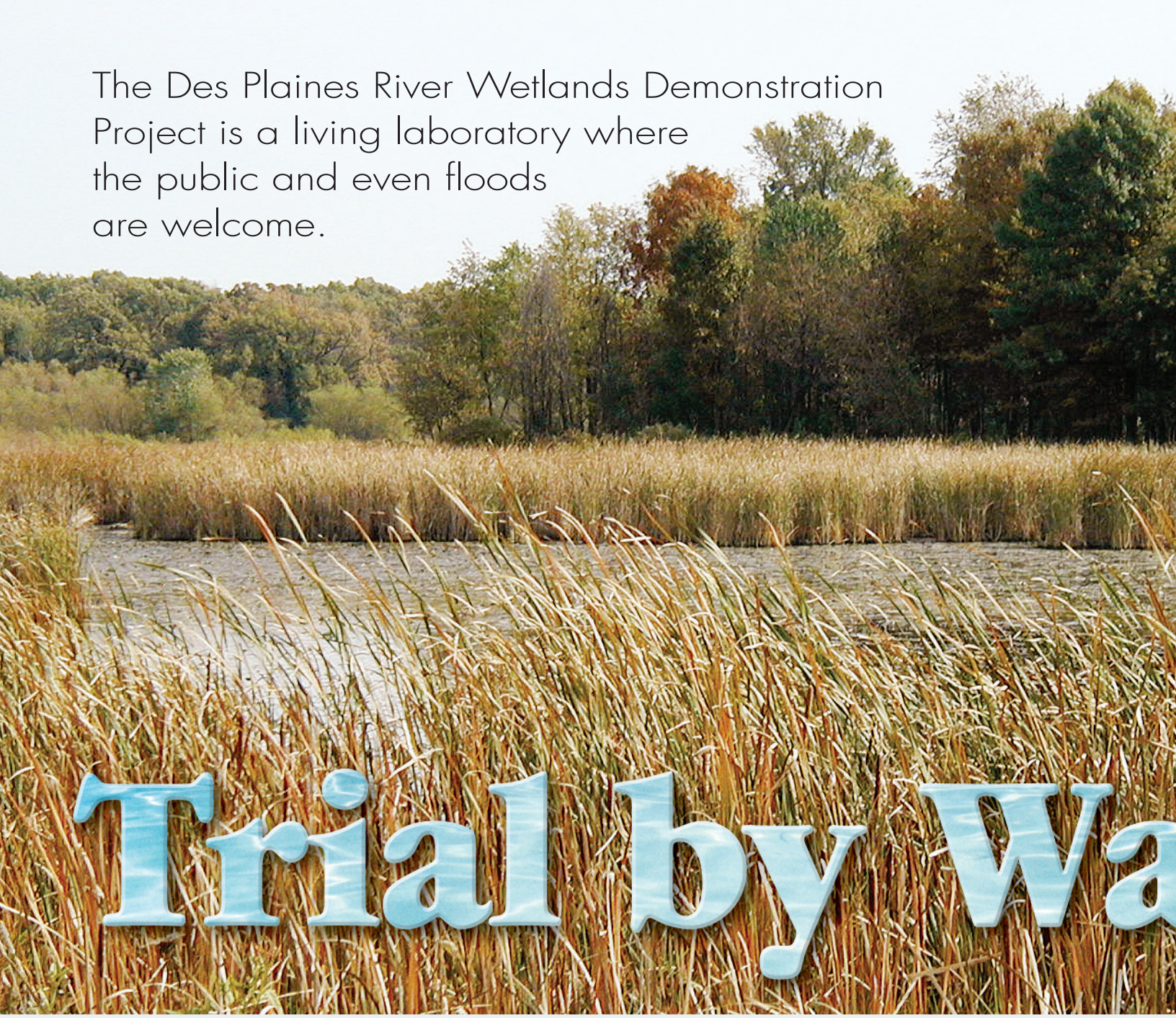
The Des Plaines River Wetlands Demonstration Project is a living laboratory where the public and even floods are welcome.



Trial by Wa

Story By Joe McFarland
Photos Courtesy Lake County Forest Preserves

The landscape at these 550 acres in northeast Illinois has changed dramatically a total of three times during the past 10,000 years or so.

The first change: The Wisconsinan glacier melted away to reveal a rich, wetland-filled river valley. It was Illinois' last glacial episode. For thousands of years thereafter, a river that would eventually be known as the Des Plaines wandered across this biologically diverse wetland habitat, surviving centuries of drought and flood, scorching wildfires and gradually changing climate. Throughout the ages, industrious beavers steadily maintained water levels as countless numbers of wetland-dependent wildlife flourished.

The next two changes came fast—both during the past 175 years.

European settlers arrived at this piece of northeastern Illinois during the early 1800s and decided to make improvements. Beaver pelts, prized by the European fur trade, led to the local extirpation of this wetland mammal by the mid 1800s. Farmers quickly cleared and drained the fertile river bottoms with field tiles and straight ditches. Meanwhile, roads and cities were built nearby. Construction projects begged for raw materials, so mountains of gravel and sand were mined from the glacial deposits near the river, leaving acres of deep, water-filled pits where shallow wetlands once existed.

Modern development increased exponentially during the 20th century, and by 1975, the once-massive wetlands that thrived for thousands of years along the Des Plaines River had become scarcely more than a minor footnote for passing motorists glancing out the window while crossing a river bridge in Wadsworth.

Then came the third dramatic change.

Lake County's Wetlands Demonstration Project transformed a scarred landscape into a functioning wetland system.

In the early 1980s, an Illinois environmental engineer and a few other conservationists floated a dramatic idea before the Lake County Forest Preserves District. What if the entire 550 acres were re-sculpted into proper wetlands? Such change would represent a major shift in the dynamics of the local watershed. And while it wasn't possible to erase history and restore the original wetlands, would this Herculean proposal be a better alternative than leaving the dysfunctional land as a bleak monument to itself?

The forest preserve district had acquired the heavily altered landscape in a series of individual purchases in the early 1970s. Yet what the Des Plaines site offered to the public in those early years was a river corridor that was, at best, a heavily fragmented natural experience. Canoeists launching at the Wadsworth bridge in the mid-70s might paddle past giant concrete culverts and stripped-over floodplain. During the frequent floods which plagued the entire watershed, a canoe excursion might travel across a flooded farm field and through a mine pit before floating past someone's house.

Donald Hey, an environmental engineer and past member of the Illinois Department of Conservation's Wetlands Advisory Council, had crunched some wetlands numbers and proposed to the forest preserve a radical alteration of the landscape.

What if the restructured wetlands were designed to function not only as wetlands reminiscent of pre-European settlement days, but also as an experimental laboratory with different gradient zones and water-control structures manipulating the river flow amid marshes and shallow ponds? The wetlands could be a public demonstration area and serve as a water-holding center for flood control with benefits for wildlife and public recreation—a scientific model for other wetlands near urban landscapes and everywhere else.

It would require a huge alteration of the site, an epic overhaul of the landscape unseen since the Wisconsinan glacier. But since the current landscape was a relatively new condition, Hey pointed out that wetlands were perfectly natural.

(Photos courtesy Kathy Paap, Wetland Research, Inc.)

Twenty-five years ago, heavy equipment descended on the Des Plaines River Wetlands Demonstration Project area to re-establish natural wetlands.

In addition to providing valuable wildlife habitat, the Des Plaines wetlands function to improve water quality and store flood waters.

"We knew the site had evidence of hydric soils. Hydric soils are the footprint of wetlands," Hey explained. Excavations conducted in soil strata along the Des Plaines revealed ancient evidence of beaver dams and lodges dating back thousands of years to the Middle Archaic, firmly establishing these 550 acres as a natural wetland with thousands of years of history.

But convincing skeptics that a wetland could be constructed in the development-scarred river habitat seemed daunting. Some even jeered at the idea.

Yet the monumental project gained support in Washington as local congressional representatives got on board. The forest preserve learned they wouldn't have to spend a dime or foot the bill. Instead, a development group, Wetlands Research, Inc. was formed with Hey as director, and earth-moving equipment descended upon the property in 1983 to begin construction.

It's been more than 25 years since the idea to create a wetland was spawned. Today, The Des Plaines River Wetlands Demonstration Project represents an unprecedented land-use accomplishment, praised by local governments and environmentalists alike. What had previously been a scarred landscape of overgrown gravel pits and ditches is now a water-purifying, wildlife-benefiting, perfectly functioning wetland complex filled with threatened and endangered species, hiking trails and a nearby canoe access.

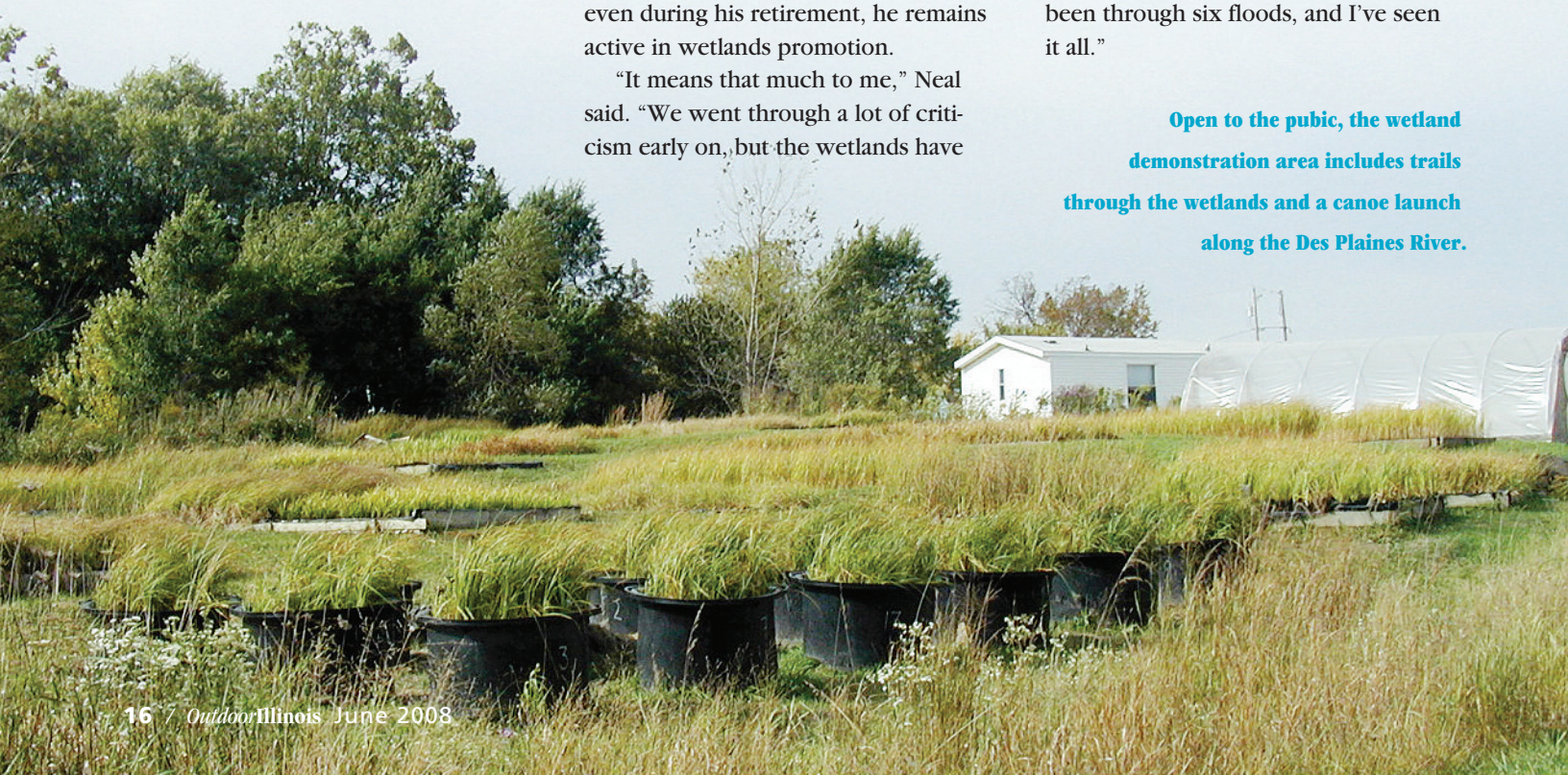
Bob Neal, a former Lake County Board member and Finance Committee chairman for the Lake County Forest Preserves District during the early 80s, said he's so proud of the accomplishments of the wetlands project that, even during his retirement, he remains active in wetlands promotion.

"It means that much to me," Neal said. "We went through a lot of criticism early on, but the wetlands have proven their benefit to the community over and over since that time and I feel really good about continuing to promote these wetlands."

Neal recently coordinated a land deal for an additional 60 acres of heavily modified Des Plaines floodplain nearby to be converted back to wetlands. Downstream, local governments in flood-prone areas couldn't be happier.

"It's been a tremendous asset to the village in terms of flood control. No ifs ands or buts about it," Gurnee Village Administrator Jim Hayner insisted. "I've been here more than 30 years, I've been through six floods, and I've seen it all."

Open to the pubic, the wetland demonstration area includes trails through the wetlands and a canoe launch along the Des Plaines River.



(Photo courtesy Carol Freeman, Carol Freeman Photography.)

Nearly 200 birds have utilized the restored wetlands, including the Illinois-endangered yellow-headed blackbird (*Xanthocephalus xanthocephalus*).

Hayner said he's taken helicopter rides after major storms and floods to survey the impact on his community. When the helicopter passes near the Des Plaines wetlands, he sees the remarkable function of the wetlands as they capture and hold water that might've otherwise flooded homes and businesses in Gurnee.

"It's always amazing to see how much water those wetlands hold," Hayner said.

The attraction of the wetlands also appeals to the original, post-glacial inhabitants as well. Even amid this highly developed region of northern Illinois, wetland-dependant wildlife ranging from aquatic microorganisms to sandhill cranes have returned.

According to Wetlands Research, Inc., the majority of wetland birds utilizing the site today—198 bird species were documented as of 2002, including threatened and endangered species—appeared within the first two years of construction. That indicates birds are able to locate new wetlands quickly, even in heavily developed regions.

It also indicates there is a shortage of such habitat in the region.

"Beavers are back on the site," Hey said with pride. Whereas early settlers eradicated beavers and destroyed their dams to drain wetlands, Hey is thrilled to see these natural wetland-makers maintaining a site built by humans. Visitors to the Des Plaines River Wetlands Demonstration Project can observe functioning beaver dams maintaining water levels in ways similar to how the original wetlands might have appeared for thousands of year.

Site manager and ecologist Kathy Paap said people hiking along trails at the wetlands will see a stretch of landscape not all that different than what the first European settlers observed.

"I'm not going to pretend that these restored wetlands have been able to turn back the clock and recreate everything Native Americans and early settlers once saw," Paap said. "But, in some ways, it's like stepping into a museum, seeing a snapshot of what people would have witnessed and experienced while providing for modern needs such as flood control, wildlife habitat and water quality."

(Photos by Adele Hodde.)

American toad

garter snake

snapping turtle

She added the trails through the wetlands include self-interpretive signs to guide and explain the nature of the site for visitors.

As part of the Lake County Forest Preserves, the Des Plaines River Wetlands Demonstration Project is open to the public year-around. Access to the site and popular canoe launch along the Des Plaines River is available along Wadsworth Road, just east of Illinois Route 41. The canoe launch at the Des Plaines River bridge is maintained by the forest preserve, as well as a parking area to the west for access to hiking trails. The site is open from 6:30 a.m. to sunset every day, year-around. Know that during severe weather and dangerous water conditions, the canoe launch is sometimes closed.

For more information, contact the Lake County Forest Preserves at (847) 367-6640 or see ww.lcfpd.org.

To learn more about Wetlands Research Inc, visit http://wetlandsresearch.org.