

JFNew NATURAL NEWS

Fall 2008

The Role of Wetlands in a Floodplain

Months of heavy precipitation across the Midwest have caused wide-spread flooding, with rivers overflowing their banks for several weeks at a time and breaking through levees at numerous locations throughout Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri and Wisconsin. While many areas sitting alongside infamous rivers such as the Mississippi and Ohio are accustomed to seasonal flooding, many more areas are now being affected. Some of these areas are located hundreds of miles inland from the closest major waterway, and, according to the U.S. Geological Survey, this has been perhaps the worst flooding the Midwest has experienced in 15 years.

For example, 29 counties in central and southwestern Indiana were declared major disaster areas in early June after heavy rains inundated parts of Bloomington and Edinburgh. To the west, the small town of Paragon received over 10 inches of rain in just a few hours, leaving 90 percent of the town underwater (Source: <http://www.crh.noaa.gov/ahps2/hydrograph.php?wfo=ind&gage=ceni3>). In southwestern Wisconsin, the Kickapoo River rose several feet above flood stage, destroying most of the village of Gays Mills. The village had already been badly flooded in August 2007. Officials said Kickapoo River flood damage will likely exceed the \$60 million damage caused by the August 2007 floods, and already the water was two feet higher than the high water mark of a historic 1978 flood. (Source: *Vernon County Broadcaster*)

But could the flooding have been partially mitigated? According to the U.S. Department of Natural Resources, the simple answer is yes. Not through the manmade structure of levees, but through the natural structure of wetlands.

Wetlands play a critical role within our floodplains. They function as natural sponges that trap and slowly release surface water, rain, snowmelt, groundwater and flood waters. Trees, shrubs, root mats and other ground-level wetland vegetation slow the speed of flood waters, distributing them more slowly over the floodplain. This combined water storage and braking action lowers flood heights and reduces erosion. Wetlands within and downstream of urban areas are particularly valuable, counteracting the greatly increased rate and volume of surface-water runoff from pavement and buildings.

According to Peg Bostwick, Michigan Department of Environmental Quality, Chief Wetlands, Lakes & Streams Unit Land and Water Management Division, "The Michigan legislature specifically recognized the important role that wetlands play in the management of floodwaters in the State's wetland regulations, listing 'flood and storm control by hydrologic absorption and storage capacity' among the public benefits of wetlands."



The holding capacity of wetlands helps control floods and prevents water logging of crops. Preserving and restoring wetlands, together with other water retention, can often provide the level of flood control otherwise provided by expensive dredging operations and levees. The bottomland, hardwood

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Corporate Headquarters

Walkerton, IN 574.586.3400

Branch Offices

Chicago, IL 708.534.3450

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Lansing, MI 517.898.9018

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riparian wetlands along the Mississippi River once stored at least 60 days of floodwater. Now they store only 12 days because most have been filled or drained. (Source: U.S. Environmental Protection Agency)

If wetlands reduce flooding and offer other benefits to wildlife and water quality, why not create or restore wetlands to create a more cost-effective, natural flood-control mechanism? Preserving wetlands, along with other flood control measures, can offer a degree of protection against flooding that is often more effective and costs less than a system of traditional dikes and levees. If more communities protect existing wetlands and increase the quantity of wetlands through restoration projects, we will be better protected against the consequences of floods.

“Some of the most flood prone areas of this state are also those that have experienced a high percentage of wetland loss or conversion to agricultural or urban land use since European settlement,” Bostwick said. The answer depends on whether we expend time and resources restoring damaged wetlands or creating new wetlands to replace those destroyed by development. Restoration can work if hydrology, soils and vegetation can be re-established. Wetland restoration and preservation is an important component of a comprehensive flood protection strategy.

Turning Native Landscaping into Works of Art

Native landscaping is seeing a surge in interest as property owners look for ways to conserve water and energy, while at the same time restore the natural ecosystem that may have originally existed on the site. Recently, two well-known museums in Chicago have recognized the benefits of native landscaping, and have turned their showy display into public works of art. Both the Museum of Science and Industry and the Peggy Notebaert Nature Museum have open exhibits which show how native plants can be used in creating beautiful, yet sustainable, landscapes.



The Museum of Science and Industry’s “Smart Home” exhibit, which is open through January 4, 2009, showcases JFNew-donated native wetland and prairie plugs. The exhibit includes a 2,500 square-foot, three-story modular and sustainable home in the Museum’s backyard. Visitors can learn



about the various ways they can incorporate eco-friendly living into everyday life such as reusable resources, smart energy consumption, sustainable gardens and green roofs. From the ground up to the roof, “Smart Home’s” landscape design demonstrates an eco-friendly aesthetic with systems that sustain and replenish the environment: green roofs, rain barrels, bioswales, porous paving and rain gardens. Prairie, dune and oak savannah plantings recall our region’s past and working gardens present food production, indoor climate control and water recycling in action. The Museum collaborated with Jacobs/Ryan Associates Landscape Architects, the University of Illinois Extension and Openlands to develop a native and sustainable site landscape for Smart Home.

Uptown at the Peggy Notebaert Nature Museum for the “Lawn Nation” exhibit, JFNew-grown native plants and ingenuity are found on display. Futuristic lawns are brought to life by JFNew, with help from The Foresight Design Initiative and landscape designers from Christy Webber Landscapes. Since opening in late May, the museum has been overwhelmed with positive feedback received from visitors, and is considering making the exhibit a permanent fixture. Located outside in front of the museum, this living installation presents a range of lawn alternatives. Each was developed

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Serving up Sustainability

Each month, JFNew, along with people from various professional industries, meet socially at local establishments to casually discuss environmental issues, and work together on innovative and sustainable solutions to environmental challenges. This monthly gathering event is called “Green Drinks” and there are currently 376 chapters of this organization world wide. There are several chapters in Michigan, and JFNew is proud to be the host for the Grand Rapids chapter, along with the West Michigan Environmental Action Council (WMEAC) and The Image Shoppe.

JFNew and The Image Shoppe are also hosting Michigan’s newest chapter in Lansing, Michigan. Every month, people who work in the environmental field or are just environmental enthusiasts, meet up for refreshments at informal sessions. JFNew is also involved with the “Green Drinks” chapters in Chicago, Illinois, and northwest and central Indiana.

According to Dave Nicholson, JFNew Regional Account Manager in Michigan, participation and interest in “Green Drinks” seems to amplify weekly. “Since our first meeting in December 2007, community response has been tremendous. Many who have attended once, come back month-to-month, bringing someone new with them,” Nicholson said. “This is the way it is supposed to work and grow. It does not matter what your background is. You just have to think ‘green.’”

For more information about JFNew’s involvement with “Green Drinks” contact Dave Nicholson (Michigan Chapter) at dnicholson@jfnew.com or Mark Berninger (Illinois Chapter) at mberninger@jfnew.com. To learn more about “Green Drinks” and to locate a chapter nearest you, visit www.greendrinks.org.

JFNew to Advise USACOE

Kelly Rice, JFNew Professional Wetland Scientist, has been selected to serve on the U.S. Army Corps of Engineers National Advisory Team. Kelly was selected among nearly two dozen applicants to help form the Peer-Review Committee for the North Central Regional Supplement to the Corps 1987 Wetland Delineation Manual used in the Clean Water Act Section 404 program. Currently, a supplement is being drafted for the Midwest region. This regional supplement covers all or parts of South Dakota, Michigan, Wisconsin, Minnesota, Iowa, Nebraska, Kansas, Oklahoma, Missouri, Illinois, Indiana and Ohio.

As part of this process, the National Advisory Team, consisting of representatives from the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, and the U.S. Department of Agriculture Natural Resources Conservation Service, has selected seven individuals across this 12-state region to form a Peer-Review Committee. The committee will be responsible for evaluating the reliability and scientific validity of the draft supplement for the Midwest region. Committee member selections were based on expertise, independence and the absence of conflicts of interest.

The final peer review report and regional work group response will become part of the administrative record for any related actions by the Corps. As part of the Peer-Review Committee, Kelly, who was the only representative chosen in Michigan, will provide direct feedback on delineation methods that are proposed currently and will be used in the future. According to Katherine Trott, U.S. Army Corps of Engineers Headquarters, Regulatory Community of Practice, "We appreciate Kelly's willingness to participate, and anticipate that her expertise will greatly benefit the team." For more information on the National Advisory Team, please contact Kelly at krice@jfnew.com.

Work of Art, continued

to be functional, attractive, low maintenance and use fewer resources than traditional turf grass. Best of all, each features design elements you can try at home. For more information about JFNew's involvement with the Museum of Science and Industry "Smart Home" and the Peggy Notebaert Nature Museum "Lawn Nation" exhibits, contact Mark O'Brien, JFNew Native Plant Nursery Director, at mobrien@jfnew.com.

Innovative Monitoring

Many scientists believe at our current rate of habitat change and loss, half of all current species on Earth will be extinct in less than 100 years. Many also believe up to one-fifth of all species will disappear in the next 30 years. (Source: <http://www.amnh.org/museum/press/feature/biofact.html>) As our natural resources are rapidly being developed and degraded, it is increasingly important to maintain detailed records of rare plants and animals on our public lands.

JFNew recently conducted surveys of the Federally Endangered Leafy Prairie Clover (*Dalea foliosa* [A. Gray] Barneby) at two properties in Will County, Illinois. Leafy Prairie Clover, a member of the legume family (*Fabaceae*), is currently known to exist only in Alabama, Illinois and Tennessee, on limestone cedar glades, limestone barrens and dolomite prairies. It has several known threats, including: habitat destruction and degradation; extended summer drought; frost heave; over collecting; trampling; and herbivore predation. The purpose of the surveys was to obtain baseline data for a long-term study on the effects of herbivory on Leafy Prairie Clover.



Because of the sensitivity of the habitat of this rare species, and because trampling and compaction are threats to the survival of the species itself, JFNew used the innovative technique of sampling while lying on cots to minimize ground contact by the sampling teams. Paired plots (enclosure and open) were established prior to the study. Data for Leafy Prairie Clover that were

recorded in enclosure and open plots included: number of primary stems and evidence of secondary and tertiary stems, height of tallest plant, number of browsed primary stems, number and length of inflorescences, and notes on general health of plants. Estimates of percent cover for all herbaceous species were also recorded to give information on the associated plant community.

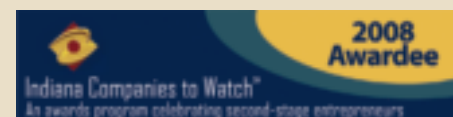
For more information on endangered species surveys, or to discuss having JFNew perform a survey on your property, contact JFNew Botanist Scott Namestnik at snamestnik@jfnew.com.

Company to Watch

JFNew was recently recognized by the Indiana Economic Development Corporation and the Edward Lowe Foundation at the first Indiana Companies to Watch awards program. Leading companies from across Indiana were honored as outstanding, second-stage companies who are driving employment growth in the private sector. Companies honored included traditional businesses involved in manufacturing, financial services and warehousing, as well as high-tech companies working in the life sciences, information technology, telecommunications, or environmental or technical consulting industries.

A total of 420 Indiana companies were nominated for the Companies to Watch program with 50 being recognized. Companies to Watch firms must employ between six and 150 full-time equivalent employees, have between \$750,000 and \$100 million in annual revenue or working capital in place, and demonstrate the intent and capacity to grow based on employee or sales growth, exceptional entrepreneurial leadership, sustainable competitive advantage or other notable strengths.

"We are proud to be independently recognized for this award, especially for our employees," said Will Ditzler, JFNew President/CEO. "More than anything it is recognition of their collective efforts in making JFNew a high performance company with a passion for what we do."



JFNew Natural News Going Paperless

Since 2000, JFNew has been keeping readers informed of environmental news and initiatives through our *Natural News*. JFNew will continue bringing reader's quality information through our new *E-Natural News* for all future newsletter publications. Moving to an all-electronic newsletter format supports JFNew's commitment to sustainability, corporate responsibility and reducing our ecological footprint. JFNew values our readership, so please visit our web site at <http://www.jfnew.com/newsletter.asp> and sign up to receive *E-Natural News* via email.

New Office Information

Please note our Wisconsin office has moved, and we have opened a new office in Michigan.

403 Venture Ct., Unit 7
Verona, Wisconsin 53593
Phone 608.848.1789 / Fax 608.848.3013

P.O. Box 100
Holt, Michigan 48842
Phone 517.898.9018 / Fax 517.913.5959

JFNewswire

Leading Wetland Biologist
Joins JFNew



Stu Kogge, a leading Wetland Biologist with over 25 years experience, has joined our team as Vice President, Technical Services. Stu will provide technical assistance on wetland assessments, delineations, mitigation designs, ecological restorations, endangered species surveys, and fisheries and aquatic assessments. Stu will also develop and conduct ecological education and training classes, and will be instrumental in promoting JFNew as the Midwest leader in wetland consulting, restoration and environmental education. Stu's experience and in-depth understanding of managing and resolving wetland-related issues allows him to be an effective partner for our clients on the complex challenges of wetland regulatory statutes. Contact Stu directly at skogge@jfnew.com.

corporate headquarters: 574.586.3400

nursery: 574.586.2412



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