



UMISC

Upper Midwest Invasive Species Conference

2012

Upper Midwest Invasive Species Conference

Working Together to Control Invasive Species



October 29–31, 2012

La Crosse Center • La Crosse, WI

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About the Conference

Following two successful, regional invasive species conferences in 2008 (Duluth) and 2010 (St. Paul), the re-named Upper Midwest Invasive Species Conference 2012 with expanded geographical coverage will be held at the La Crosse Center in La Crosse, Wisconsin.

The purpose of UMISC 2012 is to exchange information on invasive species topics and improve land management. This is an all-taxa conference covering invasive aquatic and terrestrial plants, animals, pests, and pathogens. The goals of the conference are to:

- Strengthen awareness of invasive species issues, prevention, and management; and
- Facilitate information sharing and collaboration.

Expected attendees include:

- researchers
- land managers
- natural resource professionals
- academics
- nursery and landscaping professionals
- agricultural professionals
- forestry professionals
- environmental specialists
- lake association members
- landowners
- governmental agencies
- nongovernmental organizations
- others interested in controlling the spread of invasive species in the Upper Midwest.

UMISC 2012 is hosted by the Invasive Plants Association of Wisconsin, Midwest Invasive Plant Network, Minnesota Invasive Species Advisory Council, and the Wisconsin Invasive Species Council.



Minnesota
Invasive
Species
Advisory
Council

Wisconsin
Invasive
Species
Council

Conference Venue and Accommodations

LaCrosse Center



The La Crosse Center is located in the heart of downtown La Crosse nestled on the banks of the Mississippi River, steps away from shops, dining, riverboat tours, and other recreational opportunities.

La Crosse rests at the confluence of the Mississippi River, the Black River, and the La Crosse River, in the heart of what is known as the “Driftless Region” — an area of Western Wisconsin and Southeastern Minnesota that was spared the flattening effects of the Ice Age glaciers that covered two-thirds of North America. With its steep, hardwood-studded hills and deep valleys intact, the region’s rugged beauty is unequalled anywhere in the Midwest.

The La Crosse area has attractions for everyone – whether you want history, outdoor, or cultural experiences. Among the highlights include being named a top 20 North American Fishing Spot by *Field and Stream*, limestone bluffs with breathtaking views of the Mississippi Valley, and 116 boutiques and restaurants.

Hotels

Blocks of discounted hotel rooms have been reserved for conference attendees. These reduced-rate rooms will be available until September 28, 2012 on a first come, first served basis. It is recommended to book accommodations as early as possible to ensure that attendees receive the discounted rate.

The Radisson Hotel is the primary hotel for UMISC attendee accommodations. Here, we have the most discounted rooms reserved and it is adjacent to the La Crosse Center, connected by an enclosed walkway. Additional discounted room blocks are available at the Courtyard Marriott, Holiday Inn La Crosse, and Best Western Plus–La Crosse. All except the Best Western are walking distance to the La Crosse Center. Please see the conference website for rates, conference code for booking, and direct links to hotel websites.

We look forward to seeing you in La Crosse in October!

[For map and directions, click here!](#)

Monday Morning Plenary

Update on the Asian Carp Control Strategy Framework

John Goss

Asian Carp Director

White House Council on Environmental Quality

The migration of Asian carp toward Lake Michigan is one of the most serious invasive species threats facing the Great Lakes today. Asian carp are voracious eaters and heavy breeders. Some varieties can grow to more than 100 pounds and are capable of eating 20 percent of their body weight in a day, stripping the food web of key food sources for native species.

To ensure a comprehensive response, the Obama Administration formed the Asian Carp Regional Coordinating Committee (ACRCC) in 2009. Led by the White House Council on Environmental Quality's Asian Carp Director, the ACRCC now includes the U.S. Army Corps of Engineers, U.S. Coast Guard, U.S. Fish and Wildlife Service, U.S. Geological Survey, U.S. Environmental Protection Agency, the National Oceanic and Atmospheric Administration, U.S. Department of Transportation, and all Great Lakes states, as well as the Great Lakes Fishery Commission, the Metropolitan Water Reclamation District of Greater Chicago, and the City of Chicago.

Since 2010, the Obama Administration has invested more than \$150 million dollars to protect the Great Lakes from Asian carp. The scale of the effort has been unprecedented for invasive species prevention and unifies Federal, State, and local actions, employs a comprehensive approach to prevent a self-sustaining Asian carp population, and develops longer-term biological controls. This talk will provide an update on the 2012 Asian Carp Control Strategy Framework, which outlines the priority actions planned and under way to address the threat of Asian carp invading the Great Lakes, including both management actions to prevent Asian carp introduction and establishment, and research to develop permanent controls on Asian carp populations. The ACRCC is moving from the research and development phase towards implementation. The Framework can be found at www.asiancarp.us.



John Goss serves as the principal advisor to The White House Council on Environmental Quality (CEQ) Chair Nancy Sutley on Asian carp issues, and oversees the coordination of Federal, state, and local efforts to keep Asian carp from establishing in the Great Lakes ecosystems.

This continues the Obama Administration's proactive response to the threat that Asian carp pose to the Great Lakes.

Goss is chair of the Asian Carp Regional Coordinating Committee (ACRCC), which is a team of Federal, state and local agencies working together to prevent Asian carp from establishing populations in the Great Lakes. The Asian Carp Control Strategy Framework, released in February, 2010 and updated in December 2010 unifies Federal, state and local action in an unparalleled effort to combat invasive species. Goss joins CEQ from the Indiana Wildlife Federation, the Indiana State affiliate of the National Wildlife Federation, where he served for four years as the Executive Director. In his role at the Wildlife Federation, he worked with conservation, business and industry groups to support the Great Lakes Compact. Goss previously served as Director of the Indiana Department of Natural Resources and as Vice Chair of the Great Lakes Commission.

Prior to his position at the Indiana Department of Natural Resources, Goss was Director of Tourism for the State of Indiana and chaired the Great Lakes International Marketing Initiative for the Great Lakes Governors Association. Goss served as Chief of Staff for Lt. Governor Frank O'Bannon, District Director for Congressman Frank McCloskey and Deputy Mayor for the City of Bloomington, Indiana. Goss received his Masters of Public Affairs and his B.A. in Economics from Indiana University.

Monday Morning Plenary, continued

Consequences of fecundity reduction in cultivars of invasive perennial plants and in a rare plant species

Kayri Havens-Young

Director of the Division of Plant Science and Conservation and Senior Scientist, Chicago Botanic Gardens

Many invasive species were originally introduced for horticultural purposes, and several continue to be profitable for the green (nursery/horticulture/landscape) industry. Recently, some plant suppliers have marketed less fecund cultivars of several invasive species, including glossy buckthorn (*Frangula alnus*), burning bush (*Euonymus alatus*) and Japanese barberry (*Berberis thunbergii*), as “safe” alternatives to invasive relatives. We used published matrix population models to simulate the effect of reducing fecundity on population growth rates of invasive species. We showed that large changes in fruit production result in relatively small changes to the population growth rates of long-lived species, suggesting that less fecund cultivars may still provide an invasive threat. Further, many cultivars are clonal selections, and if crossed with other cultivars or self-fertilized, they produce offspring with traits and fecundities that do not resemble the parent plant. Based on these two lines of evidence, we suggest that only sterile cultivars of known invaders should be considered “safe” and non-invasive.

Invasions: the trail behind and the path ahead

Peter B. Reich

Regents Professor and F.B. Hubachek Sr. Chair, University of Minnesota, Department of Forest Resources; Foundation Director, Hawkesbury Institute for the Environment, Sydney, Australia

A century ago, introductions were widely celebrated, and acclimatization societies were busy “enriching” the flora and fauna in many regions worldwide. As a result of both intentional and unintentional introductions, introduced species now make up a substantial part of the vascular flora in most places. The ecological and socio-economic costs of invasive species have become increasingly apparent. The applied nature of invasion biology makes it attractive to researchers and funding agencies alike, and as a result, the field is enormous and progressing at great speed. In such a rapidly growing field, it is worthwhile to ask which lines of research are yielding important advances, whether there are important questions being overlooked or processes viewed with pre-biased glasses, and whether there are areas where our efforts are yielding poor returns. I will examine progress in our understanding of invasion biology (particularly in relation to plants) and implications for ecology of managed and unmanaged systems. Areas highlighted (given time constraints) will include (1) the traits of successful invaders, (2) factors that determine community and habitat susceptibility to invasion, (3) impacts of invasive species on native communities, (4) concepts of drivers, passengers, and backseat drivers, and (5) invasion in the context of a changing climate.



Kayri Havens-Young holds a B.S. and an M.A. in Botany from Southern Illinois University and a Ph.D. in Biology from Indiana University. She spent three years as the Conservation Biologist at Missouri Botanical Garden before joining the Chicago Botanic Garden in April 1997.

She is currently the Garden’s Director of the Division of Plant Science and Conservation and Senior Scientist. Her research interests include the effects of climate change on plant species, restoration genetics, the biology of plant rarity and invasiveness. She is on the adjunct faculty of Loyola University, Northwestern University and the University of Illinois-Chicago, and collaborates with a variety of academic institutions and stewardship organizations to help improve conservation efforts for plants. She serves on the boards of Botanic Gardens Conservation International and on the IUCN Species Survival Commission Plants Committee.



Peter B. Reich is a Regents Professor and holder of the F.B. Hubachek Sr. Chair at the University of Minnesota, Department of Forest Resources, with a joint affiliation as Foundation Director of the Hawkesbury Institute for the Environment in Sydney, Australia. Reich’s teaching and research focus on ecology, global change, and the sustainability of managed and unmanaged terrestrial ecosystems. His work focuses regionally on the forests and grasslands of mid-North America and globally on terrestrial ecosystems in aggregate. This includes long-term experimental field studies of global change effects on grasslands and forests; synthetic analyses of global plant trait data; and the development of physiologically robust global carbon cycling models. He has written more than 375 articles published in peer-reviewed international scientific journals or books, including more than 20 in leading journals such as *Science and Nature*; and has been engaged in research in tropical, temperate and boreal ecosystems on five continents. Reich has served on the editorial boards of leading international journals; has received numerous honors; and has served on advisory and review panels for the National Science Foundation, National Academy of Sciences, US Department of Agriculture, NASA, US EPA, US Forest Service; and several state and federal agencies and legislatures. Reich also serves local and state environmental boards and organizations in both professional and personal capacities

Tuesday Lunch Plenary

Are invasive plants drivers or passengers in the truck of ecological change? Distinguishing causes from consequences

Don Waller

John T. Curtis Professor of Botany, University of Wisconsin-Madison

Ecological changes of many kinds surround us but often go unnoticed as they tend to be gradual and cumulative. Non-native plants and earthworms, however, often invade native plant communities in a quick and dramatic way. It is thus natural to ask whether the declines we observe in many native wildflowers and the 'biotic homogenization' we observe among sites results from these invasions. For the last 12 years, we have resurveyed hundreds of forest sites across Wisconsin, documenting shifts in species abundance and exotic species invasions since the 1950s. We are using these data to test causes and consequences of weedy plant invasion and answer questions like: Are more diverse communities less susceptible to invasion? Do particular site factors or surrounding landscape conditions increase the likelihood of invasion? Is native plant diversity declining faster in invaded sites? Do invasions contribute to community homogenization? Do deer and invasive species interact to affect native plant communities? Are the impacts of invasives specific to the particular invader and native species interacting at each site? We find expected answers to some of these questions and surprising answers to others. Knowing the actual causes of invasions and the specific impacts they have helps managers figure out how best to cope with invaders and helps to justify public efforts to control these plants.



Don Waller is the John T. Curtis Professor of Botany at the University of Wisconsin-Madison where he teaches ecology, evolution, and conservation biology. He is a plant ecologist with particular interests in disturbance, herbivory, population dynamics, and the causes and consequences of weedy plant invasions.

His recent research has focused on monitoring methods and the long-term dynamics of temperate forest plant communities. He works regularly with environmental organizations and state and federal resource agencies to integrate science effectively into forest and wildlife management. He co-authored *Wild Forests: Conservation Biology and Public Policy* (Island Press 1994) and co-edited *The Vanishing Present: Shifts in Wisconsin's lands, waters, and wildlife* (Univ. of Chicago Press 2008). He has co-authored more than 120 articles and book chapters and served on the editorial and/or executive boards of *Oecologia*, *Natural Areas Journal*, *Ecology Letters*, and *Evolution*. He is a Fellow of the American Association for the Advancement of Science and served as President of the Study of Evolution (2006-07).

Registration Information

An easy to use, online registration system is available for your convenience at www.umisc2012.org/registration. A download-able pdf registration form is also available on the website. Register early for best rates!

Early Registration Deadline:

Friday, September 14, 2012 at 11 pm Central Time.

Full Conference: \$195
Full Conference, MIPN or IPAW member rate: \$175
Full Conference - Student: \$100
One-Day (Monday, October 29 or Tuesday, October 30): \$125
One-Day - MIPN or IPAW member rate: \$115
One-Day - Student (Mon or Tue): \$50
Wednesday Only: \$85
Wednesday Only - MIPN or IPAW member rate: \$75
Wednesday - Student: \$25

Late Registration Deadline:

Friday, October 12, 2012 at 11 pm Central Time.

Online registration will close at this time. Mail-in or emailed registrations will be accepted until Friday, October 19. On-site registration may be available for a limited number of registrants and is not guaranteed.

Full Conference: \$300
Full Conference - Student: \$150
One-Day (Monday, October 29 or Tuesday, October 30): \$185
One-Day - Student (Mon or Tue): \$75
Wednesday Only: \$105
Wednesday - Student: \$50

2012 CONFERENCE SCHEDULE AT-A-GLANCE

Upper Midwest Invasive Species Conference 2012

REGISTRATION TIMES	
4 pm – 7 pm	Sunday, October 28
7 am – 5 pm	Monday, October 29
7 am – 5 pm	Tuesday, October 30
7 am – 10 am	Wednesday, October 31

CONCURRENT SESSIONS COLOR KEY
Aquatic Species
Forest Health
Terrestrial Species
Interdisciplinary

Registration will be at the La Crosse Center box office at street level. Free parking is available at the Radisson for hotel guests. Several public parking lots in walking distance to the Center offer very affordable rates (in most cases, \$7.00 or less for the day).

Coffee breaks will be held between concurrent sessions with exhibitors in the Arena.

Poster presentations will be on display for the entire conference.

Due to limited space available, Workshops and Field Trips require pre-registration before the conference begins.

MONDAY, OCTOBER 29

8:00 am - 9:30 am	Continental Breakfast with Exhibitors	12:15 pm - 4:30 pm	Field Trips
		1:00 pm - 4:30 pm	Concurrent sessions and Workshops
9:30 am - 11:30 am	Opening Plenary	4:45 pm - 6:30 pm	Welcome Reception
11:30 am - 12:15 pm	Lunch and Visit with Exhibitors Box Lunch Provided	WORKSHOPS 1:00 pm – 4:30 pm	FIELD TRIPS See descriptions for start time.
12:15 pm - 1:00 pm	Networking and Visit with Exhibitors in Arena		
CONCURRENT SESSIONS		▼ North Hall B	Forest Pest Tour (4.5 hours) Bus will depart at 12:15 pm from La Crosse Center
1:00 pm – 2:40 pm	3:00 pm – 4:40 pm	Identification of Native and Exotic Aquatic Plants	
▼ North Hall D		▼ North Hall E	Emerald Ash Borer Tour (4 hours) Bus will depart at 12:15 pm from La Crosse Center
Herbicides: Maximizing Benefit, Minimizing Risk	Land Manager Panel on Invasive Species Management	Citizen Science: How to Recruit and Maintain Volunteers; Manage Data and Measure Program Successes	
▼ North Hall C		▼ North Hall F	USGS Upper Midwest Environmental Sciences Center Tour (Two 1-hour tours will be offered). Buses will depart from the La Crosse Center at 12:30 pm and 2:30 pm
Prevention in Aquaculture	Aquatic Invasive Plants: Research, Early Detection and Rapid Response	Aquatic and Terrestrial Invasive Species-Hazard Analysis Critical Control Point (HACCP) Workshop	
▼ North Hall A ▼		▼ North Hall Meeting Room	
State Invasives Regulations	Minnesota's Aquatic Invasive Species Management Strategies	Watercraft Inspection and Decontamination Training	▶ The Watercraft workshop is a combination workshop and field trip.



Purple loosestrife

E. Czarapata



Zebra mussels

Iowa DNR



Japanese hops

Wisconsin DNR

TUESDAY, OCTOBER 30			
7:00 am – 8:00 am	Continental Breakfast with Exhibitors	1:30 pm – 5:05 pm	Concurrent sessions
8:00 am – 11:40 am	Concurrent Sessions	5:05 pm – 7:00 pm	Poster and Exhibit Reception
Noon – 1:30 pm	Lunch Plenary		
CONCURRENT SESSIONS			
8:00 am – 9:40 am	10:00 am – 11:40 am	1:30 pm – 3:10 pm	3:30 pm – 5:05 pm
▼ North Hall D			
Invasive Fish and Crayfish Control	Common Carp and Zebra Mussel Biology and Control	Aquatic Partnership Tools	Prevention Tools
▼ North Hall E			
Volunteer and Prevention Programs	Aquatic Detection and Response Planning	Management and Control of Eurasian Watermilfoil and Curlyleaf Pondweed	Wetland and Aquatic Invasive Plant Management A
▼ North Hall A			
Emerald Ash Borer Control Tactics	Emerald Ash Borer Landscape Level Management	Battling Established Forest Critters and Pathogens	Forest Insect Invaders on our Doorstep
▼ North Hall C			
Mapping and Monitoring	Online Resources for Mapping and Early Detection and Rapid Response	Communication and Partnership Tools: Wisconsin Case Studies	Education and Message Development
▼ North Hall B			
Fire Techniques for Control	Highway and Right of Way: Early Detection and Rapid Response and Management	Herbicide Techniques and Tools	Expert Panel on Herbicide Use
▼ North Hall F			
Invasion Biology	Post-Invasion Restoration	Plant Identification, Biology and Control	Japanese Hops Summit

WEDNESDAY, OCTOBER 31	
7:30 am – 8:30 am	Continental breakfast with Exhibitors
8:30 am – 11:30 am	Concurrent Sessions
11:40 am – Noon	Closing Plenary
CONCURRENT SESSIONS	
8:30 am – 9:45 am	10:15 am – 11:30 am
▼ North Hall E	
Ballast Water Panel	Great Lakes Control Strategies
▼ North Hall D	
Wetland and Aquatic Invasive Plant Management B	Biology and Ecology of Snails and Snail Parasites
▼ North Hall A	
Emerald Ash Borer's Future Impact	Thousand Cankers Disease: Surveys and Research
▼ North Hall C	
Communication and Partnership Tools	Federal and State Agency Panel
▼ North Hall B	
Invasive Vertebrates and Vertebrate Diseases	Invasives in Horticulture
▼ North Hall F	
Cooperative Weed Management Area Strategies	Master Planning on State Lands



Iowa DNR

Field Trips and Workshops

Field Trips and Workshops require pre-registration due to limited space available. Field Trips cost \$25.00 and payment is due at time of registration.

FIELD TRIPS

FOREST PEST TOUR

Come see a plantation of chestnut trees where researchers are carrying out biological control of Chestnut Blight, a pine plantation struggling with Heterobasidion Root Disease, a destructive Oriental bittersweet infestation, and learn about emerald ash borer in a heavily infested area. Bus will depart at 12:15 pm from the La Crosse Center. Tour will finish at 4:45 pm at the La Crosse Center. Limited to 50 participants.

Tour leaders:

Brian Schwingle, Wisconsin Department of Natural Resources

Kyoko Scanlon, Wisconsin Department of Natural Resources

Monika Chandler, Minnesota Department of Agriculture

EMERALD ASH BORER TOUR

This is an in-depth tour to learn about Emerald Ash Borer biology and detection techniques. You will learn to recognize Emerald Ash Borer symptoms in ash trees such as woodpecking and canopy decline and find larvae under bark. The tour will be conducted in a heavily infested area of Great River Bluffs State Park. Bus will depart at 12:15 pm from the La Crosse Center. Limited to 50 participants.

Tour leaders:

Mark Abrahamson, Minnesota Department of Agriculture

Jonathan Osthus, Minnesota Department of Agriculture

USGS UPPER MIDWEST ENVIRONMENTAL SCIENCES CENTER TOUR

The USGS Upper Midwest Environmental Sciences Center (UMESC) is one of 17 biological research centers across the Nation that conducts science in support of natural resource management, conservation, and restoration. During a field trip to UMESC, participants will learn about research in support of native fisheries management, and the development of new methods for the surveillance (eDNA) and control of aquatic invasive species (Asian carp, zebra mussels) through chemical, biological, or physical means. Two tours will be offered (1 pm and 3 pm). Limited to 25 participants for each tour.

COMBINATION FIELD TRIP AND WORKSHOP

WATERCRAFT INSPECTION AND

DECONTAMINATION TRAINING (Boat washing is an appropriate method to help Stop Aquatic Hitchhikers!™ by recreational watercraft users. Hosted at Powerhouse Marina on the Mississippi River, participants will get practical hands-on training on how to inspect and use a watercraft decontamination station to kill and remove zebra mussels on a variety of watercraft. Training is based on new inspection and

decontamination protocols by the Minnesota Department of Natural Resources. Through this workshop, participants will also learn how boat washing fits within the national Stop Aquatic Hitchhikers!™ campaign guidelines for recreational watercraft in the context of prevention and containment. Limited to 40 participants.

Leaders:

Doug Jensen, Aquatic Invasive Species Program Coordinator, University of Minnesota Sea Grant Program

Joe Eisterhold, Invasive Species Specialist, Minnesota Department of Natural Resources

WORKSHOPS

IDENTIFICATION OF NATIVE AND EXOTIC AQUATIC PLANTS

This 3-hour identification workshop will cover native and exotic aquatic plants from the Upper Midwest region. In addition to established exotic species, additional species that are just beginning to show up in the Upper Midwest will be discussed, including Brazilian waterweed (*Egeria densa*), Hydrilla (*Hydrilla verticillata*), Carolina fanwort (*Cabomba caroliniana*), brittle naiad (*Najas minor*), yellow floating heart (*Nymphoides peltata*), and others. The workshop presenters will utilize photographs, fresh aquatic plant samples, and pressed specimens to assist participants in recognizing taxonomic differences between these species. A hands-on component will allow for up-close observation of the fresh and pressed plant specimens. Aquatic citizen monitoring programs will also be discussed. Limited to 60 participants.

Presenters:

Paul Skawinski, Regional Aquatic Invasive Species Education Specialist, Golden Sands RC&D Council; author of *Aquatic Plants of the Upper Midwest*

Scott Provost, Water Resources Management Specialist, Wisconsin Department of Natural Resources

Susan Knight, Aquatic Biologist, University of Wisconsin Trout Lake Station

CITIZEN SCIENCE: HOW TO RECRUIT AND MAINTAIN VOLUNTEERS; MANAGE DATA AND MEASURE PROGRAM SUCCESSSES

Do you want to pinpoint successes of your volunteer monitoring program? Recruit, retain and manage volunteers better? And learn how volunteer monitoring data have been used properly at a variety of scales and users? Then this workshop is one you'll want to attend. You will brainstorm how your program's data might be used, consider partnerships you may have previously overlooked, and outline a plan of action that can help you increase use of your program's data in your community or state. Program success can be measured in terms of how many and how long volunteers participate. You will have a chance to share your own tools with other volunteer monitoring program coordinators and fit this framework to your program so you can head home with ideas of how to realize your successes

and improve areas that may need fine tuning or change. We will also share case studies of volunteer monitoring data in support of professional monitoring and natural resources management and policy at the local and state levels. Bring examples of awards, thank-you gifts, reports, and examples of successes to share with the group.

Presenters:

Laura Herman, Coordinator, Wisconsin Citizen Lakes Monitoring Network, UW-Extension and Wisconsin Department of Natural Resources

Angela S. Gupta, Forestry Extension Educator, University of Minnesota Extension

Anna Mares, AIS Coordinator, Citizen Science Center, Beaver Creek Reserve

Scott Van Egeren, Aquatic Invasive Species Specialist, Wisconsin Department of Natural Resources

Mark Renz, Assistant Professor, Department of Agronomy, University of Wisconsin-Extension

AQUATIC AND TERRESTRIAL INVASIVE SPECIES-HAZARD ANALYSIS CRITICAL CONTROL POINT (HACCP) WORKSHOP

Aquaculture, fish stocking, wild baitfish harvest, non-native terrestrial plant use and resource management, research, and enforcement activities may pose risks for spreading aquatic and terrestrial invasive species. Movements of fish, fingerlings, eggs, water, boats, terrestrial plants, and equipment can potentially spread invasive species. Knowing whether your activity poses a risk is the first step in the HACCP (pronounced "has-sip") process. HACCP is a flexible approach that stresses appropriate procedures and verification that can ensure that operations pose minimal risk for spreading unwanted aquatic and terrestrial species. Advantages of this approach are that it can work with diverse operations and activities, fosters partnership between industry and government regulators, and is effective if properly applied. The approach concentrates on the points in the process that are critical to the safety of the activity, minimizes risks, and stresses communication between regulators and the others. And most importantly, it requires records be kept and procedures verified which provides assurance that the HACCP plan is being followed and that it works. Participants at the workshops will receive a training manual, companion video, CD, and other materials. Coursework is designed to train fish farmers, bait harvesters, those working with terrestrial plants, and management agencies in the use of HACCP fundamentals to control the spread of invasive species.

Instructors:

Ronald E. Kinnunen, Michigan Sea Grant, Michigan State University

Nicholas B. D. Phelps, Aquaculture Research and Extension Veterinary Diagnostic Laboratory, University of Minnesota

Carmen Chapin, Liaison, Great Lakes Exotic Plant Management Team, National Park Service