

# Our Mississippi

PARTNERING TO KEEP  
AMERICA'S RIVER GREAT

FALL '10



## Forest forever?

*New forest plan helps ensure health of ancient river bottomland forest*

When aerial photographer Bob Hurt looks down upon his favorite photo subject—the Mississippi River—he sees a landscape that doesn't appear to have changed much since ancient times.

Come fall, a golden-hued forest stretches for as far as the eye can see, a scenic contrast to the deep blue of the river that snakes amid bluffs and wooded islands.

"The forest kind of goes on forever, quite frankly," says Hurt, whose work has been used to inspire conservation by simply showing the grandeur that now exists.

But you don't need to see the forest by plane—or even the slightly lower vantage point of the birds and waterfowl that rely upon the famed migratory flyway—to see what's worth preserving. That's evident from a bike along the Great River Road, a tent pitched inside a pristine forest campground, or a canoe trip through a backwater teeming with wildlife.

What might not be as obvious, foresters say, are the subtle threats to this ancient mosaic. Invaders like insects and exotic plants are being put under a spotlight by foresters hoping to preserve the river's bottomland forests into perpetuity.

"The floodplain forests are a habitat that's been somewhat overlooked in this part of the country up to this point," said Randy Urich, a U.S. Army Corps of Engineers forester and forestry team leader for the Navigation and Ecosystem Sustainability Program.

"They've always been here, and they are relatively healthy, but this is a bit deceiving. What we've discovered more recently is there are significant changes taking place that are affecting growth of these forests and that more management is needed. We need a higher level of effort and focus to ensure they're there for us for the future."

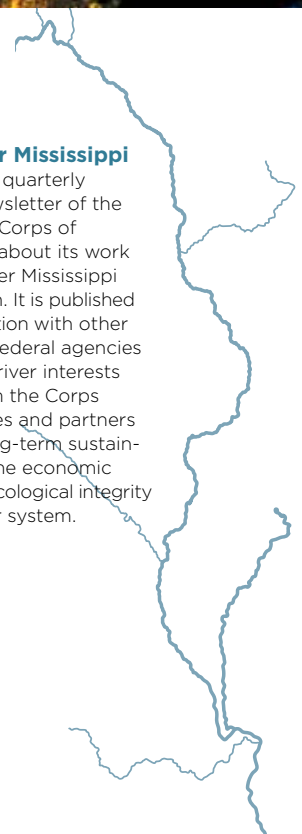
That focus is being brought to bear through a comprehensive

*Continued on page 2 >>*



### Our Mississippi

is a quarterly newsletter of the U.S. Army Corps of Engineers about its work in the Upper Mississippi River Basin. It is published in cooperation with other state and federal agencies and other river interests with whom the Corps collaborates and partners toward long-term sustainability of the economic uses and ecological integrity of the river system.





"Forest Forever?" continued from page 1...

management plan for the Mississippi River's floodplain forests, a plan that will be available for public comment this fall. One early stage involves an inventory of what currently exists, a project that'll be accomplished through such low-tech tools as sending teams out to directly measure samples of individual trees, and such high-tech tools as hydrogeomorphic evaluation. That process relates what currently exists on the land with what was located upon a given plot historically. It will show what has occurred on the land over a period of time and what the restoration potential might be—tools critical in helping to focus limited dollars on areas with the greatest potential for success, Urich says.

The management plan is part of the Navigation and Ecosystem Sustainability Program (NESP), an approved but not fully funded plan that would use the inventory to determine forestry needs and priorities, then work on restoration needs throughout the river basin. The forestry project is a key example of the system-wide thinking that characterizes NESP, Urich and others say, since the comprehensive plan for the Mississippi's floodplain forests is being completed through a partnership of 16 federal and state agencies and non-profit groups.

"We have a really cool partnership trying to determine what the gaps are, what types of forests are really missing and what's needed to provide habitat," says Charlie Deutsch, Supervisory Wildlife Biologist with the Corps of Engineers Rivers Project office within the St. Louis District. "Where are forests in most serious decline due to hydrology or invasive species? Where do we need to focus our funds and efforts? The purpose of this forest stewardship partnership along the river is to help the system as a whole."

### Forest check-up

The forest inventory will start by determining both the forest strengths and potential threats. One problem increasingly evident is the changing tree mix, caused both by the hydrological changes brought about from the locks and dams and levee systems and by various invasive pests.

"The forest is becoming more dominated by silver maple. That's of some concern to the foresters and biologists and natural resource managers on the river because it reduces the type of food available for wildlife," Deutsch notes.

Another problem with a forest monoculture is that certain wildlife species rely upon particular species of trees. One endangered species, the Indiana bat, loves the abundant silver maple as a winter home. But the bald eagle, for example, is partial to cottonwoods—trees that tower above the rest of the floodplain forest.

Invasive species pose another threat. Nearly a dozen types of invasive plants and a handful of bugs and other diseases are identified as problems within the management plan. The emerald ash borer and invasive plants like reed canary grass, Japanese hop and garlic mustard pose the greatest threats, according to Joe Lundh, Supervisory Natural Resource Specialist for the Mississippi River Project in the Rock Island District. What this broader planning can do, the foresters say, is allow local successes in combating these issues to be shared system-wide.

Despite the threats, there's really nothing that compares to the contiguous tracts of forest along the Upper Mississippi River, Deutsch says, as he glances out his window onto 500 pelicans floating in the river.

Bottomland forests provide spawning habitat for fish, they intercept rainfall and filter out impurities, they help control flooding and there's growing evidence they improve air quality by storing carbon. That's in addition to the nesting and other habitat provided for the migrating songbirds and waterfowl that turn the flyway into a highway this time of year. They're also a great place for exploration and contemplation.

"I think the forests are a great place to experience what the river might have been like 200 years ago," Deutsch said. "They're really cool big patches of timber we don't find in too many places in the Midwest. The opportunity to get out and immerse yourself in that environment is a really neat thing to do." —K.S.

To read and comment on the forest plan, go to: [www2.mvr.usace.army.mil/UMRS/NESP/default.cfm](http://www2.mvr.usace.army.mil/UMRS/NESP/default.cfm). Look under the "latest news" section.



Autumn view near Alma, Minnesota. See more of Bob Hurt's aerial photos on page 10.



Emerald Ash Borer Garlic Mustard

## Invasives at a Glance

A few of the invasive (non-native) plants, diseases and insects that pose the greatest threat to the Upper Mississippi River native floodplain forests include:

**Gypsy moths** strip a tree of leaves and are of particular concern for oaks. Pheromone traps are being used throughout the river system to detect the moths.

**Emerald ash borers**, a beetle native to Asia and 100 percent deadly to ash trees once they reach a given area, are thought to be spreading via firewood. To date, they've killed more than 20 million ash trees in Michigan, Ohio and Indiana, and they're encroaching upon the Mississippi River floodplain. Already evident in some pockets, large infestations are moving closer. Extensive monitoring is underway in the Pool 9 floodplain.

**Reed canary grass** is the most damaging of all invasive plant species in the floodplain due to how quickly it establishes itself in forest openings and edges, coating the forest floor and preventing germination of trees. It poses the biggest problem in the river's upper reaches, through Pool 18.

**Garlic mustard** similarly dominates the forest floor and threatens native plant species and wildlife dependent on them. It is present throughout the river system.

SOURCE: UPPER MISSISSIPPI RIVER SYSTEM SYSTEMIC FORESTRY MANAGEMENT PLAN



PHOTOS: AERIAL, BOB HURT; INVASIVE SPECIES: WIKIMEDIA COMMONS; CANARY GRASS, RANDY URICH.

### Join the Invasive Plant Posse

Volunteers can help forests through a new twist on geocaching: using Global Positioning Systems (GPS) to pinpoint invasive plant species rather than seek hidden treasure. The "invasive plant posse" is looking for volunteer hikers willing to take pictures of invasive plant species they find (reed canary grass, garlic mustard and other species listed above). Volunteers simply mark the plant location as a waypoint on a GPS, then send the picture and coordinates to the Upper Mississippi River National Fish and Wildlife Refuge at [UpperMississippiRiver@fws.gov](mailto:UpperMississippiRiver@fws.gov) or through the Friends of the Refuge Headwaters Facebook page. —K.S.

### Project fights invasive grasses, restores wildlife area

Reno Bottoms, a popular wildlife area that's gradually been overtaken by invasive reed canary grass, is being restored back to its floodplain forest origins through the Navigation and Ecosystem Sustainability Program of the U.S. Army Corps of Engineers.

The wildlife and recreation

area near New Albin, Iowa (Pool 9), was at one time largely farmland. But it flooded so often that it was sold to the U.S. Fish and Wildlife Service and transformed into an open grassland area for waterfowl nesting. However, the encroachment of the reed canary grass, a large, coarse grass with flat blades that can reach up to nine feet in height, started to limit the area's use by wildlife, says Randy Urich, a forester with the U.S. Army Corps of Engineers.

The project was selected for restoration through the Navigation and Ecosystem Sustainability Program because it's already on federal land, its level of degradation was high, and it had strong potential for restoration success, Urich said. Historically there were floodplain forests in the Reno Bottoms area, another reason to focus early forestry restoration efforts there, he said.

"There are a lot of different management activities that play into this project, but it's essentially converting an area degraded by an invasive species back into higher quality forested habitat," he said. Management techniques will be used to control the reed canary grass, and up to 1,100 acres of forest will be restored.

"One way to control invasive species is convert it to different vegetation cover that would out-compete it. That'd be a floodplain forest.

"We might not plant trees on every acre, but we might be able to use other forestry techniques like direct seeding of tree seed on a portion or even allowing natural regeneration."

Another management feature likely to serve as a model for other ecosystem restoration efforts involves the proverbial killing two birds with one stone—or accomplishing two very different goals through one restoration project.

Part of the Reno Bottoms site will be elevated to allow the planting of trees not as tolerant to flooding and thereby creating more forest diversity. The site will be elevated by dredging a nearby backwater that's been filling with sediment and degrading fish habitat, he said. That dredged material will be placed on the grassland site in a way that closely resembles the natural landscape. —K.S.

# FALL FOR A RIVER FOREST

A drive along one of the nation's most intact forests makes for spectacular leaf (and wildlife) viewing. Come color season, there are few drives that rival the Great River Road, and here Lori Erickson, author of *The Mighty Mississippi, A Traveler's Guide*, shares some particularly scenic stretches—each with its own special character, and each displaying an unfolding bluffside mosaic of scarlets, yellows and golds.

TURN THE PAGE FOR OUR MISSISSIPPI FALL COLOR TOUR GUIDE



# FALL FOR A RIVER FOREST

## America's Rhineland: St. Paul to La Crescent, Minnesota

South of St. Paul is where the Mississippi River gets especially mighty, its wild channel bordered by steep limestone cliffs and thickly wooded bluffs. Keeping the river on your left is the only navigation tool you'll need, allowing undistracted viewing of the unfolding beauty, as you head 40 miles south to Red Wing, Minnesota, one of the loveliest of all Mississippi River towns. Here, 19th century storefronts line the historic downtown and sailboats fill a picture-perfect harbor. Take a fall color boat cruise and then enjoy a picnic lunch atop Barn Bluff, which towers 400 feet above the Mississippi. Leave time to hunt antique stores

for original circa 1877 Red Wing Pottery, or watch modern-day potters continue the tradition in the Red Wing Pottery outlet; they'll even personalize a pot by engraving in your name.

Just a bit south, the river widens into Lake Pepin, a naturally formed expanse of water that's more than two miles wide and 22 miles long. Nineteenth-century travelers waxed eloquent about its beauty, comparing it to the Rhine Valley of Germany. Expansive lake views are found at the 2,300-acre Frontenac State Park. An added bonus are the thousands of migrating birds that pass through here, including bald eagles, tundra swans, peregrine falcons, and broadwing hawks.

Continue south to Wabasha, home to the National Eagle Center, where you'll find educational programs and exhibits and the truly unique experience of watching eagles up close; the all-glass building af-

fords great views for the five magnificent rescue birds inside.

Thirty-five miles more, another historic, lively and particularly scenic small town awaits: Winona, which is nestled between 500-foot limestone bluffs and the Mississippi and teeming with specialty stores, galleries and Victorian mansions.

End your tour 25 miles south in La Crescent, the Apple Capital of Minnesota. Pick your own fruit in the orchards that top the bluffs or visit roadside stands for locally grown fruit, Indian corn, and pumpkins.

**Driving Tunes:** Folksinger John Hartford (who moonlighted as a steamboat pilot) wrote many songs celebrating the Mississippi River.

**Worth crossing the border for:** Picturesque Alma's worth a detour for eagle viewing and lunch at a restaurant bordering Lock and Dam 4 and blufftop view from Buena Vista Park.

**Best Place to Lay Your Weary Head:** Historic hotels abound in these river towns, as do lofts overlooking the river.

## Heartland Vistas: McGregor, Iowa to Quincy, Illinois

With just 900 residents, the northeastern Iowa town of McGregor makes up in charm what it lacks in size with its antique and specialty stores, down-home restaurants, and laid-back atmosphere. Using McGregor as a base, you can also explore the backwaters of the Upper Mississippi River National Wildlife and Fish Refuge, hike the trails of Pike's Peak State Park, and marvel at the ancient Native American burial preserved at Effigy Mounds National Monument.

Heading south, stop to picnic at beautiful Grant River Recreation Area near Potosi, Wisc., then continue on to Dubuque and its National Mississippi River Museum, celebrating everything river-related. Inside are aquariums filled with alligators, snapping turtles, river otters, and other creatures. The new National River Center has a 3D/4D theater, hands-on activities and saltwater aquariums with sharks and rays. The area is also home to Lock and Dam 11 with a lookout tower over Sunfish Lake, an Environmental Management Program success story that re-created long lost backwater habitat.

As you continue down river don't miss the Mississippi River Visitor Center located at Lock and Dam #15 on Arsenal Island. View towboats locking through against the backdrop of the Quad Cities. Also check out Government Bridge, the oldest bridge of its kind still in use on the Mississippi River.

Thirty miles farther is Muscatine, Iowa, the "Pearl Button Capital of the World." Explore this river town's history at the Muscatine History and Industry Center. In the area are three Corps Campgrounds on the Mississippi, ideal places for watching the fall colors and migration.

End your tour near Lock and Dam 21 and the quaint river town of Quincy. The "Villa Kathrine," a Moorish Castle, serves as the tourist information center overlooking the River. It's one of many places listed on the National Register of Historic Places located in four major historical districts.

**Best Place to Buy a Frock Coat:** River Junction Trade Company in McGregor specializes in reproductions of nineteenth-century clothing ranging from bib-front shirts to ladies' corsets.

**Foodie Mecca:** Getting a taste of river cuisine goes beyond catfish in a growing number of restaurants using fresh, seasonal, local ingredients.

**Picture Perfect:** Visit Bellevue State Park for majestic views of the Mississippi River and Lock and Dam 12. Check out the nature center, butterfly garden and Native American burial mounds.



Grant River Recreation Area, Potosi, Wisc.



Grant River Recreation Area

PHOTOS: ABOVE FROM LEFT: KIM SCHNEIDER; HILARY MARKIN (C); WIKIMEDIA COMMONS; BELOW FROM LEFT: BLAKE DARST; KIM SCHNEIDER; NATIONAL PARK SERVICE; DUBUQUE AREA CHAMBER OF COMMERCE; KIM SCHNEIDER; WAP; DIANE KOLAC.

## Mark Twain Country: Hannibal to Alton, Missouri

As anyone familiar with *The Adventures of Tom Sawyer* knows, Mark Twain grew up in Hannibal and used his boyhood memories to craft some of America's best-loved tales. Tour the simple white clapboard home where Twain lived as a child to learn more about his life, including how he patterned the characters of Huck, Tom and Becky after childhood friends. Don't leave without having your picture taken in front of the most famous white picket fence in America (whitewashed courtesy of Tom Sawyer's friends).

Next visit the Mark Twain Cave one mile south of Hannibal, a series of limestone passageways that the author explored as a child. This later served as the inspiration for the cave in which young Tom and Becky were lost in *Tom Sawyer*. Thirty miles south of Hannibal, the small town of Louisiana has a Southern feel, with gracious antebellum homes and a commercial district that's on the National Register of Historic Places and features a shop in which the time-honored craft of pewter-crafting is practiced and taught.

Ten miles south, the tour continues in the picturesque river town of Clarksville, which sits at the base of the highest bluff on the Mississippi. Watch the workings of Lock & Dam #24, enjoy a scone and cup of coffee, and then browse through the town's galleries and antiques stores. Bring your binoculars for bird watching, as eagles are frequently sighted near the river.

Worth the drive farther south to Alton is the expert guidance and easy bird spotting you'll find at the new Riverlands Audubon Center, opening this fall at the Riverlands Migratory Bird Sanctuary. Explore the 33-mile "Meeting of the Great Rivers National Scenic Byway," which takes you to the National Great Rivers Museum and Lewis and Clark Historic Site.

**River Adventure:** In Hannibal, narrated paddlewheeler cruises take you past some sites that appear in Twain's books, including mysterious Jackson Island.

**Artists' Haven:** Hannibal, Louisiana and Clarksville are home to more than 40 artists who sell their works in local galleries and shops. The "50 Miles of Art" Gallery and Studio Tour is held each November.

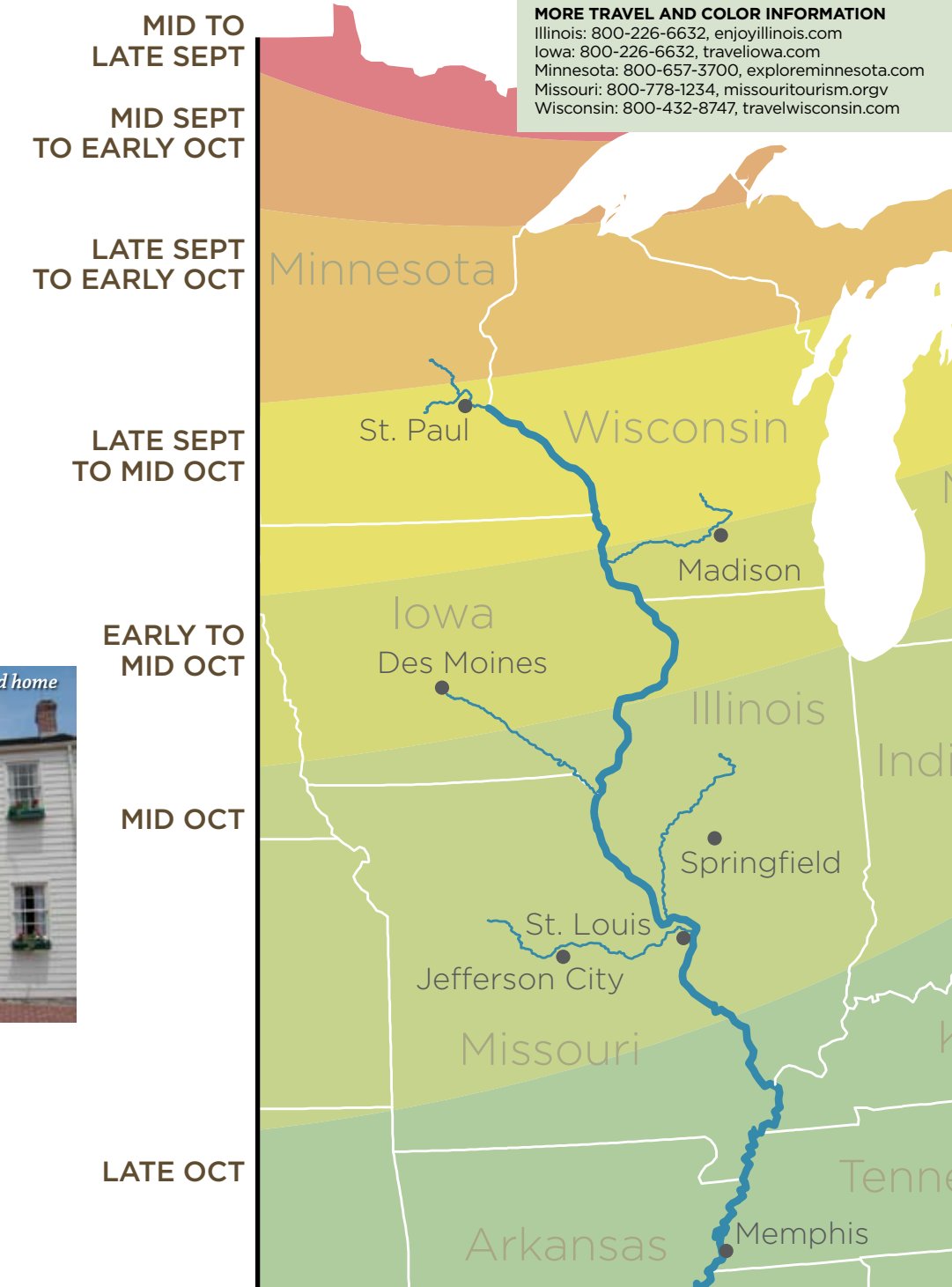
**Best Place to Unwind after a Busy Day of Touring:** Wineries are popping up at various spots along the trail, some paired with inns or bistros, throughout the middle Mississippi valley. [greatriverroad.com](http://greatriverroad.com). —L.E.



Mark Twain's childhood home in Hannibal

## WHEN TO GO

Follow peak color down the river



**MORE TRAVEL AND COLOR INFORMATION**  
 Illinois: 800-226-6632, [enjoyillinois.com](http://enjoyillinois.com)  
 Iowa: 800-226-6632, [travelliowa.com](http://travelliowa.com)  
 Minnesota: 800-657-3700, [exploreminnesota.com](http://exploreminnesota.com)  
 Missouri: 800-778-1234, [missouritourism.org](http://missouritourism.org)  
 Wisconsin: 800-432-8747, [travelwisconsin.com](http://travelwisconsin.com)



Wabasha, Minn.



Red Wing, Minn.



National Eagle Center



Fire Point, Effigy Mounds National Monument



National Mississippi River Museum



Taste the wines along Great River Road Wine Trails



FROM THE PROJECT MANAGER

# Operations, Mississippi River Project

As Operations Manager of the Mississippi River Project, Rock Island District, Bill Gretten supervises the largest civil works operations project in the U.S. Army Corps of Engineers in terms of geographic area and size. His 314-mile river reach, from Guttenberg, Iowa, to Saverton, Mo., is among the busiest and most scenic river stretches in the nation, flowing through four states including 12 lock and dam sites, 1,800 regulating structures and 26 recreation areas



Bill Gretten

**Q. What does the operations section of the Corps do?**

A. We have a navigation mission, a recreation mission and an environmental stewardship mission. We provide support in terms of emergency management during flood periods, too. We have 55,000 acres of bottomland forest that we also manage in cooperation with the U.S. Fish and Wildlife Service and the state DNRs. And we have 2,100 miles of shoreline along the river that we monitor, particularly with regard to the interface between federally owned land and private land. We've been tasked with managing this great resource. To us, it's an everyday thing that navigation, recreation and environmental stewardship all coexist.

**Q. What's the biggest challenge you face?**

A. The age of our infrastructure. Nearly all locks and dams on this river were built in the 1930s with an expected design life of 50 years. We have long surpassed that. Only through diligent efforts by the preventive maintenance and repair staff have we been able to continue our operation. We've spent most of our (major rehab) dollars fixing locks rather than dams. Now as our dams get older, we find some pretty serious structural issues starting to occur. Since nearly all of our lock and dam sites have a single lock chamber the system is essentially a "one-lane highway." Losing one lock on this river shuts down the entire system.

The other enormous challenge is that as this river gets older, things are hap-

pening to the habitat, too. If I'm not at work, I'm out on the river, hunting and fishing. I see siltation and the resulting loss of backwater habitat. It bothers me both professionally and personally. All these things we know need to happen—improvements to navigation infrastructure and improvements and repairs to the ecosystem—they really do need to happen at some point.

**Q. What's something you're most proud of?**

A. I'd put our recreation areas up against anybody's in terms of cleanliness, quality, features and access to the river. The fact that this country had the foresight in the 1920s to establish this (fish and wildlife refuge) is important. If they had not done that, all these islands would be privately owned, and every inch of shoreline would probably be developed. You can go out on some reaches of this river and see no signs of man. It's in everyone's best interest to do the best job we can to preserve what nature gave us to start with.

**Q: Anything you want to say in conclusion?**

A. Our Mississippi River Project staff has the greatest, most dedicated folks you can imagine. All have a zeal for their job and a dedication that's unmatched. They know what needs to be done. Everybody wants to run out and fix all this stuff, but we just can't do it all right away because resources are limited. That's probably the most frustrating part. Our needs and our story must compete with a lot of other stories and other needs. There are a lot of competing needs in this country right now. —K.S.



## MY MISSISSIPPI

Duke Addicks, anthropologist/storyteller/naturalist, St. Paul, Minn.

I've just always been fascinated by the river I guess. I've had a longtime love affair with it. I was born in Minneapolis and grew up in the Twin Cities, but my family farm is down in the mountains of Northwest Georgia, the Cherokee side of my family. Every summer I'd go down there, and my grandmother and her brother would take me in hand and do Indian stuff with me. From the time I could speak probably, she would take me down to the barnyard and brush her hair and tell me a story. The next morning, she'd bring me back again. If I could tell her the story back she told me the previous day, she'd reward me by telling me another story. By one month every summer, I was being made into a storyteller.

I fell in with the Dakota Sioux as a teenager and started telling their stories. Because they're river Indians, all the stories are about the river. I bring a drum, I bring my flute and I play some music that people might have heard back whenever.

The Dakota Indians sang all the time. In an Indian village, you'd hear dogs barking and guys singing athletic songs and war songs, women singing songs about making corn muffins, digging out canoes. They played flutes. Missionaries talked about drums through the night; coyotes singing, they called it. So it's about the music. The voyageurs when they paddled, every stroke they sang a song. Then they'd go to the shore and got out their fiddles and danced and sang.

My Mississippi is alive and populated with the people who have lived along its shores. When I walk along the shore, I hear their music. I don't hear birds singing, but I hear the fiddles and bagpipes, and I hear the flutes and the songs.

In the fall of the year, in October or thereabouts, at nighttime, there are Indian people walking the various trails, bicycle trails following the old Indian trails, the railroad tracks along the Mississippi River. They're all heading south or west because at that time of year, they left the summer planting villages and went down river walking. They'd follow the river shores inland to the wild rice areas where they would have left their canoes.

For years many people were seeing in late October Indian people walking these trails. I'd talk to farmers who would see them walking through their barnyards. The question was, who are these folks?

I was telling stories at a small town along the Mississippi River, in October or thereabouts, and a couple comes up to me and says can we talk to you for a minute? During the break, I'm listening to them telling me they own a house on the Mississippi River between the tracks and the river. Every night, around three or four nights in October, Indian people would come heading south. They'd come through one wall, go through the living room, pass in front of the bed, and through the next wall. First they shouted, "Get out!" Sometimes their dog would look at them. The Indian people were oblivious to the presence of people in the house.

That night four other couples stopped me and told the same story, who lived in the same community. This was 20 years ago. They still have this telephone tree. The folks when they see the Indians coming through their bedroom will call the other five couples and say, 'Hey. They're coming.' What is this? I don't know. I just tell the stories.

I was down once and saw them walk through the living room. You think you can reach out and touch them. They're totally present, not shadowy figures. They're in old-time stuff, dressed in buckskin. The dogs have collars and are pulling poles strapped with bedrolls and stuff. But it was soundless, no sound of poles dragging across the floors of the living room, just a visual.

Train engineers see these people come down the track. By the time they get to the people, they can't stop, and the people just disappear. I found a few who will talk about it. Only a couple, three nights in October, they'll be rolling along, and all of the sudden at 2 a.m., 'Holy Catfish!' Before you can hit the brake, you're on them, but you look down the side of the track, and they're not there.

Duke Addicks or Asgina Ageli ("Walks with his ancestors") sells CDs of stories about the "literally hundreds" of ghosts he's encountered or learned of along the Mississippi River. [dukeaddicksstoryteller.com](http://dukeaddicksstoryteller.com).

WETLAND PHOTO: KIM SCHNEIDER



## Mississippi River wetland recognized as internationally important

Set aside 10 minutes on 10/10/10, somewhere along the Upper Mississippi River. Then count 10 birds, identify 10 plants, pull up 10 pounds of invasive species, or shout out 10 things you like about what you see.

That's the way the U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers and others are asking people to help celebrate an important new designation for the Upper Mississippi River Floodplain, one 10 years in the making.

The 261-mile refuge established by Congress in 1924 as a refuge and breeding place for migratory birds, fish, wildlife and plants, has been named a Wetland of International Importance. The designation was imparted by the Swiss-based Ramsar Convention on Wetlands and covers 300,000 acres from near Wabasha, Wisc., to the north and Rock Island, Ill. to the south. There are only 30 such designations in the U.S. and 160 worldwide.

Events are being scheduled at various spots within the refuge and elsewhere along the Mississippi River on 10/10/10 to mark the formal designation. Another celebration goal is to share the value of wetlands, often misunderstood as inhospitable swamps but key in sequestering carbon, filtering impurities out of water and more, says Refuge Biologist Bob Clevenstine, the Fish and Wildlife Service refuge liaison to the U.S. Army Corps of Engineers.

The floodplain forests are also at their golden peak this time of year, he notes, and timing great for the spotting of migrating birds and waterfowl.

"We're just trying to get people to think about wetlands and see them as a highly productive biologically diverse habitat that provides a whole lot of ecosystem services that people need, whether it's clean water or fish production or waterfowl production, you name it," he said. "Wetlands are extremely important areas for overall ecosystem health."

The Ramsar convention is named after the city in Iran, at which a cradle-of-civilization wetland near the confluence of the Tigris and Euphrates rivers was drained as a political move designed to drive out the indigenous population. The newest member wetland includes the Upper Mississippi River National Wildlife and Fish Refuge, Trempealeau National Wildlife Refuge, Great River Bluffs State Park and some 20 other partnering federal and state wildlife areas, says Cindy Samples, visitor services manager at the headquarters of the Upper Mississippi National Wildlife and Fish Refuge. The many collaborative efforts by those groups are worth celebrating in themselves, she said.

"We sometimes don't take time to celebrate success," she said. "And we do have a lot going on that's working because we're working together."

Organized 10/10/10 events are being held at the Trempealeau National Wildlife Refuge (Trempealeau, Wisc.) the Riverlands Migratory Bird Sanctuary (West Alton, Mo.), National Eagle Center (Wabasha, Minn.), Effigy Mounds National Monument (McGregor, Iowa) and several other sites. Participants are asked to dress in festive attire because events will include group photos taken as part of a celebratory video commemorating the designation. Find the complete event list at: [fws.gov/midwest/uppermississippiriver](http://fws.gov/midwest/uppermississippiriver). —K.S.

## Multi-century Vision for "America's River" Moves Forward

A steering committee representing influential river interests has been formed to move ahead a 200-year vision for America's "inner coast."

The vision's champion, Maj. General Michael J. Walsh, commander of the Mississippi Valley Division, continued to share his vision aboard the Corps' Motor Vessel *Mississippi* during the Mississippi River Commission's annual inspection trip down the Arkansas River and its tributaries. "Everyone has an interest in some aspect of the river—whether

it's improving navigation, improving flood risk reduction, attaining cleaner water and more sustainable ecosystems, improving our understanding of how rivers thrive ... or numerous others," Gen. Walsh said.

"Our goal is to look at the entire watershed from a planning perspective and maximize the economic and environmental value of our water resources in a sustainable way."

The eight members of the steering committee will build on the ideas expressed at an Inner Coast summit this summer and work to create a structure that can make the vision a reality, says Barb Naramore, director of the Upper Mississippi River Basin Association and one of the committee members.

The steering committee will explore possible future river scenarios and related policy and funding issues, says committee member Michael Reuter, director of The Nature Conservancy's Great Rivers Partnership. The coming together of diverse groups representing various interests from the headwaters to the gulf to ask where the river is headed is unprecedented, he says.

"If each of us with our own influence can collectively agree on what's needed for the river as a whole, I think we will see greater national recognition and understanding of what the Mississippi River faces, what its needs are and what we should be doing about it as a country," Reuter said. "As Gen. Walsh says, 'It's the largest watershed in North America and third largest in the world.' I'd like to think all of us in this country could find a way to put resources behind an effort like this." —B.A., K.S.

To learn more or volunteer for a vision subcommittee, visit [conference.ifas.ufl.edu/AICS/](http://conference.ifas.ufl.edu/AICS/) or contact Angie Freyermuth at 309-794-5341.

### DID YOU KNOW?

During migration, night fliers such as thrushes, warblers, and orioles navigate by the earth's magnetic field and by the stars. Office buildings with reflective glass windows and the flashing lights on communications towers can disorient them.



# All about fall!

Identify the leaves, then color them the way they turn in the fall!

- \_\_\_\_\_ Aspen turns **golden yellow**
- \_\_\_\_\_ Beech turns **light tan**
- \_\_\_\_\_ Birch turns **golden yellow**
- \_\_\_\_\_ Dogwood turns **purplish red**
- \_\_\_\_\_ Hickory turns **golden bronze**
- \_\_\_\_\_ Oak turns **crimson, brown, or russet**
- \_\_\_\_\_ Red maple turns **brilliant scarlet**
- \_\_\_\_\_ Sourwood turns **crimson**
- \_\_\_\_\_ Sugar maple turns **orange-red**
- \_\_\_\_\_ Tupelo turns **crimson**



## ARTSY AUTUMN

A brisk autumn hike is required for these activities. The bonus: your leafy souvenirs become works of art.

### Fall Wreath

Paint a paper plate brown. Then go for a hike and collect leaves, pinecones, acorns, etc. Glue the items onto the paper plate. Glue on a bow before hanging it up.

### Fall Place Mats

Go for a hike and collect different shapes of leaves. Place white construction paper over the leaves and have children color over top, creating a leaf rub. Make them reversible by creating a different design and color scheme on the flip side. Cover front and back with clear contact paper. Your kids will love using these bright placemats and sharing hike memories through the meal.

### Journal

Create your own journal or purchase an inexpensive notebook. Keep track of all the signs of fall you see while out hiking. Make daily entries as you notice different signs of fall. Collect leaves and other items and tuck them in your notebook as an adventure reminder.

### Bookmarks

Collect leaves and other relatively flat items while you are out hiking. Place your items separately on pieces of paper. Create as many layers as needed. Place items in between two heavy books creating a press. Leave items in the press for about a week. Carefully remove the books and items; they will be fragile. Then lightly glue them to a piece of paper using invisible glue. Place items on paper between two pieces of clear contact paper and trim. —H.M.

## FOCUS ON NAVIGATION

### Lock project pioneers new building method

AN EXTENDED GUIDEWALL is being built at the Mississippi River's Lock and Dam 3 near Red Wing, Minn., a project notable for the way it'll improve safety at one of the system's most dangerous locks and also for the fact it's being built in the middle of the navigation system, in the middle of a busy navigation season.

The \$70 million in improvements are being funded through the American Recovery and Reinvestment Act of 2009. But the "in the wet" (or in-river) construction method is being used as a test case for the lock expansion projects planned under the massive Navigation and Ecosystem Sustainability Project approved in 2007, says Kent Hokens, a U.S. Army Corps of Engineers structural engineer who developed the design concept for the guidewall extension.

"We were looking at building projects in winter without shutting down the lock. Our design-build contractor (Edward Kraemer and Sons) proposed construction of the guidewall extension during navigation season without any lock closures. They are out there now constructing, and it will be a demonstration of construction procedures and coordination with navigation that we'll be able to learn from for NESP. It will set a precedent for how that construction can move forward."

The larger project, NESP, features the construction of five new 1,200-foot locks on the Upper Mississippi River and two on the Illinois River, and comparable spending on

system-wide ecosystem restoration projects. Preconstruction research and design work is ongoing for the project, still awaiting construction funding.

The Lock and Dam 3 improvements were given priority because of navigation safety issues. When initially built in the 1930s, this



Lock 3 Guidewall Construction

lock was not placed in the optimal location, Hokens said. A curve in the river just upstream of the lock creates a cross-current near the entrance, causing barges to come apart and land in the dam on several occasions.

This massive improvement project involves the extension of the 600-foot guidewall another 860 feet upstream and the dredging of a channel and other improvements to change flow conditions and prevent barges from straying. The project also includes improvements to an embankment to control erosion problems.

Progress reports and construction photos are being posted regularly on a website set up by the construction company: lockanddam3project.com. —K.S.

### Getting it done

Working group solves long-time navigation challenges

REQUIRED TRAINING and certification for new lock operators and first-ever baseline maintenance standards for each of the country's locks and dams are two of the pioneering changes in navigation to come, so far, from a new Corps Inland Marine Transportation System Working Group.

The IMTS Working Group, with oversight and direction by a Board of Directors, morphed out of a study to identify ways to improve the efficiency and effectiveness of the inland navigation system. An initial study determined that total reorganization wasn't needed, says John LaRondeau, the working group's executive secretary, if long-time concerns could be fixed internally.

"In our final September 2008 report forming the new Corps IMTS Working Group process we came up with 115 ideas for the lock and dam and channel system to be more effective and more efficient," he said. Nationwide, there are 240 locks at 192 lock sites and more than 1,500 lock operators.

The training and certification requirement is slated to go into effect on Jan. 31, 2011. After that date, all newly hired operators must complete the 52 training units and the certification process in a maximum of 52 weeks. The program will be mandatory for new employees, voluntary for existing operators. The long-term goal is to have all lock operators trained and certified, something that will occur by natural attrition as existing lock operators retire.

"Passing confirms they know their job and quickly makes them a knowledgeable and safe employee," LaRondeau said. "Our goal is help them do the job safely and effectively and to understand some visual clues about stress within a lock system or when a certain operation should be terminated. Learning the hard way is sometimes very expensive to the public and users of the system."

Also starting in January, each lock will be asked to meet a maintenance standard baseline and division annex. The standard is action-oriented and lists what must be done to comply with certain requirements. For example, it lists the steps that must be taken to meet the requirement for keeping adequate spare parts on hand with a goal of insuring consistency and reliability among locks.

"It's like having a fleet of cars with different owners. You still have a maintenance schedule that outlines the actions you are to take such as when you're supposed to change the oil," explained Dave Johnson, the working group's facilitator. "That's basically what we're doing with the lock and dam system, providing a high-level standard that's will be used across district and field offices to make sure the key maintenance tasks get done."

"Another benefit of the maintenance standard is the improved, and documented, communication of maintenance for our funding requests to the President through the Office of Management and Budget," LaRondeau said. "This will be our foundation for a world-class maintenance management system."

Streamlining communication within the Corps is another team goal, as are other issues relating to safe operations, increasingly critical as the infrastructure ages. In addition, new ideas from the navigation industry and the IMTS workforce continue to be received by the group consisting of Corps navigation, economics and engineering experts. One of those ideas has already led to a new Human Resources Center for Standardization in Rock Island, Ill. That office, for example, is working on standardizing job descriptions across Corps districts.

"We have 192 locks and 150 different job descriptions, and they basically do the same thing," LaRondeau said.

What's most exciting, group members say, is seeing progress being made on issues that have come up for years but had no avenue for resolution. "I've got 36 years with the Corps, and some of us have lived with issues that just won't get changed because of mission priorities, complexities, personalities, divisions, districts, and headquarters" LaRondeau said. "We have different districts for one river, but the public sees the waterway as a system. We wanted to make the system more consistent so things become more efficient and effective and ultimately reliable for our customer." —K.S.



Lock and Dam 4

## MY MISSISSIPPI



Sue Fletcher, chaplain at Franciscan-Skemp hospice program and volunteer at Trempealeau National Wildlife Refuge, La Crosse, Wisc.

I came up here to go bird watching and saw seven sandhill cranes circling that day. I've been coming up regularly since. The cranes were so beautiful, so amazing, it got me hooked and I wanted to give back to the refuge. I get excited about birds, and I love to get someone else excited, show, "That's a great blue heron!" I hope it makes it more memorable to people.

I've been reading field guides as much as I can, going out with other birders and learning how to identify birds in flight. For me it's very zen. You never know what you're going to get. You have to be open and aware of what's right in front of you, and it's all a gift.





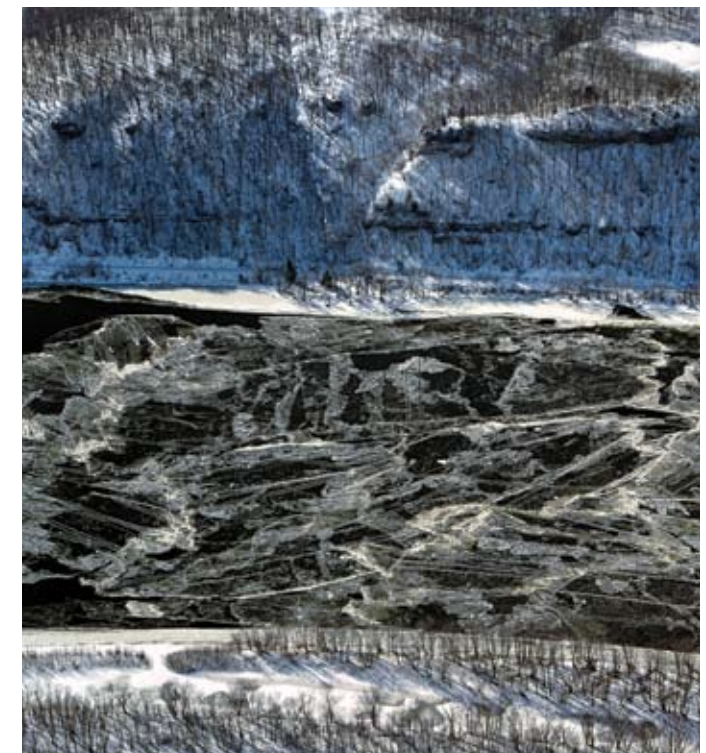
# Aerial Inspiration



It was the beauty of the Mississippi River's rolling bluff region that drew former architect Bob Hurt, owner of Robert J. Hurt Landscape Photography, to the Midwest from a particularly beautiful part of Colorado. Now he's capturing it for all to enjoy, using some tricky techniques to keep photos sharp even as the plane—his photographic vehicle of choice—is vibrating, dipping and diving above the migratory flyway.



His mission? "I think most nature and landscape photographers all hope, and I'm included, that people will have a better appreciation and love for it and therefore when it comes to any way they can help protect it, they will. It might be picnicking on a sandbar and cleaning up their mess, all the way to when they get to the voting booth trying to find out which politicians are concerned about protecting the environment of the river." "Photography gets to people's heart. When I do slideshows, I'll have music put to these photos. It's usually from films like *Cider House Rules* or *The Color Purple*, anything that's really sentimental, heartwarming. You put that in with some dreamy, beautiful photographs and it turns people to mush. That's what you want to do. You want people to understand it's beautiful, and it's important." —K.S.



PHOTOS: PAGE 10, BOB HURT; ARCH RENDERING, MICHAEL VAN VALKENBURGH ASSOCIATES; FIELD STATION RENDERING, COURTESY NGRREC.

## Arch Adviser



**JULIE ZIINO** wasn't one of the internationally known designers vying for the chance to better frame one of the Mississippi River's most iconic landmarks—the St. Louis Gateway Arch. But her technical advice to the teams made her something of a muse.

As a member of the project's advisory team, the acting assistant project manager for the Rivers Office of the U.S. Army Corps of Engineers worked with other local officials in charge of roads, river traffic and other public works near the memorial to make sure designs are not just innovative, but also safe and viable.

Competing teams were asked to better connect the arch site with the river and improve the visitor experience, along with other design goals. Among the innovative suggestions floated by the five finalists was a ferry system crossing the river, for example, Ziino says. "That's a recreation component, and it's highly pleasing," she said, "but they had to be aware there are risks associated with having a recreational vessel transport the public across the navigation channel on a regular basis because of the congestion in that channel."

The winning design was selected by a jury of experts Sept. 24 for the best combination of the "ambitious and manage-

### Now it's St. Paul's turn

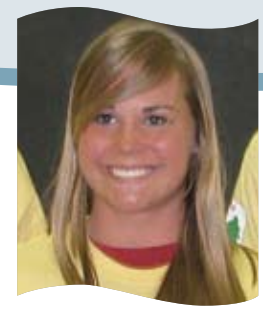
How can the 17 miles of Mississippi River that flow through St. Paul's city limits be more natural, more "urban," and more connected to the surrounding landscape? Those are questions the city parks and recreation department are hoping the public can help them answer.

The parks department is leading the effort to create the Great River Park master plan, which will prioritize river-related projects over the next 30 years. It will be seeking public input for the next year, throughout a planning process funded in part through \$1 million provided by the state legislature. Share your thoughts at: [greatriverpark.org](http://greatriverpark.org).

able." The team led by Michael Van Valkenburgh Associates of New York will now work to transform the grounds surrounding the nation's tallest man-made landmark through ideas like a cobblestone plaza between the arch and river for markets and events, an urban bird sanctuary and a lid over I-70.

The contest—"Framing a Modern Masterpiece: The City + The Arch + The River 2015"—was run by the private CityArchRiver 2015 foundation and marks the first time in 45 years the National Park Service has remodeled the grounds around the arch. The four teams of finalists, which each won \$100,000 for their detailed efforts, suggested gondolas, aerial trams, floating stages, mound sculptures and a natural meandering river for kayaking. Plans included riverside music stages and centers of research for agriculture or culture or ecology—depending upon the design group.

Ziino says she thinks the experience working with the technical advisory team will lead to more future collaboration among the agencies. —K.S.



## MY MISSISSIPPI

**Grace Griffin, 17, national finalist, Canon Envirothon competition, Bellevue, Iowa**

I have gone to envirothon competitions, where you take four tests, in wildlife, aquatics, soils and forestry. We went to state and ended up winning second overall in the state of Iowa, which qualified us for the nationals in forestry in October. There, there are 12 different practicums you're quizzed on and an interview, a very thorough process.

We're getting ready by looking at the DNR website and a bunch of forest information. We talk to different district foresters and loggers to help us prepare. We learn stuff like how many board feet are in a tree or how to calculate something like that with different utensils and that there are a lot of different kinds of trees and how you'd identify them. There are a bunch of weird little facts like that.

I want to go into medicine, but I got involved because of my dad (a wildlife biologist). He'd take me out hunting and fishing when I was little. As I grew older, we'd just go fishing or out in the woods to look at trees.

The Mississippi River is right in my backyard, really. Our main street in town goes parallel to the river, and we're right next to Lock and Dam 12. The more you learn about it, I think you do appreciate it more. You know where you can find the fish you want or where it's safe to tube or where's good to camp. My Mississippi is my home, and I pity people who take it for granted.



## A Green Home for River Research

*The Confluence Field Station Opens in Alton, Illinois*

A new major environmental research center is setting out to have no negative impact on the environment when it opens this month in Alton, Illinois.

The Confluence Field Station is part of the National Great Rivers Research and Education Center (NGRREC), a partnership between Lewis & Clark Community College, the Illinois Natural History Survey, and the University of Illinois at Urbana-Champaign. It will be an innovator not just in research but also in green building design.

"We consider the design of the building to be part of our educational mission," says Bill Kruidenier, associate director of the National Great Rivers Research and Education Center. "Its external landscaping reflects the environment along the flood plain region, and inside we'll have interactive displays with information about the green design of the field station, the ecology of the rivers and their watersheds, and what people can do to help maintain the health of rivers and streams."

Other green elements of the facility include wind and hydrokinetic turbines that supply the building's energy needs, recycling of gray water for non-potable uses, and outside pavers that allow rainwater to be absorbed into the ground rather than go into stormwater systems. NGRREC officials are seeking platinum-level LEED certification for the building, the highest environmental certification.

Education is another important component of the facility, which will offer programs for K-12 students as well as training for adults who want to get involved in activities like water quality monitoring.

One of the innovative elements in the research and education area is a series of six mesocosms, which are large concrete channels that contain flowing water and plankton pumped from the Mississippi River. Scientists will use the channels to conduct controlled experiments that are difficult to do in the wild.

The aptly named center sits at the confluence of the Mississippi, Missouri, and Illinois Rivers, on land owned by the U.S. Army Corps of Engineers, which also serves on the advisory board for the National Great Rivers Research and Education Center.

The site couldn't be more fitting for the study of the complex interactions between the aquatic, terrestrial, and human communities of the waterways. Scientists working at the station will study topics that include floodplain management, ecosystem restoration, and how to increase sustainability along the rivers. —L.E.

For more information on the Confluence Field Station, see [ngrrec.org](http://ngrrec.org) or call 618-468-4811.



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## News Briefs



Col. Tom O'Hara and other officials listen to a student's idea

### HOW DO WE GET MORE PEOPLE OUT ENJOYING NATURE?

Make it "cool." Or so St. Louis area residents told Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works, and Ken Salazar, Interior Secretary, during a late summer listening session hosted by the Corps as part of Pres. Obama's America's Great Outdoors Initiative. A morning youth event allowed students to experience the outdoors through hands-on activities. Later, Col. Tom O'Hara, commander of the St. Louis District, heard suggestions from teens like: Turn off street lights to observe stars and bring nature into town; create outdoor classrooms along the river; and have advertisements about the outdoors. One adult speaker suggested a Grand Canyon "rap" to show the outdoors can be cool. Suggestions will be combined with ideas from across the country and presented to the president in November. [doi.gov/americasgreatoutdoors](http://doi.gov/americasgreatoutdoors). —H.M.

## Pay a fee, help a creek

More than \$1 million has been invested in the fish-rich LaBarque Creek near St. Louis, notable for its deep canyons and sandstone bluffs, through an unusual partnership that pairs regulatory fees with specific stream preservation projects.

Section 404 of the Clean Water act requires mitigation for any project that might result in watershed impacts, says Danny McClendon, regulatory branch chief for the St. Louis District of the U.S. Army Corps of Engineers. Normally, that means the developer or homeowner must construct and monitor some sort of mitigation project.

In Missouri, that can be accomplished through a fee that's paid into the Missouri Conservation Heritage Foundation Stream Stewardship Trust Fund. The state's seven U.S. Army Corps of Engineers districts allow for the option, and the foundation determines the best use for the funds, McClendon said.

"What it does is identify priority areas within the state that are considered unique and high priorities for protection," he said. "It also provides the ability to protect a particular resource."

So far, the foundation has spent \$3 million on stream protection efforts. That includes about \$1 million to sustain LaBarque Creek, one of the most diverse streams in the St. Louis metropolitan area and notable for its 40-some species of fish. It's also open to the public for hiking, fishing, bird watching and other recreational uses, thanks to the support of other preservation partners that include the Fish and Wildlife Service, Missouri Department of Conservation, The Nature Conservancy, and other groups.

Other projects around the state have involved purchase of easements, improvements in stream habitat for endangered species and removal of low-water culverts that were blocking fish passage. Restoration doesn't just help the individual project, McClendon notes. LaBarque, for example, flows into the 218-mile Meramec River, which runs through the Ozark highlands and empties into the Mississippi below St. Louis.

"Anything that's done to improve the tributaries has positive impacts on the Mississippi eventually," he said.



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This newsletter is a quarterly update of ongoing efforts in the Upper Mississippi River Basin and does not necessarily reflect the views of the U.S. Army.