todd Ambs had previously served as DNR Water Division administrator from 2003-2010. Ambs has worked in the environmental policy field for more than 35 years, most recently as the director for Healing Our Waters-Great Lakes Coalition. He has extensive experience in both state government and nonprofit organizations, including serving as executive director of two statewide river organizations, policy director for the Ohio Attorney General and senior policy analyst for the Wisconsin Department of Justice. Ambs graduated from Eastern Michigan University in 1980 with a BS in Political Science/Speech.

Friday Sessions

1:30-2:30 PM

1:30-2:30 PM — Expo 1 Room - Updates and Developments

AIS Research Updates

You have probably heard about (or have applied for) the Wisconsin Department of Natural Resources' Surface Water Grant program, but did you know that part of this grant program includes a category for funding aquatic invasive species (AIS) research and demonstration projects? These research and demonstration projects are intended as cooperative activities between sponsors and the DNR, and are designed to increase our scientific understanding of the ecological and economic implications of AIS, as well as assess experimental and innovative techniques for their prevention, containment and control. This session will give an overview of the AIS research grant program, as well as briefly highlight several recently completed and ongoing studies, including innovative aquatic plant management research, AIS decontamination techniques and much more.

Presenter: Michelle Nault, Statewide Lakes and Reservoir Ecologist, Wisconsin DNR

1:30-2:30 PM — Expo 2 Room - Ecology and Natural History

Snakes of Wisconsin

There is a common misconception that, "the only good snake is a dead snake." In reality, snakes play an important role in maintaining healthy ecosystems by providing benefits to the environment and sustaining a high level of biodiversity. There are 21 species of snakes occurring in Wisconsin with 14 species being rare and listed as endangered, threatened, or of special concern. This session will focus on snake species that enrich lake, stream, and wetland ecosystems, and it will provide information on how citizen science can help contribute to snake conservation throughout the state.

Presenter: Alyssa Hoekstra, Conservation Biologist, Wisconsin DNR

Who Are Wisconsin's Lake Leaders?

We all do important work to help our lakes, but these folks have kicked it up a notch after graduating from the Wisconsin Lake Leaders Institute. Over 300 graduates from twelve crews are doing great work across the state. To find out more about Lake Leaders, pick up a brochure at the Extension Lakes educational table near registration, or ask someone wearing a button that looks like this!



Friday Sessions, cont.



1:30-2:30 PM

1:30-2:30 PM — Evergreen Room - Creative Concepts

Mindful Climate Action: Changing Behaviors to Enhance Health and Protect the Environment

Mindfulness is the nonjudgmental awareness of bodily sensations, thoughts, and emotions as they are happening in the present moment. Mindfulness-based practices have been shown to reduce stress, anxiety, pain, depression, addiction and asthma, and to improve quality of life among people with chronic illness. Mindfulness-based practices appear to be effective in modifying health-related behaviors, but have not been tested for behaviors related to environmental preservation or sustainability.

Presenters: Bruce Barrett, Professor, Family Department of Medicine, UW-Madison and Cathy Middlecamp, Professor, Nelson Institute, UW-Madison

1:30-2:30 PM — Stonefield/Woodland Room - People and Policy

(Two presentations)

But Really, How Do We Protect Wisconsin's Water Resources into the Future?

A whopping 82% of Wisconsin's assessed lakes and rivers are healthy, but we seem to mostly hear about those lakes and rivers that are impaired. Can we challenge ourselves to protect Wisconsin's waters prior to the perceived crisis of being impaired? If so, how? This presentation will summarize key lake, river, wetland, and watershed assessments at multiple scales and stimulate us to envision a statewide protection strategy.

Presenter: Pamela Toshner, Statewide Healthy Waters Coordinator and Northwest Lakes Biologist, Wisconsin DNR

Shoreland Zoning and Beyond: Options for the 2020s

Legislation passed in recent years has constrained the ability of counties to use shoreland zoning regulations beyond NR115 minimums to protect more sensitive lakes from harmful effects of development. We'll give a quick update on where Wisconsin's shoreland zoning rules stand in 2019, then shift our focus to the tools remaining for lake advocates to implement long-term protection of smaller and undeveloped lakes. Land purchases, conservation easements, and conservation subdivision designs all offer varying levels of lake protection. We'll review a series of cases highlighting how these tools have recently been used across Wisconsin and discuss what you need as lake organizations and advocates to make them more common on the landscape.

Presenters: Lynn Markham, Land Use Specialist, Extension Center for Land Use Education and Robin Rothfeder, Assistant Professor of Natural Resource Planning at UW-Stevens Point and Specialist with Extension Center for Land Use Education.

1:30-2:30 PM — Sands/Frontier Room - Water and Land Health

Water and Land Health 101

It's often said that a waterbody's health reflects the condition of its watershed. This session will cover the fundamental concepts underlying this important relationship between the land and the water. We'll discuss the basics of what watersheds are, how we measure their condition, and how watershed activities influence the health of lakes and surrounding streams. You'll learn why it is so important for lake advocates to take an interest in promoting healthy watersheds. We will also share some of the most prominent tools you can use to engage partners in your watershed to both protect and restore the landscapes that shape lakes and rivers.

Presenter: Dan Zerr, Natural Resources Educator, Extension



1:30-2:30 PM — Harvest/Trillium Room - Lake and River Organization Capacity

Programmatic Capacity at a County and Watershed Scale

Moving beyond the scale of managing a single lake typically involves developing strong partnerships. We'll explore a couple of examples of regional groups that provide support and resources to multiple lakes. The discussion will highlight what strengths a regional group brings to the table, and explore recipes for success when multiple groups get together in order to get things done.

Presenter: Kendra Kelling, Director of Projects, Lakeshore Natural Resources Partnership



Friday Sessions

2:45-3:45 PM

2:45-3:45 PM — Expo 1 Room - Updates and Developments

Starry Stonewort Management Updates

In this session, we will discuss the management techniques attempted in southeastern Wisconsin to control starry stonewort. Four different lakes with differing management techniques will be highlighted in this session: Green Lake in Washington County (barrier treatment with chemicals), Little Muskego Lake (extended fall and winter drawdown), Pike Lake (no management of any kind) and Wind Lake (large-scale spring treatment). We will also discuss the role of social capital in the implementation of these projects.

Presenters: Heidi Bunk, Lakes Biologist for Southeast Wisconsin, Wisconsin DNR and Amy Kretlow, Aquatic Invasive Species Monitoring Specialist, Wisconsin DNR

2:45-3:45 PM — Expo 2 Room - Ecology and Natural History

Birdscaping Your Shoreline Property

Learn how to increase the variety of birds on your shoreline property by growing native plants, offering birds their natural habitat and a yearlong smorgasbord of berries, nuts, seeds and insects. By doing so, you can play a vital role in preserving and enhancing native communities that support not only birds, but also other wildlife including butterflies, bees and bats. Become a steward of your piece of earth and pay forward its diversity and beauty to future generations.

Presenter: Mariette Nowak, Author & Past Director of Wehr Nature Center, Milwaukee County

2:45-3:45 PM — Stonefield/Woodland Room - People and Policy

Putting Wisconsin's Water First - Legislative and Gubernatorial Efforts to Address Water Quality in Wisconsin

2019 saw the declaration from Governor Evers naming it the “Year of Clean Drinking Water” as well as the creation of Assembly Speaker Robin Vos’s bipartisan legislative Taskforce For Water Quality, but what does all this mean? With an invited panel of legislators and representatives from the Governor, this session will look at the big picture work being done in our state government to address policy needs to solve our water crisis and ensure clean water for future generations.

Moderator: Mike Engleson, Director, Wisconsin Lakes

Panelists: Todd Ambs, Assistant Deputy Secretary, Wisconsin DNR, Katrina Shankland, Representative, 71st Assembly District and other Legislators and state agency representatives

2:45-3:45 PM — Sands/Frontier Room - Water and Land Health

Wetland Restoration at Pheasant Branch Conservancy

In this session, we will outline the history and lessons learned from over 20 years of restoration and management activities conducted by the Friends of Pheasant Branch in the wetlands of Pheasant Branch Conservancy.

We will explore the connections with restoration of prairie and oak opening communities and the story of making connections with the community of Middleton and the surrounding area. Recent monitoring data will be used to assess the effectiveness of invasive plant control and vegetation management to maintain a sedge meadow plant community in the face of shrub invasion, reduce reed canary grass cover and increase species richness and floristic quality at the Frederick’s Springs, maintain a population of round-leaved monkey flower by pulling watercress from the springs area, and control mixed cattail populations that are spreading through the sedge meadow and marsh. Observations and stories will be offered that sketch the dynamics of building and maintaining connections with the users of the Conservancy and the entities in the City of Middleton and Dane County responsible for its management.

Presenter: Tom Bernthal, Member, Restoration and Management Committee, Friends of Pheasant Branch Conservancy



Friday Sessions

2:45-3:45 PM

2:45-3:45 PM — Harvest/Trillium Room - Lake and River Organization Capacity
Programmatic Capacity Demonstrated at a Statewide Scale

This session will highlight two groups that are carrying out major programmatic efforts all across Wisconsin. 2019 is the 15th anniversary of the Wisconsin Citizen-based Monitoring (WCBM) Network, a statewide stakeholder collaboration designed to improve Wisconsin’s natural resource citizen science efforts by providing communications, resources and recognition. Since 2004, the WCBM Network has offered volunteers, practitioners, educators and others involved in citizen science, opportunities for networking and resource sharing. It hosts conferences, offers funding and equipment lending opportunities, and promotes and encourages cross-promotion of projects and partner organizations. Members of the citizen-based monitoring community use those resources to study, manage and protect Wisconsin’s plants, animals and waters. Learn about the history and accomplishments of the WCBM Network, what resources it offers, ongoing work and how to get involved. WisCorps, Inc. is a 501(c)(3) conservation corps headquartered in La Crosse, Wisconsin that engages youth and young adults in three areas: conservation projects throughout Wisconsin and the Upper Midwest, WisCorps WORKS (an in- and out-of-school youth work program in eight western Wisconsin counties), and nature education programs for school children, youth and adults. Through their conservation projects, WisCorps engages partners to complete a range of physical projects including trail construction, invasive species management, shoreland restoration and stream bank stabilization.

Presenters: Eva Lewandowski, Citizen-based Monitoring Coordinator, Wisconsin DNR and Chad DuChateau, Conservation Program Manager, Wisconsin Conservation Corps

Thank You for Paying it Forward!

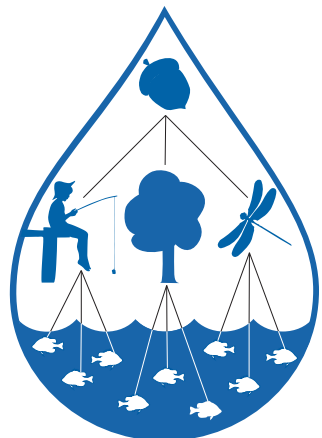
Kim Becken	Natalie Dutack	Patrick Goggin	Erin McFarlane	Paul Skawinski
Mitchel Block	Mike Engleson	Ilana Haimes	Alison Mikulyuk	Brad Steckart
Brynn Cade	Cathie Erickson	Amy Kowalski	Eric Olson	Bob Wakeman
Tim Campbell	Reesa Evans	Maud LaMarche	Carolyn Scholl	Sandy Wickman
Amber Cannon	Michala Feigal	Zack Loken	Jeanne Scherer	Victoria Ziegler
Peggy Compton	Maureen Ferry	Lynn Markham		

2019

**Wisconsin Lakes Partnership Convention and Water Action Volunteers Symposium
Planning Team**

2019 Convention Archives

Not able to attend all of the sessions you'd like? Want to view a specific presentation in depth? You're in luck! Convention archives will be available on the Extension Lakes web site and will include items such as:



Pay it Forward

- **Presentation Materials**
- **Exit Survey**
- **Speaker List**
- **Convention Packet Materials**
(agenda, stewardship awards, business partner guide, speaker list, etc.)
- **Photo Contest Winners**
- **Digital Production**
- **Videos and Photos**

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Click *Convention 2019* under *Events* in the left navigation column.

NEW Convention archives searchable database -
Located under *Resources* in the left navigation column!

2020 Lakes Convention



SAVE THE DATE

for next year's Lakes Convention and WAV Symposium.

Wednesday through Friday, April 1-3, 2020

Holiday Inn and Convention Center, Stevens Point, WI



*Wisconsin
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Water Action Volunteers



College of Natural Resources
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