

# RESTORATION NEWS MIDWEST

Newsletter of the Midwest-Great Lakes Chapter of the Society for Ecological Restoration International - January 2009, Volume 1, Issue 2

## CHICAGO EXHIBIT, FIRST BUSINESS MEETING, AND UPCOMING ANNUAL MEETING

The Organizing Committee of the Midwest-Great Lakes SER Chapter has been working hard to get the Chapter started. We participated as exhibitors at the Chicago Wilderness Congress on November 13, 2008 as part of our membership recruitment efforts. Our exhibit enabled us get the word out about the Chapter and SER to restoration practitioners and scientists working within the four state area of Wisconsin, Illinois, Indiana, and Michigan that forms the Chicago Wilderness Region. Our exhibit included a banner with summary of the benefits of Chapter membership, Chapter membership applications, copies of the first newsletter, a flyer describing the benefits of SER membership, and a flyer advertising the Global Restoration Network.

The next day (November 14, 2008) we held our first Chapter business meeting via an online webinar broadcast from Depaul University. This business meeting was intended to provide Chapter members with a report of recent activities, presentation of proposed bylaws, an overview of opportunities for student involvement, a report on future plans, and an opportunity to ask questions and provide feedback. Four members of the Organizing Committee presented different components of the webinar. Cody Fleece provided a summary of our recent activities, which included a review of our organizational status, membership recruitment efforts, maintenance of Chapter Listserve, and the list of 300 organizations working in ecological restoration within the Chapter boundaries compiled by the Subregional/Local Restoration Group Subcommittee. Rocky Smiley presented an

overview of the proposed Chapter bylaws and reviewed the mission statement, membership criteria, structure of Chapter leadership, committees, election procedures, annual meetings, and process for future modifications of the bylaws. Wesley Ket summarized opportunities and benefits of student involvement. Jennifer Lyndall concluded the webinar with an overview of proposed sites for our first Annual Meeting and answered questions from the audience. A pdf of the webinar is available to download at our Chapter webpage [www.ser.org/content/SERMWGL.asp](http://www.ser.org/content/SERMWGL.asp).



*W. Ket, L. Heneghan, Y. Choi, P. Rice, R. Smiley, and C. Fleece with the Chapter recruiting banner*

The Organizing Committee is now focusing on preparations for the First Annual Chapter Meeting. Our First Annual Chapter Meeting is scheduled for April 24 to April 25, 2009 at Marian College in Indianapolis, Indiana. We are very excited about this inaugural event as it will signify the beginning of what will be a very exciting and dynamic SER Regional Chapter. The call for abstracts is located at the end the newsletter (pages 15 to 16) and we invite you to submit an abstract for an oral presentation or poster presentation to be presented at the conference.

We would like to conclude by expressing our gratitude to the other members of the Organizing Committee for their contributions. Much appreciation goes to the following individuals for the time and effort they have contributed in the past year.

David Benson	Hua Chen
Young Choi	Cody Fleece
Robert Grese	Cara Hardesty
Liam Heneghan	Jason Husveth
Wesley Ket	Anne Remek Kominowsk
Pamela Rice	John Shuey
Carl Wodrich	Robert Welch.

Thank you for your hard work!

*Rocky Smiley and Jennifer Lyndall,  
Co-Chairs, Organizing Committee*

## **EMIQUON FLOODPLAIN RESTORATION - PARTNERSHIP, IMPLEMENTATION, RESEARCH, AND CHALLENGES**

One of the largest floodplain restoration projects in the United States is underway in the west-central Illinois. The project is on the Emiquon Preserve, a 29 km<sup>2</sup> floodplain and uplands area owned and managed by The Nature Conservancy (Conservancy). Emiquon, which means "squash" in the Native American language, hugs the banks of the great Illinois River. This land once was the "Jewel of the Illinois River" as it supported the most productive floodplain ecosystem in Illinois. This was once the location containing the greatest abundance of fish, mussels, and waterfowl in Illinois and the Upper Mississippi River valleys. This floodplain area held ancient paddlefish, sturgeon, gar, and bowfin. The area was converted to farmland after it was separated

from the river by construction of a levee 80 years ago. Since the early 2000s, the Conservancy in Illinois has collaborated with federal, state, and local agencies to restore the floodplain through planning, implementation, and research. The landmark restoration project was formally launched in 2007. In this article, we will briefly review planning and partnership, restoration implementation, research, and the challenges that lie ahead.



*Farmland prior to restoration*

### *Planning and Partnership*

The primary objectives of the Emiquon restoration project are to restore natural ecological processes and habitats that promote and sustain the aquatic and terrestrial communities once found in this region of the Illinois River. To achieve the objectives, intensive planning began with the formation of the Emiquon Science Advisory Council. This advisory council consisted of more than 40 scientists from around the country. The Council met in 2001 and 2004 as part of the initial planning phase to determine the best science and methods to guide the restoration of the Emiquon's floodplain. An important document that emerged from these meetings was the Key Ecological Attributes (KEA) report as the final planning product, which

includes the detailed work plans for the Emiquon floodplain restoration.

Implementation of this multi-faceted restoration project is sustained through the work and cooperation of a strong partnership. The Conservancy developed partnerships with the Illinois Department of Natural Resources, Illinois Natural Survey, Illinois State Water Survey, Dickson Mounds State Museum, University of Illinois (UIS) at Springfield, UIS at Urbana Champaign, USDA Natural Resources Conservation Service, U.S. Environmental Protection Agency, and U.S. Fish and Wildlife Service. Additionally, the UIS at Springfield envisioned the importance of establishing an on site field station to meet the increasing needs for restoration ecology research and education. The UIS Emiquon Field Station consists of a 335 m<sup>2</sup> facility and opened for outreach, education, and research activities in the spring of 2008.



*UIS Emiquon Field Station (Photo –D. Hedrick, The Nature Conservancy)*

### Restoration Implementation

The Emiquon restoration project was formally launched in spring 2007. The Conservancy seeded or planted many native species last spring signaling the commencement of a sophisticated floodplain restoration project. The planting covered 5.7 km<sup>2</sup> of bottomland forest, tallgrass prairie, wet prairie, upland

forest, and wetland. Increasing plant biodiversity is important to restore functional floodplain habitat. In the first year, 180,000 trees including pecan, burr oak, swamp white oak and sycamore were planted as well as 3630 kg of seed with six grass and 59 forb taxa were sowed. Moreover, water was returned to the site. The Illinois Department of Natural Resources prepared the waterways at Emiquon for the return of native fish by eradicating invasive aquatic species earlier last year. Now it is a homecoming site for native species including white crappie, black crappie, largemouth bass, channel catfish, and brown bullhead. Local hatcheries supplied several fish species that will soon be joined by rare minnow species.



*Prairie seeds in preparation for sowing*

### Research Assessment

Incorporating the principles of adaptive management into the Emiquon floodplain restoration is among the important objectives of this project. Research assessment serves to evaluate if the restoration practices work or not and is an important step in adaptive management. Scientists from the Conservancy, UIS (Springfield and Urbana-Champaign campuses), Illinois Department of Natural Resources and other agencies developed many research projects. The primary aims of these projects are: 1) to evaluate floodplain composition by assessing

if native species of plants, fishes, migratory birds, mammals, reptiles, and insects appear or occur in the restored floodplain and 2) to evaluate floodplain function by assessing if carbon storage increases and if water quality changes over time. Once established, we predict the wet prairie will provide cover and foraging areas for grassland dependent bird species such as sparrows, wrens, orioles, and migrating warblers. Mammals including river otter, beaver and mink, as well as reptiles such as the prairie king snake and green frogs are expected to thrive. The restored floodplain is predicted to store more carbon than the previous cropland ecosystems.



*Graduate students sampling soils for carbon storage analysis*

### Challenges

Initial, pre-implementation challenges were addressed by the Emiquon Advisory Council. These challenges involved determining how the water level and sedimentation may change following restoration. Hydrological models were developed to simulate where the water will occur on the property, how deep it will be, how it will carry and deposit sediment, and how plant communities will respond to the changes. Detailed maps of the restored floodplain were developed. Another challenge was determining what was the desired native species of plants and fishes in this restored floodplain. Seeding and planting

of appropriate native plant species is critical for the restoration process.

Many challenges lie ahead. One of the challenges faced are invasive species. With the increase of native species diversity, project scientists and managers are hoping the exotic species diversity will decline over time. However, this may not be that simple. A key component of the restoration effort will be the reconnection of the restored floodplain with the Illinois River. Such a reconnection would help naturalize river flow and the movement of water within Emiquon's wetlands, thus restoring natural, cyclical processes of flooding and drying and improving water quality. The reconnection would allow access between the river and floodplain for aquatic species, including paddlefish and gar, which need a variety of habitats to reproduce and survive. However, one potential challenge is that the reconnection may allow invasive species to colonize the restored floodplain. Another challenge is how to better coordinate the increasing demands of public access to the restored floodplain and the conservation and protection of this site and locations of ongoing research projects.



*First summer of restoration (Photo – M. Crossland, UIS at Springfield)*



*Emiquon floodplain after restoration  
(Photo-C. Young, State Journal Register)*

Emiquon floodplain restoration project is very important due to its scale and location. Lessons learned at Emiquon will be shared through the Conservancy's Upper Mississippi River, Lower Mississippi River, and Great Rivers Programs to advance the Conservancy's national and global efforts to protect the Earth's critically important freshwater resources. The Emiquon floodplain restoration model can be used for the restoration of large floodplain rivers all over the world. We are proud to be part of this exciting floodplain restoration project.

*Hua Chen and Michael Lemke  
Biology Department, University of Illinois at  
Springfield*

## **WHERE RESTORATION EMERGED: A GEM OF A RESERVE CELEBRATES ITS DIAMOND ANNIVERSARY**

From its beginning, the University of Wisconsin-Madison Arboretum has been guided by the writings and legacy of Aldo Leopold. On June 17, 1934, Leopold delivered the speech that dedicated the initial parcel of land for research and teaching. Since then, the Arboretum has grown to

include 4.9 km<sup>2</sup> of remnant, restored, and degraded ecosystems in Madison and 11 outlying properties (2.1 km<sup>2</sup> total) that serve as references for ecosystem restoration efforts statewide and beyond.

The Arboretum plans to celebrate its 75-year legacy of land conservation and restoration in several events over the next 18 months. From January through May 2009, students in a graduate seminar will look back over 75 years of research in restoration ecology to identify landmarks in understanding, while a dozen guests from around the country will address the innovations needed to advance the science over the next 75 years (with most joining via the internet). Events through June 2010 will be open to the public and advertised at <http://uwarboretum.org>.

Among the restoration ecology landmarks that took place in the Arboretum were early field experiments that tested methods of restoring prairie vegetation and later modifications of Gardner Marsh to increase wetland habitat diversity habitat for wildlife. In 1984 a dozen eminent ecologists met to consider how restoration efforts could advance the science of ecology, and their ideas led to the first book on *Restoration Ecology* (Jordan et al. 1987). The Arboretum also developed a journal for practitioners (now called *Ecological Restoration*), and, most recently, adaptive restoration efforts have engaged hundreds of University of Wisconsin ecology students in field experiments designed to combat invasive plants.

Even though the Arboretum has served to advance both the science and practice of restoration for 75 years, researchers and practitioners are still learning that restoration is never finished. Efforts to retain the historic features of Curtis Prairie are threatened by its succession toward shrub dominance, despite annual burning. The city's human population

seeks more access and amenities that would replace natural features and invasive species expand faster than staff and volunteers can remove them. Leopold's land ethic is thus still highly relevant: "A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise" (Sand County Almanac and Sketches Here and There, 1949, p. 224-225).

*Joy Zedler, Aldo Leopold Chair of Restoration Ecology, UW-Madison*

### **100 SITES FOR 100 YEARS: A CHICAGO WILDERNESS LAND MANAGEMENT RESEARCH PROGRAM**

Despite the recognized centrality of ecological knowledge to restoration practice, there is sometimes an unproductive disconnect between the work of restoration practitioners and the work of researchers in this field. This disconnect has some potentially grave consequences for both. Though practitioners can often report on gratifying progress, they are frequently perplexed by unexpected outcomes. For example, noxious invasive species may persist despite repeated removal efforts and the native communities may fail to flourish despite repeated plantings. On the other hand, researchers often pursue more esoteric issues at the expense of applied research on the efficacy of practice, and on many occasions design projects on spatial and temporal scales that do not seem relevant to many restoration practitioners.

Chicago Wilderness (CW) is a regional biodiversity consortium of over 230 institutional members who collectively manage more than 1416 km<sup>2</sup> of protected

natural areas. CW coalition has been translating its research agenda into a long-term research program in the past two years. The Chicago Wilderness Research Agenda identifies critical gaps in scientific and management knowledge that must be closed over the next decade in order for the CW coalition to move toward realizing its vision of increasing the number of accessible, interconnected, restored, diverse, and healthy ecosystems in the greater Chicago metropolitan area. The final version of the Chicago Wilderness Research Agenda will be published in the coming year. With funding primarily coming from the Gaylord and Dorothy Donnelley Foundation, the Chicago Wilderness Research Program (CWRP) developing from the agenda is a multi-faceted one in which several counties in the Chicago Wilderness region are collaborating with us to create a system of 100 long-term research sites (prairies, woodlands and savannas), each with a core area of 0.01 km<sup>2</sup> (1 ha), available for assessment and monitoring of ecological management efforts. The research sites are intended to serve the needs of the CW coalition members for decades to come. By bringing together managers, researchers, and where appropriate, restoration volunteers, the research program should establish a long-term collaboration between all constituencies needed for successful ecological restoration.



*Nodding Wild Onion (Allium cernuum), one of the many beautiful prairie plants found in the CW region*

years for the envisioned network of over 100 one-ha research sites across the Chicago Wilderness region. These sites include woodland, savanna and prairie habitats, and have been selected along gradients of management effort, from those that are highly degraded, usually due to impacts of invasive species, to mature restoration sites that have been managed for 20 or more years. We have also included sites that represent the “highest quality/pristine” habitats in the region as well as some sites of particular interest to individual counties. This network of sites is the core of CWRP. It will be used to evaluate the effectiveness of biodiversity management practices and allow us to validate, improve, and invent the most effective restoration practices for the Chicago Wilderness region.



*Degraded woodland site in Lake County, IL with various introduced species that are often the focus of management*

Site selection in four Illinois counties (McHenry, Lake, DuPage, and Cook) will be completed in 2009. Data layers developed based upon site visits and consultations with managers are being incorporated into a Geographical Information System (GIS) along with all pre-existing data from each site. In the upcoming growing season, we will begin measuring a range of ecological

criteria, or response variables, to serve as indicators of management success. These variables currently include plant species diversity, relative cover, presence of representative ground-active arthropods, and key ecosystem processes (decomposition rates, major soil nutrient pools, and rates of nutrient cycling). The methods we will use for ecosystem monitoring will be those of the National Science Foundation’s Long-Term Ecological Research (LTER) sites and of the Illinois Natural Areas Inventory. The use of similar methods will allow us to compare sites in CWRP with other sites throughout the region. This data will not only provide a comprehensive baseline that can be referenced for decades (perhaps even centuries), but will also allow us to develop regionally specific hypotheses about the success of different management techniques.



*A mature prairie restoration site in Lake County, IL with a fairly high diversity of plants*

This program is currently funded for the next three years, though the work will continue well beyond that time frame. One of the goals of the project is to stimulate an even greater interest by regional researchers in local applied conservation issues. Following the development of the comprehensive suite of baseline data and an accessible database, researchers throughout the region will be able

to select from a representative range of habitat and management conditions and may contextualize their work within the context of basic ecological and land management data and in the broader context of regional ecological restoration and conservation.

*Lauren Umek and Liam Heneghan, Institute for Nature and Culture, DePaul University*

## **ISSUES IN NATURAL RESOURCE DAMAGE ASSESSMENT**

*Local, state, and federal regulations and policies influence the restoration of publicly owned lands. This article provides an example of a Natural Resource Damage Assessment case conducted to address impacts of wastewater discharge in the White River in central Indiana through the Comprehensive Environmental Response and Liability Act (CERCLA) and the Clean Water Act.*

Untreated wastewater was discharged to the Upper West Fork of the White River in central Indiana on December 16, 1999. This wastewater discharge injured and killed fish and damaged other natural resources. The United States Fish and Wildlife Service, Indiana Department of Natural Resources, and the Indiana Department of Environmental Management collaborated to determine what was necessary to address natural resource injuries to the Upper West Fork of the White River.

### White River

The White River is part of the Mississippi River system and drains 29,400 km<sup>2</sup> in central and southern Indiana. The river begins in Randolph County, Indiana and flows southwest until it meets the Wabash River in Gibson County, Indiana. The White River

from its beginning to its confluence with the Wabash River is on the Outstanding Rivers List for Indiana. Rivers included in the Outstanding Rivers List have outstanding ecological, recreational, or scenic importance. The White River is used for a wide variety of uses including fishing, boating, nature study, hunting, industrial plant cooling, municipal water supplies, and wastewater treatment plant discharge.

### Background of Incident and Injury

Guide Corporation was located in Anderson, Madison County, Indiana. The facility manufactured automotive head-light and tail-light assemblies from 1929 to 2007. General Motors Corporation owned and operated the plant until 1998, when the facility was then leased to Guide Corporation. Guide Corporation committed to ending plating operations and planned on shutting down the onsite wastewater treatment plant at the end of December 1999.

The onsite wastewater treatment plant was constructed in early 1970s and was used in conjunction with the city of Anderson's wastewater treatment plant. A sodium hydroxide metal polishing agent, HMP 2000, was used to create floc and precipitate metal from the wastewater as part of the treatment process in the onsite wastewater treatment plant. Approximately 558,900 to 662,450 liters of plating wastewater were batch treated one to two times a day using 76 to 114 liters of HMP 2000 per batch. Wastewater treated onsite was then routed to the Anderson's wastewater treatment plant for further processing.

Shut down operations involved a large volume of plating bath being sent to the onsite wastewater treatment plant. Guide Corporation attempted to remove contaminants by adding large amounts of HMP 2000 and the use of other non-



conventional treatment methods. Unfortunately, this treatment strategy failed and wastewater containing HMP 2000 and other contaminants was released to the Anderson wastewater treatment plant and quickly overwhelmed it. As a result ammonia and untreated wastewater was discharged to the White River. It is estimated that 37,850 liters of HMP 2000 was illegally released into the river over a 10 day period.

The active ingredient in HMP 2000 is sodium dimethyldithiocarbamate and when released to the environment it degrades into a more lethal form known as thiram (tetramethylthiuram disulfide). Thiram is registered by the Federal government as a general use pesticide.

#### Natural Resource Injuries

The Indiana Department of Natural Resources began to receive reports of dead and dying fish in the river on December 16, 1999 after the raw wastewater began to reach the river. A complete list of hazardous substances illegally released was too difficult to develop. However, it was confirmed that HMP 2000, thiram, and ammonia were present in toxic levels. Other contaminants likely released included chromium, copper, nickel, sulfuric acid, and sodium hypochlorite.

The State of Indiana worked for months to determine the actual injuries to the river as a result of the release. The most obvious injury to the river was the large numbers of dead fish. State of Indiana contractors picked up and disposed of approximately 118 tons of dead fish by the spring of 2000. The Indiana Department of Natural Resources estimated with the use of modeling programs that 180 tons of fish died. Additionally, fish that survived the event likely suffered injuries such as blindness and skin lesions. Other natural resources that were impacted included: 1) fish habitat; 2) piscivorous birds;

3) piscivorous reptiles; 4) piscivorous mammals; 5) lost fishing use; 6) lost recreational use; and 7) water quality. The Natural Resource Trustees of the State of Indiana and the United States Government undertook a civil natural resource damage action under CERCLA and the Clean Water Act to address injuries that resulted from this wastewater discharge. CERCLA and the Federal Water Pollution Control Act authorize State agencies and certain federal agencies to manage or control natural resources, to act as “trustees” on behalf of the public, and to restore, rehabilitate, replace, and/or acquire natural resources equivalent to those harmed by the release of hazardous substances. Natural resource damages received, either through negotiated or adjudicated settlements, must be used to restore, rehabilitate, replace, and/or acquire the equivalent of natural resources injured by the release of hazardous substances.

The civil action was settled through Consent Decree Case No. IP-00-0702-C-D/F with the Guide Corporation. The settlement provided \$6,000,000 to the Natural Resource Trustees to restore, rehabilitate, replace and/or acquire the equivalent of those natural resources that have been injured. An additional \$250,000 was provided in 2004 through a Consent Decree settlement for Natural Resource Damages from the Crown Environmental Group, the environmental consultant for the Guide Corporation.

#### Restoration Process

The goal of the restoration efforts was to address the resource injuries that resulted from the release of hazardous substances by Guide Corporation. The objective in accomplishing this goal was and continues to be restoration, replacement, or acquisition of the equivalent of the injured natural resources.

CERCLA requires the federal government to

promulgate regulations for developing natural resource damage claims. The Natural Resource Damage Assessment (NRDA) regulations outline procedures for restoration planning and indicate that restoration plans need to consider ten factors when evaluating and selecting among possible projects to be used for restoring or replacing injured natural resources. Factors include consideration of the technical feasibility, cost effectiveness, potential for additional injury, natural recovery period, and compliance with federal, state, and tribal policies and laws.

As part of the NRDA process, a range of restoration alternatives were considered to address one or more specific injuries. For each alternative, consideration was given to costs, benefits, likelihood of success and effects on the public health and safety. Specifically, three restoration strategies were identified by the Trustees as potential alternatives to meet the requirements of NRDA regulations. The three strategies were: 1) no further action; 2) primary restoration of the impacted area; and 3) onsite and offsite restoration.

The restoration strategy of “no further action” would involve no direct actions and only allow for natural recovery in response to a wastewater spill. This strategy would not provide compensatory losses to the public for the interim losses to natural resources from the time of the incident until recovery is achieved. Without restoration, compensation for injury to natural resources would not occur.

The restoration strategy of “primary restoration of impacted area” would provide for efforts to remove hazardous substances and their by-products from the White River. However, removal of hazardous substances and other remedial activities were not feasible due to the characteristics of the contaminants.

The “onsite and offsite restoration” strategy involved consideration of restoration of sites directly impacted by the wastewater discharge and offsite locations not directly impacted. This strategy attempts to provide compensation for injured resources through acquisition, rehabilitation and protection of equivalent resources. Specifically, the “onsite and offsite” restoration strategy planned to restore injured natural resources and the services they provided by increasing the occurrence of and/or enhancing or restoring habitats that will support these resources.

The “onsite and offsite” restoration strategy was the preferred alternative for the Trustees because it best met the goal of the restoration plan. Additionally, this strategy was preferred because it focused restoration monies on areas where maximum restoration, replacement, or acquisition of the equivalent of injured resources could be achieved.

The target area of the river that was established for restoration activities is a 92 km long reach beginning at the west end of Anderson, Indiana and extending downriver to 16<sup>th</sup> Street in Indianapolis, Indiana. This area encompasses a variety of landuse and ecosystems and was identified as the most significantly injured portion of the river.

Implementation of the restoration plan involved cooperative efforts between private and public landowners, city, county, state agencies, federal agencies, not-for-profit organizations, public volunteers, contractors, and consultants. Restoration activities covered a broad array of natural resources associated with the river. Specific restoration activities implemented as part of this strategy included: 1) fish restocking; 2) protection, restoration, and/or acquisition of ecologically important natural areas; 3) protection and restoration of riparian buffer strips; and 4) river clean-up events.

Restoration efforts thus far have allowed for the fee simple acquisition and restoration of 1.2 km<sup>2</sup> of land and the purchase of conservation easements over an additional 1.1 km<sup>2</sup> of land. The trustees have also funded over \$2 million towards restoration on these and other properties already protected. Three new public access sites to the river have been acquired and several others have been improved and/or upgraded.

Monitoring the restoration efforts is an integral part of the restoration efforts in White River. Monitoring is conducted by the Natural Resource Trustees or their designated representatives. A monitoring plan is developed for each restoration site to determine if corrective action or continued efforts are needed.

Although the regulations governing NRDA lay out a framework for assessing injury, claiming damages, and implementing restoration it is important to keep in mind that each case is different and there may be parallel enforcement actions such as Resource Conservation and Recovery Act (RCRA) corrective action that also includes restoration activities. These activities are not always a substitute, done in lieu of, nor have the same requirements established pursuant to NRDA regulations when restoring natural resources.

*Carl Wodrich, Indiana Department of Natural Resources and Anne Remek Kominowsk, Indiana Department of Environmental Management*

## **SELECTED CONTENTS OF THE DECEMBER 2008 ISSUE OF *RESTORATION ECOLOGY***

This issue contains a special section edited by M.A. Callahan, L. Heneghan, and C.C. Rhoades on the application of soil ecology to restoration ecology.

K.S. Wendelberger, M.Q.N. Fellows, and J. Maschinski. Rescue and Restoration: Experimental Translocation of *Amorpha herbacea* Walter var. *crenulata* (Rybd.) Isley into a Novel Urban Habitat.

E.S. Cox, R.H. Marrs, R.J. Pakeman, and M.G. Le Duc. Factors Affecting the Restoration of Heathland and Acid Grassland on *Pteridium aquilinum*-Infested Land across the United Kingdom: A Multisite Study.

J. Bhattacharjee, J.P. Taylor Jr., L.M. Smith, and L.E. Spence. The Importance of Soil Characteristics in Determining Survival of First-Year Cottonwood Seedlings in Altered Riparian Habitats.

Y. Li, W. Wang, Z. Liu, and S. Jiang. Grazing Gradient versus Restoration Succession of *Leymus chinensis* (Trin.) Tzvel. Grassland in Inner Mongolia.

M.E. Lulow. Restoration of California Native Grasses and Clovers: The Roles of Clipping, Broadleaf Herbicide, and Native Grass Density.

J.B. Fant, R.M. Holmstrom, E. Sirkin, J.R. Etterson, and S. Masi. Genetic Structure of Threatened Native Populations and Propagules Used for Restoration in a Clonal Species, American Beachgrass (*Ammophila breviligulata* Fern.).

SPECIAL SECTION: SOIL ECOLOGY  
AND RESTORATION ECOLOGY

M.A. Callaham Jr., C.C. Rhoades, and L. Heneghan. A Striking Profile: Soil Ecological Knowledge in Restoration Management and Science.

L. Heneghan, S.P. Miller, S. Baer, M.A. Callaham Jr., J. Montgomery, M. Pavao-Zuckerman, C.C. Rhoades, and S. Richardson. Integrating Soil Ecological Knowledge into Restoration Management.

J.A. Montgomery and J.M. Eames. Prairie Wolf Slough Wetlands Demonstration Project: A Case Study Illustrating the Need for Incorporating Soil and Water Quality Assessment in Wetland Restoration Planning, Design and Monitoring.

B.A. Snyder and P.F. Hendrix. Current and Potential Roles of Soil Macroinvertebrates (Earthworms, Millipedes, and Isopods) in Ecological Restoration.

K.R. Butt. Earthworms in Soil Restoration: Lessons Learned from United Kingdom Case Studies of Land Reclamation.

M.A. Pavao-Zuckerman. The Nature of Urban Soils and Their Role in Ecological Restoration in Cities.

R.C. Anderson. Growth and Arbuscular Mycorrhizal Fungal Colonization of Two Prairie Grasses Grown in Soil from Restorations of Three Ages.

D.A. Grimley, J. Wang, D.A. Liebert, and J.O. Dawson. Soil Magnetic Susceptibility: A Quantitative Proxy of Soil Drainage for Use in Ecological Restoration.

C.D. Barton, D.M. Andrews, and R.K. Kolka. Evaluating Hydroperiod Response in

Restored Carolina Bay Wetlands Using Soil Physicochemical Properties.

A.J. Wells, N.J. Balster, S. Van Wychen, and J. Harrington. Differences in Belowground Heterogeneity Within a Restoration of a Dewatered Reservoir in Southwestern Wisconsin.

B.V. Iannone III and S.M. Galatowitsch. Altering Light and Soil N to Limit *Phalaris arundinacea* Reinvasion in Sedge Meadow Restorations.

K.W. Seo, Y. Son, C.C. Rhoades, N.J. Noh, J.W. Koo, and J. Kim. Seedling Growth and Heavy Metal Accumulation of Candidate Woody Species for Revegetating Korean Mine Spoils.

V.T. Eviner and C.V. Hawkes. Embracing Variability in the Application of Plant–Soil Interactions to the Restoration of Communities and Ecosystems.

*For more information on current and past issues of Restoration Ecology see:*  
[www3.interscience.wiley.com/journal/11797/9191/home](http://www3.interscience.wiley.com/journal/11797/9191/home)

**UPCOMING ECOLOGICAL  
RESTORATION RELATED  
CONFERENCES – JANUARY TO  
APRIL 2009**

Habitat/Wetlands Initiative Workshops 2008-2009. There are five, one day workshops offered between January and March 2009. The Great Lakes Interagency Task Force and the Corps of Engineer's Great Lakes Habitat Initiative are sponsoring the workshop. Additionally, workshops are being facilitated by the Great Lakes Commission in coordination with the resource agencies of Great Lakes states and tribes. Dates and locations of upcoming workshops within Chapter Boundaries are:

- January 15, 2009, Illinois, Chicago area
- January 29, 2009, Indiana, Northwest
- February 19, 2009, Tribal Lac du Flambeau
- March 2009, Michigan
- March 17, 2009, Wisconsin, Milwaukee area

<http://www.glrc.us/initiatives/wetlands/Workshops2008-2009.html> or contact Victoria Pebbles, Great Lakes Commission, [vpebbles@glc.org](mailto:vpebbles@glc.org).

Ohio Parks and Recreation Association (OPRA) Conference and Trade Show, Columbus, OH. January 10-14, 2009. <http://www.opraonline.org/>

Great Lakes Urban Habitat Restoration Symposium. Chicago, IL. January 22-23, 2009.

<http://www.glfc.org/urbanrestore/>

Stewardship Network Conference East Lansing, MI. January 23-24, 2009. The science, practice and art of restoring native ecosystems.

<http://www.stewardshipnetwork.org/site/c.hrLOKWPILuF/b.2607611/>

5th Annual Conservation Day at the Indiana Conservation Day 2009. Sponsored by the Indiana Conservation Alliance, Indianapolis, IN. January 27, 2009.

<http://www.nature.org/wherewework/northamerica/states/indiana/events/events5304.html>

Building Partnerships/Protecting Indiana's Aquatic Resources. Joint Meeting of the Indiana Chapter of the American Fisheries Society and the Indiana Lake Management Society, Indianapolis, IN. January 29-31, 2009.

<http://www.fisheries.org/units/indiana/INARC/>

Wild Things 2009: Conference cosponsored by Audubon Chicago Region, the Volunteer Stewardship Network, and Chicago Wilderness, Chicago, IL. February 7, 2009.

<http://www.habitatproject.org/wildthings2009/>

2009 Annual Meeting of the American Association for the Advancement of Science "Our Planet and Its Life: Origins and Futures", Chicago, IL. February 12-16, 2009. <http://meeting2009.aaas.org>

Invasive Plants of Grasslands Conference. A joint conference of the Prairie Enthusiasts and the Invasive Plants Association of Wisconsin, Madison, WI. February 21, 2009.

<http://www.ipaw.org>

Thumbs Up For The Environment: Native Landscaping for Clean Water. Wild Ones 2009 Spring Expo, Roseville, MN. February 21, 2009.

<http://for-wild.org/chapters/twincities/expo.html>

Midwest Aquatic Plant Management Society's 29th Annual Conference, Lisle, IL. March 1-4, 2009.

<http://www.mapms.org/MAPMSConf2009.html>

Minimizing and Preventing the Spread of Invasive Plant Species through Public Spaces and Corridors. 2009 symposium of the Michigan Invasive Plant Council, Kellogg Center-East Lansing, MI. March 6, 2009.

<http://www.invasiveplantsmi.org>

22<sup>nd</sup> Annual Michigan Wildflower Conference, Wildflower Association of Michigan. March 7-8, 2009.

<http://www.wildflowersmich.org/index.php?menu=5>

Ohio Lake Management Society 2009 Spring Conference, March 16-17, 2009. More details to be announced later.

<http://www.olms.org/conference.php>

Recreate, Replace, Restore: Exploring the Intersections Between Meanings and Environments, Ohio Northern University, Ada, OH. April 17-19, 2009.

<http://www.onu.edu/org/wgren/conference-index.html>

**Midwest-Great Lakes SER Chapter's First Annual Meeting, Marian College, Indianapolis, IN. April 24-25, 2009. See Call for Abstracts below.**

If you have a restoration conference that you would like announced in this section please send the information to smiley.50@osu.edu

*Belynda Smiley, SENR, the Ohio State University and Cara Hardesty, Liason Subregional/Local Restoration Group Subcommittee*

# CALL FOR ABSTRACTS FIRST ANNUAL CHAPTER MEETING



## MIDWEST-GREAT LAKES CHAPTER SOCIETY FOR ECOLOGICAL RESTORATION INTERNATIONAL

We invite all interested parties to submit an abstract for an oral presentation or poster to be presented at the First Annual Chapter Meeting of the Midwest-Great Lakes SER Chapter. The meeting is scheduled for April 24 to 25, 2009 and will be held at Marian College in Indianapolis, Indiana. The Midwest-Great Lakes Chapter of the Society for Ecological Restoration International (SER) is the newest regional SER chapter, covering a six-state region of Ohio, Indiana, Michigan, Illinois, Wisconsin, and Minnesota. Our mission is to promote the science and practice of ecological restoration to assist with the recovery and management of degraded ecosystems throughout the Midwestern and Great Lakes region of the United States. There is a tremendous diversity of individuals and institutions involved in ecological restoration within the Chapter boundaries. Our goal is to provide a forum on a diversity of ecological restoration topics and we welcome abstracts from all individuals, institutions, and disciplines involved in ecological restoration. Oral presentations will be scheduled in 15 minute segments. More details related to audiovisual formats and space requirements will be provided at a later date. This meeting is an inaugural event for us because it represents the beginning of what will be a dynamic and exciting regional SER Chapter.

The deadline for submission of abstracts for oral and poster presentations is **Monday February 23, 2009**. Abstracts will be reviewed and authors will be notified of acceptance status by **Monday March 23, 2009**. **Abstracts will be limited to 250 words.**

Abstracts need to be submitted via email to the following email address (rocky.smiley@ars.usda.gov) with the author information and abstract attached as a Microsoft Word file (Microsoft Word 2003 or earlier files only - \*.doc) or Rich Text Format (\*.rtf). We will not accept Microsoft Word 2007 (\*.docx) documents. The subject line of your email should read "MWGL SER Annual Meeting Abstract". Alternatively, if email submission is not an option for you then you may FAX your abstract to Rocky Smiley (614-292-9448) or mail to USDA-ARS Soil Drainage Research Unit, 590 Woody Hayes Drive, Columbus, Ohio 43210.

Please follow the formatting guidelines below in preparation of your abstract. Abstracts that do not follow the required formatting guidelines will be rejected.

## 1. Format for Author, title, and affiliation information:

Use Times New Roman font with a font size of 12. List all authors and indicate the person who will be presenting with an \* following their name. The title of the presentation should be bolded. Provide an abbreviated contact information for each author containing the affiliated institution, City, and State. Additionally, provide the email address of the person giving the presentation. See examples provided below

a. All authors having same affiliation:

Jones, Jane J.\* and John D. Doe. **Hydrological and ecological responses to implementation of streamside buffers.** Jones University, Anytown, Ohio. Email: jane.jones@jones.edu

b. Authors with different affiliations:

Smith, Ann R..<sup>\*1</sup>, Jane D. Doe<sup>1</sup>, and Jim R. Evers<sup>2</sup>. **Prairie restoration efforts in Wisconsin.**  
<sup>1</sup> Old School University, Anytown, Wisconsin. <sup>2</sup> Deer County Agricultural Agency, Jonesburg, Michigan. Email: asmith@oldschool.edu

## 2. Format for Text of Abstracts:

The text of the abstract begins two line spaces below the author, title, and contact information. Use Times New Roman font with a font size of 12. The abstract is to be single spaced and aligned left with no indentations. Maximum word limit for text of abstract is 250 words. An abstract is a single paragraph summary of your entire talk or poster in 250 words or less. It is not an outline of what you are going to present. It should be concise and to the point.

Indicate if the abstract is for an oral presentation or poster presentation and if the abstract is student presentation in the line that is two line spaces below end of the abstract. Indication of abstract type will not be counted towards maximum word limit.