



## Wisconsin Wetlands Association's 18th Annual Conference

February 12 - 14, 2013  
Sheboygan, Wisconsin



Special thanks to this year's Exclusive Lead Sponsor



Forest County Potawatomi  
FOUNDATION



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## *About Wisconsin Wetlands Association*

Wisconsin Wetlands Association is dedicated to the protection, restoration and enjoyment of wetlands and associated ecosystems through science-based programs, education and advocacy. WWA is a 501(c)3 non-profit organization and our members include wetland scientists, wetland professionals, educators, hunters and anglers, conservationists, and concerned citizens. Learn more about WWA online at [www.wisconsinwetlands.org](http://www.wisconsinwetlands.org).



Special thanks this year's Lead Sponsor, We Energies

## *World Wetlands Day*

February 2nd is World Wetlands Day. The Ramsar Convention on Wetlands of International Importance was signed on February 2, 1971, in the Iranian city of Ramsar. Each year, government agencies, non-governmental organizations, and groups of citizens take action to raise public awareness of wetland values and the Ramsar Convention. This conference is held in celebration of World Wetlands Day 2013. Learn more about World Wetlands Day at [www.ramsar.org](http://www.ramsar.org).

Wisconsin Wetlands Association was presented with the 2012 Wetland Conservation Award for Education by the Ramsar Convention on Wetlands. Wisconsin Wetlands Association was honored for its work to promote and increase the number of designated Ramsar Wetlands of International Importance in Wisconsin and the United States as well as for our outreach and education programs that promote the ideals of the Ramsar Convention. We are the first U.S.-based entity ever to win this award.



CONVENTION ON WETLANDS  
(Ramsar, Iran, 1971)

## *Make it Social*



"Like" us on Facebook or follow us on Twitter @WIWetlandsAssoc. Share your conference experience!



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*Note: In an effort to conserve resources, we have not printed presentation abstracts and speaker biographies as part of the program this year. You can view abstracts and biographies at the registration desk or download them (in pdf format) at [www.wisconsinwetlands.org/2013program.htm](http://www.wisconsinwetlands.org/2013program.htm).*

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# Welcome to Wisconsin Wetlands Association's 18th Annual Conference: *Great Wetlands, Healthy Watersheds*

Wetlands are an important tool for solving problems. From improving water quality to absorbing and storing flood waters, from providing space for recreation to improving quality of life, wetlands provide solutions to many community challenges.

Nowhere is this fact more evident than in working to improve watershed health. Watersheds are garnering more attention as a unit for planning and action as it becomes increasingly clear that sustainable solutions to many local problems require large scale action. Many water-related community challenges cannot be solved within the community, but instead require creative collaboration within and between communities: networks of community partnerships that reflect the interconnectedness of the water resources on which the communities depend. Wetland gains, losses, and management in the upper reaches of a watershed can positively or negatively impact the watershed ecosystem and community health. Great wetlands can help make healthy watersheds.

This conference provides an opportunity for the regional wetland community to discuss the latest wetland science, management, restoration, and protection issues. Great wetlands make healthy watersheds, and healthy watersheds make great wetlands.

## CONFERENCE ADVISORY PANEL

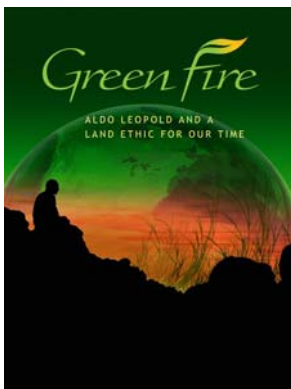
Numerous partners assisted in developing, planning, and reviewing the content of the conference program.

*We thank the following Advisory Panel participants for their contributions:*

Tom Bernthal, WI Department of Natural Resources  
Debbie Beyer, UW-Extension  
Gail Epping Overholt, UW-Extension  
Eric Epstein, Ecologist  
Jon Gumtow, Stantec Consulting Services Inc.  
Tracy Hames, Wisconsin Wetlands Association  
Tod Highsmith, Wisconsin Wetlands Association Board  
Stacy Hron, Sheboygan River AOC Coordinator  
Kelly Kearns, WI Department of Natural Resources  
Art Kitchen, Wisconsin Wetlands Association Board  
Mary Linton, Snapping Linton Ecology

Sarah Majerus, AECOM  
Nick Miller, The Nature Conservancy  
John Nelson, The Nature Conservancy  
Travis Olson, Wisconsin Coastal Management Program  
Pete Pittner, Miller Engineers & Scientists and  
Sheboygan River Basin Partnership  
Jim Ruwaldt, Wisconsin Wetlands Association Board  
Pat Trochlell, WI Department of Natural Resources  
Dreux Watermolen, WI Department of Natural Resources  
Paul Zedler, UW-Madison Nelson Institute for  
Environmental Studies

*WWA staff supporting the Panel: Katie Beilfuss, Ruth Smith, and Stephani Pescitelli.*



## Film Screening & Social

Tuesday, February 12, 6:30—9:00 pm

Location: Lakeside Terrace

Join us for this conference opening event to socialize with your wetland friends and colleagues and view the award-winning film, *Green Fire: Aldo Leopold and a Land Ethic for our Time*.

This extraordinary film documents the life of Aldo Leopold and his influence on the modern environmental movement and recently won an Emmy Award for Best Historical Documentary. Special guest **Dr. Curt Meine** will join us to give a brief introduction of the film and to answer questions and participate in discussions following the film. Cash bar and snacks provided.

*Thank you to the Aldo Leopold Foundation, Miller Engineers & Scientists, and Friends of Broughton Sheboygan Marsh for their sponsorship of this event.*



# PROGRAM HIGHLIGHTS

## KEYNOTE ADDRESS

Wednesday, February 13, 9:00 - 10:10 am

Location: Salon ABCD

### *Our Landscape, Wetland, and Water Legacy*

Dr. Patrick Robinson, Co-Director and Environmental Studies Specialist for the Environmental Resources Center, UW-Madison, UW-Extension, and UW-Green Bay

In northeast Wisconsin, like so much of the Midwest, our landscape, wetlands, and coastal waters have experienced a multitude of impacts and changes. This presentation will explore pre-settlement watershed conditions in northeast Wisconsin and the changes that have occurred to the landscape since statehood. How have hydrologic connections between watersheds, wetlands, and the Great Lakes been modified through the past 130 years, and what are the implications of these modifications? What have we learned that we can use to support great wetlands and healthy watersheds in coastal Northeast Wisconsin, as well as throughout the state and region?

#### *About the Speaker*

*Patrick Robinson has a Doctorate in environment and resources and a Master of Science degree in ecosystem studies. Patrick has worked as a natural resource scientist and educator across the Upper Great Lakes Region for over 15 years. Much of his career has been spent working on issues related to wetland, water, and Great Lakes resources. Patrick is a life-long Wisconsinite who resides in Kewaunee County.*



*This plenary session is generously sponsored by the Wisconsin Coastal Management Program*



## Symposium: Wetlands and Watershed Planning and Protection

Wednesday, February 13, 2013, 10:40 am - 5:00 pm

Location: Salon E

This symposium will cover a wide variety of topics exploring wetlands in watershed planning, protection, and management efforts. Early in the day, speakers will present on how counties and communities across the state are using planning and local ordinances to protect wetlands in various ways. This will include information on local wetland protection trends and gaps as well as policy options for improving zoning and other land use controls. Next, presenters will demonstrate their use of watershed hydrology models to evaluate the role of wetlands in flood attenuation and to inform a large-scale wetland restoration project with multiple objectives. The final talks will include updates on new state and federal programs designed to improve wetland and watershed health. The symposium will wrap up with a facilitated discussion on ways to use collaborations and technology to better address wetlands in local water resource management efforts.

#### **Symposium Presenters**

Camilla Correll, Emmons & Olivier Resources, Inc.  
Kyle Magyera, Wisconsin Wetlands Association  
Kay Miller, Door County  
Thomas Miller, Emmons & Olivier Resources, Inc

Paul McGinley, UW-Stevens Point  
Tom Bernthal, WDNR  
Kristi Minahan, WDNR  
Sue Elston, USEPA

*This symposium was organized by Beth Markhart, Emmons & Olivier Resources, with assistance from Erin O'Brien, Wisconsin Wetlands Association.*

## PROGRAM HIGHLIGHTS

### BANQUET PRESENTATION

Wednesday, February 13, banquet 6:30 pm, presentation 7:30 pm

Location: Salon A

#### ***Seven Wetlands, Seven Watersheds: Connecting Landscapes for Cranes, People, and our Biological Heritage***

Dr. Richard Beilfuss, President & CEO, International Crane Foundation

Cranes are among the most endangered families of birds in the world, with eleven of fifteen species threatened and many populations in peril. Over the next 20 years, emerging challenges will further jeopardize cranes and the places where they live: the rapid development of China (home to eight crane species), for example, and the impact of climate change on regional water supplies and wetlands. Yet the special characteristics of cranes, their cultural significance, high visibility, extraordinary beauty, dramatic migrations, and striking behavior, also create unique opportunities for conservation action.

Dr. Beilfuss' presentation will explore the role of cranes as both sentinels and flagships for watershed conservation in seven great river basins around the world. With vivid images and personal stories, Dr. Beilfuss will share how ICF is working to protect and restore great wetlands and healthy watersheds around the world.

#### *About the Speaker*

*Dr. Richard Beilfuss is a professional hydrologist and wetland ecologist who has been directly involved in watershed restoration projects in the US (Wisconsin, Texas), Asia (China, Nepal, Vietnam), and Africa (Mozambique, Uganda, Rwanda, Zambia, Kenya, Ethiopia), and advises on many others. Rich is an Adjunct Professor for the UW College of Engineering, where he teaches a graduate course on environmental flows and enjoys supervising students.*

**Note: The Banquet is a ticketed event open to conference participants and the general public who purchased tickets in advance. If you did not purchase a ticket, please see the conference registration desk for information about ticket availability.**



### PLENARY PRESENTATION

Thursday, February 14, 8:30 - 9:10 am

Location: Salon ABCD

#### ***Keeping Wetlands in the Watershed: EPA's Healthy Watershed Initiative and Other Priorities for Wetlands Integration***

Michael McDavit, Chief, Wetland Strategies & State Programs Branch, Wetlands Division, U.S. Environmental Protection Agency

The Healthy Watershed Initiative (HWI) is a novel non-regulatory program that takes a systems-based approach to proactively managing the Nation's water resources and recognizes the vital role of wetlands in a high quality watershed. With the help of many collaborators, including the State of Wisconsin, EPA is also writing a new chapter in wetland science by issuing the first national-scale wetland condition assessment in late 2013.

#### *About the Speaker*

*W. Michael McDavit is Chief of the Wetlands Strategies and State Programs Branch, Office of Wetlands, Oceans and Watersheds at U.S. EPA, where he administers technical and financial support for enhancing State and Tribal wetland programs and oversees special projects on protecting and restoring wetlands. He fondly remembers slogging through Green Bay marshes as a Sea Grant research assistant in the 1970's. Mike holds a Bachelors in Environmental Science from the UW-Green Bay and a Masters in Public Administration from George Washington University.*



## PROGRAM HIGHLIGHTS

### Symposium: Healthy Wetlands & Groundwater: The Other Watershed

*This symposium is generously sponsored by the Central Sands Water Action Coalition, NASCO, and Snapping Linton Ecology.*

Groundwater affects wetland communities in many ways, some not obvious. Changes in groundwater flow can influence water chemistry and affect conditions for emergent aquatic plants, potentially altering plant communities. Change in groundwater flows can also change wildlife habitat. This symposium will present studies that map hydrogeology in wetland and riverine complexes, address wetland community change caused by irruptions in groundwater flows, and demonstrate how knowledge of groundwater flow patterns in impaired wetland situations can improve restoration efforts.

#### SYMPOSIUM KEYNOTE

Thursday, February 14, 9:10 am - 12:00 noon

Location: Salon ABCD

#### *Say it Together One More Time: All Water is Connected*

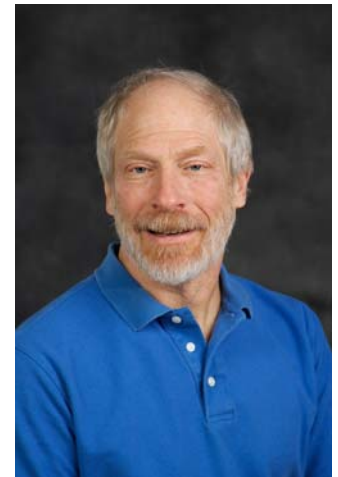
Dr. George Kraft, Director, Center for Watershed Science and Education and Director, Central Wisconsin Groundwater Center, UW-Stevens Point

All water is connected, but sometimes in ways that are not immediately apparent. Groundwater connects to wetlands, lakes, and streams, and frequently supplies them with most of their incoming water. Perhaps nowhere is groundwater more important to surface waters than in the northern Great Lakes states of Wisconsin, Minnesota, and Michigan. Here, precipitation on the landscape is largely driven underground due to circumstances of geology, only emerging later as discharge to surface waters. Hence, if we value surface waters, we should value groundwater and manage it carefully. But we don't.

Though it may be illegal in Wisconsin to harm surface waters by pumping directly from them, it is mostly legal to do so by pumping groundwater from wells. The current condition of management in Wisconsin is that the consequences of groundwater pumping are not well characterized except in a few regions like the Wisconsin central sands, where pumping has dried wetlands, lakes, and streams. Better policies and approaches are needed for managing groundwater. However, politicians and state agencies seem skittish about developing them, perhaps because the connection between groundwater and healthy surface waters is so less apparent than the immediate benefit of pumping the resource. We need to work on this.

#### *About the Speaker*

*George Kraft is a Professor of Water Resources and the Director of the Center for Watershed Science and Education. His work centers around groundwater sustainability for quantity and quality. Of late, most of his work has concerned groundwater pumping impacts on surface water, combining research, outreach, and policy concerns.*



#### SYMPOSIUM PRESENTATIONS

Thursday, February 14, 10:00 am - 12:00 pm

Location: Salon E

- Dr. Jean Bahr, Department of Geosciences, UW-Madison
- Dr. Ken Bradbury, Wisconsin Geological and Natural History Survey, UW-Madison, UW-Extension
- Dr. Madeline Gotkowitz, Wisconsin Geological and Natural History Survey, UW-Extension
- Dr. David Hart, Wisconsin Geological and Natural History Survey, UW-Extension
- Dr. Steven Loheide, Department of Civil and Environmental Engineering, UW-Madison
- Dr. Maureen Muldoon, Department of Geology at UW-Oshkosh

*This symposium was organized by wetland ecologist Dr. Mary Linton.*

# WEDNESDAY, February 13, 9:00 am - 9:00 pm

## 9:00 - 10:10 Plenary Session (Salon ABCD)

9:00 Welcome & Opening comments  
 Conference Keynote: *Our Landscape, Wetland, and Water Legacy*  
 9:20 Patrick Robinson, Environmental Resources Center Co-Director, UW-Madison and UW-Extension, and adjunct faculty, UW-Green Bay

## 10:10 - 10:40 Break (Lakeside Terrace)

## 10:40 - 12:00 Concurrent Sessions

	Location: Salon E	SYMPOSIUM: Wetlands and Watershed Planning & Protection  <i>Moderator: Beth Markhart</i>	Location: Salon F	Historical Perspectives  <i>Moderator: Jim Ruwaldt</i>	Location: Salon G	Mitigation & Design  <i>Moderator: Sarah Majerus</i>
10:40	Correll	Brown's Creek Watershed District: a 15-year history of understanding and protecting surface water-groundwater interactions	Erickson	Lead contamination in water and biota at the site of a former trap shooting range	Anderson	Wetland mitigation: Good for the environment and good for business
11:00			Davenport	Investigating the relationships between land-use histories and current vegetation in Southern Wisconsin fens	Salas	Application of stream and floodplain restoration for protection of electric utility infrastructure
11:20	Magyera	Lessons from supporting local wetland protection	Kuhns	Natural history of the Cedarburg Bog, Saukville, Wisconsin: Insights into post-glacial wetland formation	O'Leary	Eight keys to successful urban wetland design
11:40	Miller	The challenges and opportunities of local wetland conservation: Door County's experience				

## 12:00 - 1:00 Lunch (provided - Salon ABCD)

## 1:00 - 2:40 Concurrent Sessions

	Location: Salon E	SYMPOSIUM: Wetlands and Watershed Planning & Protection  <i>Moderator: Beth Markhart</i>	Location: Salon F	Wetland Invasive Species I  <i>Moderator: Kelly Kearns</i>	Location: Salon G	Wetlands as Wildlife and Fish Habitat  <i>Moderator: Mary Linton</i>
1:00	Miller	Modeling the Pelican Lake restoration project	Patti	Effects of two popular herbicides on the control of the invasive <i>Glyceria maxima</i> (reed manna grass) in Southeast Wisconsin	Mushinski	Northern pike habitat restoration project in Green Bay
1:20			Rios	Intra- and inter-population variability in microsatellite markers for cattail plant species	Badje	Overwintering habitats, spring dispersal, and status of the Northern Cricket Frog ( <i>Acris crepitans</i> ) in Wisconsin
1:40	McGinley	Modeling wetlands in the watershed: Some challenges to simulating wetland hydrology, hydraulics, and nutrient transport	Wilkinson	Wisconsin invasive species rule and planned revisions	Paloski	WDNR species guidance documents
2:00			Schreck	Invasive species in trade: Coming to a wetland near you?	Cutright	Migratory birds respond to wetland creation at Forest Beach Migratory Preserve, a former golf course
2:20	Berenthal	WDNR's watershed level wetland status data and applications	Jensen	WISDOT invasive control program: Large scale invasive plant control across transportation corridors and mitigation sites		

## 2:40 - 3:10 Break (Lakeside Terrace)

## 3:10-4:50 Concurrent Sessions

	Location: Salon E	SYMPOSIUM: Wetlands and Watershed Planning & Protection  <i>Moderator: Beth Markhart</i>	Location: Salon F	Wetland Invasive Species II  <i>Moderator: Chrystal Schreck</i>	Location: Salon G	Case Studies of Wetland Restoration  <i>Moderator: Stacy Hron</i>
3:10	Minahan	Wisconsin's Healthy Watersheds Initiative	Kearns	Japanese Hop: A rapidly spreading riparian invasive	Gumtow	The Ridges Sanctuary ridge and swale restoration project
3:30	Elston	Incorporating wetlands into watershed planning: A new EPA Region 5 supplement to watershed planning handbook	Motquin	Rapid response and control of policeman's helmet ( <i>Impatiens glandulifera</i> )	O'Reilly	Use of enhanced ditch plugs and riparian wetlands to reduce nitrogen and phosphorus export from small agricultural watersheds
3:50			Ward	Response to an outbreak of giant hogweed ( <i>Heracleum mantegazzianum</i> ), a dangerous noxious weed	David	Progress and setbacks over two decades of wild rice management in the Wisconsin ceded territory
4:10		Watershed Planning & Protection Discussion & Working Group Moderated by Erin O'Brien	Boos	Developing best management practices to slow the spread of unwanted invasive species in wetlands	Fevold	Ashland Chequamegon Bay Shoreland Restoration Project: Evaluating the ecological benefits of a constructed wetland
4:30					Redlinski	Practical climate change adaptations: What does TWI do to restore with climate change in mind

## 4:50 - 6:30 Poster Session & Cash Bar (Lakeside Terrace)

## 6:30 - 9:00 Banquet & Presentation (Ticketed event - Salon A).

7:30 Banquet Presentation: *Seven Wetlands, Seven Watersheds: Connecting Landscapes for Cranes, People, and Our Biological Heritage*  
 Dr. Richard Beilfuss, President & CEO, International Crane Foundation



# THURSDAY, February 14, 8:30 am - 4:30 pm

## 8:30-9:20 Plenary Session (Salon ABCD)

8:30	Welcome
8:40	Plenary Address: <i>Keeping Wetlands in the Watershed: EPA's Healthy Watershed Initiative and Other Priorities for Wetlands Integration</i> Michael McDavit, Chief of the Wetland Strategies and State Programs Branch, Wetlands Division, U.S. EPA
9:10	Symposium Keynote: <i>Say it Together One More Time: All Water is Connected</i> Dr. George Kraft, Director, Center for Watershed Science & Education; Director, Central Wisconsin Groundwater Center, UW-Stevens Point

## 9:50 - 10:00 Break (Lakeside Terrace)

## 10:00 - 12:00 Concurrent Sessions

	Location: Salon E <b>SYMPOSIUM: Healthy Wetlands &amp; Groundwater: the Other Watershed</b> <i>Moderator: Mary Linton</i>	Location: Salon F <b>Assessment &amp; Planning for Wetland Conservation</b> <i>Moderator: Travis Olson</i>	Location: Salon G <b>Watershed Approaches to Wetland Conservation</b> <i>Moderator: Peter Pittner</i>
10:00	<b>Loheide</b> Groundwater influences on wetland health and ecosystem services provided by stormwater treatment wetlands	(break continues)	(break continues)
10:20	<b>Bahr</b> Subsurface heterogeneity as a control on wetland vegetation and biogeochemistry	<b>Macleod</b> Semi-automated wetland mapping techniques: A pilot project in Wisconsin	<b>Fowler</b> Economic and ecological benefits of Iowa's Middle Cedar River watershed
10:40	<b>Gotkowitz</b> Groundwater-induced flooding of lowland areas in Spring Green, Wisconsin	<b>Hlina</b> Setting floristic quality assessment benchmarks for non-forested wetlands of the Lake Superior basin	<b>Melchior</b> Restoration of riverine wetland habitat as part of the Sheboygan Area of Concern Project
11:00	<b>Bradbury</b> Hydrogeology of the Mink River Estuary, Door County, WI: Groundwater flow and chemistry	<b>Trochell</b> Wisconsin Rapid Assessment Methodology, v.2.0	<b>Crane</b> Post-Development isolated waters of Lake County and the 80% - 150% wetland hydrology design criteria
11:20	<b>Muldoon</b> Hydrogeology of the Mink River Estuary, Door County, WI: Geologic controls on spring locations	<b>Salas</b> Developing a tool for prioritizing resources of concern in habitat conservation	<b>Martinka</b> Healthy watersheds: Changing the rules and the roles to improve our chances
11:40	<b>Hart</b> Hydrogeology of the Cedarburg Bog	<b>Smail</b> Wisconsin's water withdrawal inventory and reporting program	<b>Malott</b> Wisconsin's Watershed Adaptive Management Option and opportunities for wetland restoration

## 12:00 - 1:30 Lunch (provided) and Presentation (Salon ABCD)

## 1:30 - 4:30 Field Trips & Working Groups

Working Groups			
	<b>Practitioners Working Group</b> Location: Salon E  <i>Moderators: Heather Patti &amp; Alice Thompson</i>	<b>Ridge &amp; Swale Communities Working Group</b> Location: Salon F  <i>Moderator: Steve Leonard and Vicki Medland</i>	<b>Opportunities for Reaching Private Wetland Landowners Working Group</b> Location: Salon G  <i>Moderator: Katie Belfuss</i>
1:30 - 4:30	An opportunity for wetland practitioners - including consultants, federal, state, and local regulators, land managers, and others - to discuss current issues relevant to their daily work. The agenda will be set with the input of those who participated in a similar working group at recent WWA conferences.	This Working Group will begin with a short presentation on the Ridge and Swale complex on the Ridges Sanctuary and Toft Point in Door County to begin a discussion of our current state of knowledge. Our goal is to provide participants with an opportunity to explore strategies and opportunities to better manage these unique communities in the face of habitat fragmentation, invasive species, and increasingly variable hydrology due to climate change and modification of surrounding watersheds.	In 2012, WWA began assessing programs and resources available to support private wetland landowners in their efforts to protect, restore, and manage wetlands. We conducted interviews with partner agencies and organizations to understand what resources they currently offer and promote. We are also talking with landowners themselves to better understand the wetland questions and problems they have. We will present the preliminary results of this work, gather further information from participants, and discuss the best opportunities to pursue in the near future in order to better meet the needs of Wisconsin wetland landowners.
Field Trips			
	<i>Prior sign up required; check at registration desk for remaining availability.</i>	<i>Prior sign up required; check at registration desk for remaining availability.</i>	<i>Prior sign up required; check at registration desk for remaining availability.</i>
	* Sheboygan River AOC Restoration Project (departs from the conference center entrance)	* Sheboygan Marsh State Wildlife Area (departs from Hotel Door 4)	* Kohler-Andrae State Park (departs from Hotel Door 3)



We want your feedback!

Please complete the conference evaluation coming to your email inbox.

Thank you.

## POSTER SESSION

Posters will be available for viewing 8:00 am - 4:30 pm Wednesday and Thursday in the Lakeside Terrace. The Poster Session, when authors will be present to discuss their posters, will be Wednesday, 4:50 - 6:30 pm.

<b>Bart</b>	Abiotic and land-use legacy predictors of invasion resistance in Wisconsin fens
<b>Baum</b>	Empowering exploration: Providing a cooperative and user-friendly model for photo-journaling local wetlands
<b>Bernier</b>	Effects of glyphosate and sod removal on plant species richness and native transplant survival
<b>Doherty</b>	Hydroperiod dictated ecosystem services in stormwater treatment wetlands
<b>Goldade</b>	pH Analysis of lead contaminated sediment and water in the La Crosse River Marsh
<b>Hoy</b>	Wetland vegetation mapping in the 21st century: Advances in technology and why maps matter
<b>Jessop</b>	Tradeoffs among ecosystem functions in compensatory mitigation wetlands
<b>Kearns</b>	Observations sought for plants being assessed for Wisconsin's invasive species rule
<b>Neary</b>	Sedimentation in the Miljala Channel Watershed: Drained wetlands, agriculture and restoration potential
<b>Rockman</b>	Silver nanoparticle effects on zebrafish with potential remediation by wetland soil media
<b>Scherer</b>	The Rock River Coalition's successful citizen-based wetland monitoring at Zeloski Marsh
<b>Sullivan</b>	Assessing the need of management techniques for aquatic invasive species in Kenosha, Wisconsin
<b>Van den Bosch</b>	Taking a look back: Do wetland mitigation sites continue to satisfy original compliance standards?
<b>Wolf</b>	Assessment of restoration at Root River Environmental Education Community Center, Racine, WI
<b>Wolf</b>	A survey of riparian canopy for the Root River in downtown Racine, Wisconsin

## PROGRAM HIGHLIGHTS

### WETLAND FIELD TRIPS

Thursday, February 14, 1:30—4:30 pm

*The field trips are generously sponsored by Ho-Chunk Nation.*



*Pre-registration for field trips was required. Please see the registration desk if you will not attend a field trip for which you signed up so that your space can be freed up for someone on the waiting list. If you did not pre-register and would like to attend, please see the registration desk to find out if space might be available.*

*Please dress warmly and wear sturdy boots. Please note that the field trips will go in almost any weather (with the exception of hazardous conditions). Field trips will depart by bus at 1:30 pm from the Conference Center. Please arrive 10 minutes early to board the appropriate bus.*

### Sheboygan River Area of Concern (AOC) Restoration Project

Trip Leader: Stacy Hron, Sheboygan River AOC Coordinator, WDNR

Departs from Conference Center Entrance

The Sheboygan River Area of Concern (AOC) was identified as priority area for remediation and restoration through the Great Lakes Restoration Initiative by the EPA and encompasses the lower 14 miles of the Sheboygan River downstream, including the harbor. Over \$50 million has been targeted for two contaminated sediment dredging projects and 11 fish and wildlife projects. The Wisconsin Department of Natural Resources received \$6.5 million for habitat restoration and assessment projects within the AOC. This multi-stop field trip highlights some of the wetlands that are part of this AOC's fish and wildlife habitat restoration sites. Sites include an 8+ acre wetland restoration of a former mitigation wetland, a riparian floodplain wetland, and wetlands associated with an island complex/backwater area. Hear about the process of determining the fish and wildlife goals and projects, and get a first-hand look at the diverse array of wetland and habitat restoration that has occurred at these sites.

## PROGRAM HIGHLIGHTS

### WETLAND FIELD TRIPS (continued)

Thursday, February 14, 1:30—4:30 pm

#### Sheboygan Marsh State Wildlife Area

Trip Leaders: Dan Weidert, Wildlife Biologist, WDNR and  
Brian Glenzinski, Regional Biologist, Wisconsin Ducks Unlimited

Departs from Hotel Door 4

Join biologists Dan Weidert and Brian Glenzinski on a field trip to Sheboygan Marsh State Wildlife Area. While visiting the wildlife viewing sites and touring the marsh along its boardwalks, learn about the unique geological and ecological history that has resulted in a species rich area. Dan and Brian will discuss the history and impacts of draining and damming of the marsh, along with the successful restoration efforts to restore the wetlands and surrounding uplands area. They will also touch upon the current management practices for the area, along with current and future management challenges.

Sheboygan Marsh contains the largest restored wetlands in the watershed of Lakes Michigan and Superior. The marsh encompasses over 8,166 acres, of which 7,414 acres are owned by Sheboygan County, 752 acres are owned by the State of Wisconsin and the rest is privately owned. All of the county and state owned area is managed by the WI Dept. of Natural Resources. This important marsh area is home to a unique ecosystem that is rich in species diversity.

#### Kohler-Andrae State Park

Trip Leader: Jim Buchholz, Park Manager, Kohler-Andrae State Park

Departs from Hotel Door 3

Join Jim Buchholz on this field trip to Kohler-Andrae State Park. The field trip will include a walk on a "cordwalk" trail that provides access to the sensitive interdunal wetlands area. Other highlights include a hike on the boardwalk over the Black River Marsh and a stop at the Sanderling Nature Center, where we'll provide a brief overview of the park and its ecology and history.

In 2009, Kohler-Andrae was named one of Wisconsin's *Wetland Gems*<sup>™</sup> by Wisconsin Wetlands Association. Wetland Gems are considered high quality habitats that are critically important to Wisconsin's biodiversity. The interdunal wetlands at Kohler-Andrae are unique in the Great Lakes region and comprise the largest dune complex along Wisconsin's Lake Michigan shoreline. This distinct area provides habitat for many rare plants, some of which are endemic to Great Lakes shorelines. In addition, over 150 bird species are known to use the Kohler-Andrae area throughout the year.



# PROGRAM HIGHLIGHTS

## WORKING GROUPS

*Please note that Working Groups are held concurrent with the Conference Field Trips on Thursday afternoon. No pre-registration is required for working groups.*

### **Practitioners Working Group**

Thursday, February 14, 1:30—4:30 pm

Location: Salon E

Facilitators: Alice Thompson, Thompson & Associates Wetland Services, and Heather Patti, R.A.Smith National

This session offers an opportunity for wetland practitioners—including consultants, federal, state, and local regulators, land managers, and others—to discuss current issues relevant to their daily work. The agenda will be set with the input of those who participated in a similar working group at recent WWA conferences. Topics covered will likely include what's new with state wetland policies, including how they have or will change the review and approval of wetland development permits and associated compensatory mitigation requirements.

### **Ridge & Swale Communities**

Thursday, February 14, 1:30—4:30 pm

Location: Salon F

Facilitators: Steve Leonard, Director, The Ridges Sanctuary, and Vicki Medland, Associate Director, Cofrin Center for Biodiversity, UW-Green Bay

"Ridge and Swale" describes a coastal community complex where a series of old dune ridges separated by wetland swales form parallel to shorelines of the Great Lakes, particularly Lake Michigan and parts of Lake Superior. This complex of successional upland and lowland habitats support diverse assemblages of plants, amphibians, reptiles, and breeding and migratory birds.

This Working Group will begin with a short presentation on the Ridge and Swale complex on the Ridges Sanctuary and Toft Point in Door County to begin a discussion of our current state of knowledge. Our goal is to provide participants with an opportunity to explore strategies and opportunities to better manage these unique communities in the face of habitat fragmentation, invasive species, and increasingly variable hydrology due to climate change and modification of surrounding watersheds.

### **Opportunities for Reaching Private Wetland Landowners**

Thursday, February 14, 1:30 - 4:30 pm

Location: Salon G

Facilitator: Katie Beilfuss, Wisconsin Wetlands Association

In 2012, WWA began assessing programs and resources available to support private wetland landowners in their efforts to protect, restore, and manage wetlands. We conducted interviews with partner agencies and organizations to understand what resources they currently offer and promote. We are also talking with landowners themselves to better understand the wetland questions and problems they have. We will present the preliminary results of this work, gather further information from participants, and discuss the best opportunities to pursue in the near future in order to better meet the needs of Wisconsin wetland landowners.



# ACKNOWLEDGEMENTS

More than 100 experts and enthusiasts have contributed to the planning and content of this conference. We would like to thank all of the presenters, field trips leaders, and working group leaders for sharing their expertise with the regional wetland and water resource professional community. While it is not feasible to acknowledge every contributor individually, we offer special thanks below to individuals who have made especially important contributions to this event.

## MODERATORS

*Thank you to the following partners for moderating conference sessions:*

**Stacy Hron**, Sheboygan River AOC Coordinator  
**Kelly Kearns**, Wisconsin Department of Natural Resources  
**Steve Leonard**, The Ridges Sanctuary  
**Mary Linton**, Snapping Linton Ecology  
**Sarah Majerus**, AECOM  
**Beth Markhart**, Emmons & Olivier Resources  
**Vicki Medland**, UW-Green Bay

**Travis Olson**, Wisconsin Coastal Management Program  
**Heather Patti**, R.A. Smith National  
**Pete Pittner**, Miller Engineers & Scientists and Sheboygan River Basin Partnership  
**Jim Ruwaldt**, Wisconsin Wetlands Association Board  
**Chrystal Schreck**, WI Department of Natural Resources  
**Alice Thompson**, Thompson & Associates Wetland Services

*Thank you to AECOM, Miller Engineers & Scientists, The Nature Conservancy, the Wisconsin Coastal Management Program, and Wisconsin DNR for lending laptop computers for use during the conference sessions.*

## STUDENT SCHOLARSHIP PROGRAM SPONSORS

Generous contributions made by The Nature Conservancy and We Energies have allowed us to provide financial support to many students who are attending our conference. These students are denoted with a \* in the list of volunteers below.



## VOLUNTEERS

We thank the following volunteers, and others we may have left out, for assisting us with the many and varied aspects of conference logistics:

Thomas Beneke \*  
Lincoln Cruz \*  
Tara Davenport \*  
Nicholas Domnitz \*  
Kathy Dutilly  
Frances Eanes \*  
Chris Ester \*

Lee Hengescht  
Carissa Hudson \*  
Rick Jones  
Jeremiah Kramasz \*  
Stuart Lannoye \*  
Steve Neary \*  
Caroline Oswald \*

Mary Quade \*  
Kelly Redmond \*  
Maria Rios \*  
Tanner Servoss \*  
Bobbie Webster

## FIELD TRIP LEADERS

Thank you to the following individuals for their assistance planning, coordinating, and leading our conference field trips to wetlands near Sheboygan:

Stacy Hron, Sheboygan River AOC Coordinator, Wisconsin Department of Natural Resources  
Dan Weidert, Wildlife Biologist, Wisconsin Department of Natural Resources  
Brian Glenzinski, Regional Biologist, Wisconsin Ducks Unlimited  
Jim Buchholz, Park Manager, Kohler-Andrae State Park

# Blue Harbor Resort Conference Center

1 Film Screening, Pre Conference Social & Registration (Tuesday PM)

2 Conference Registration

3 Exhibitors & Breaks

4 Concurrent Sessions

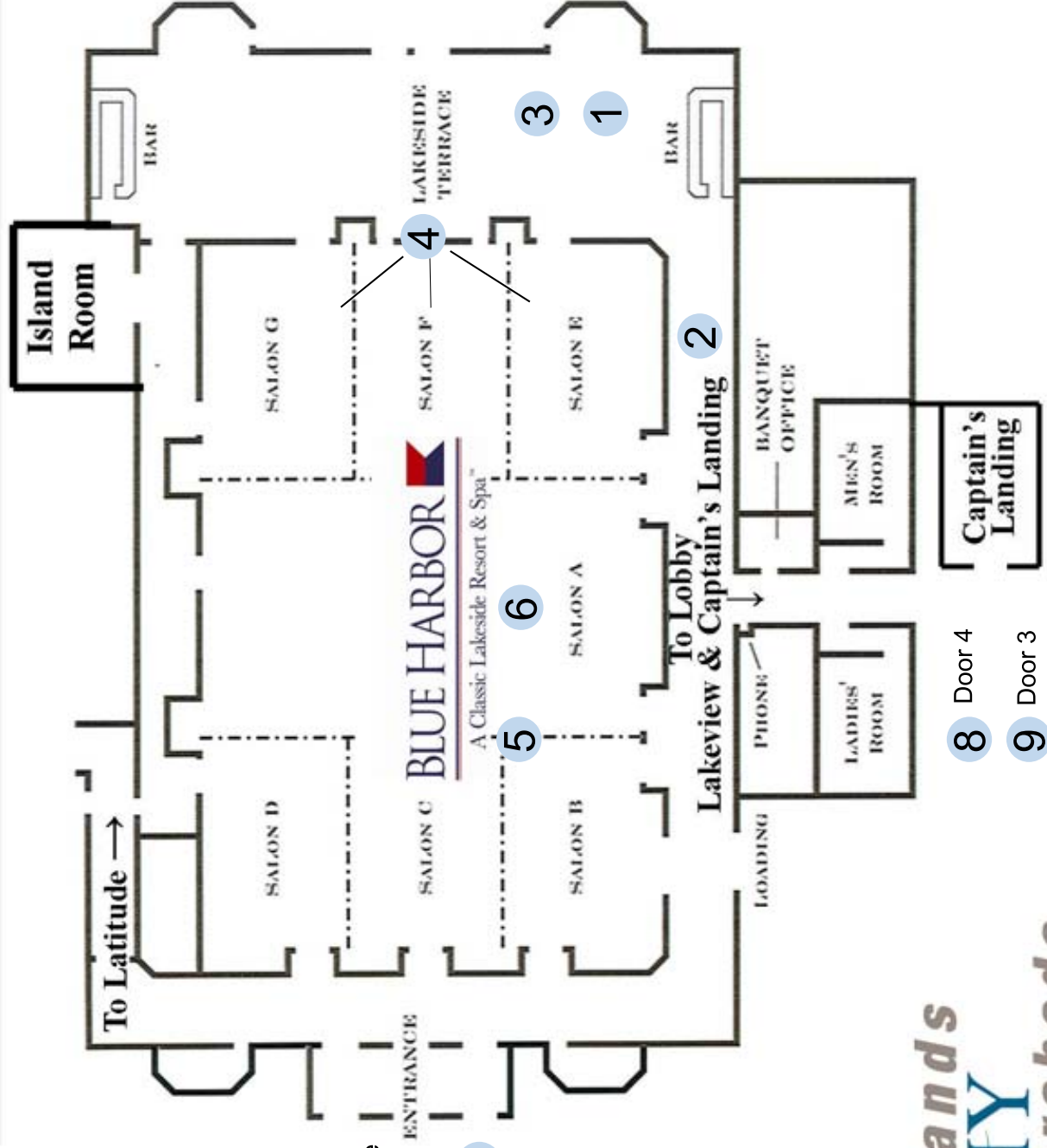
5 Plenary Sessions & Lunches

6 Banquet

7 Sheboygan AOC Field Trip Meeting Place

8 Sheboygan Marsh Field Trip Meeting Place

9 Kohler Andrae Field Trip Meeting Place

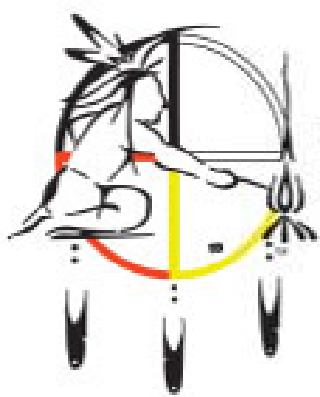


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