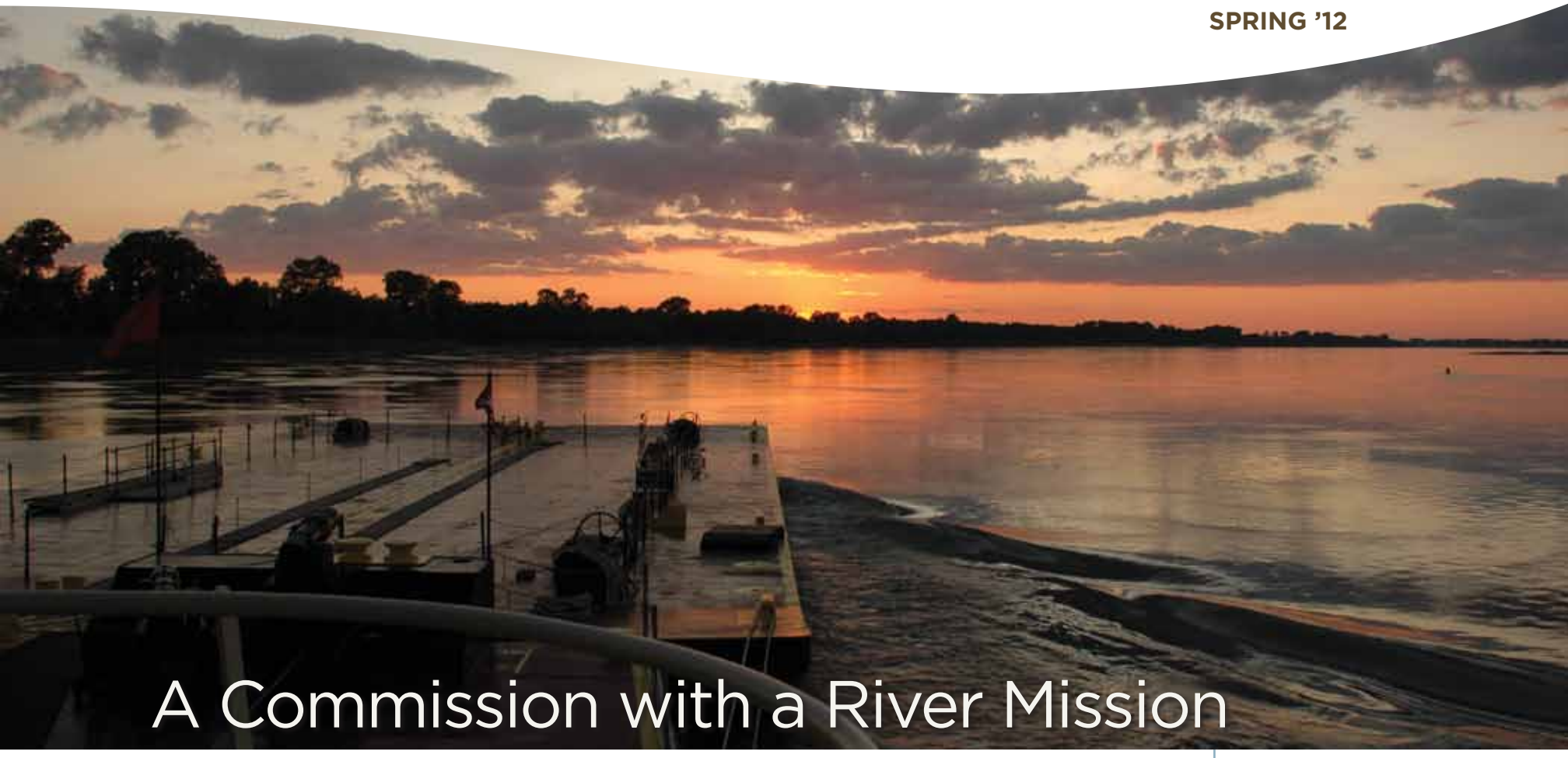
Our Mississippi

PARTNERING TO KEEP AMERICA'S RIVER GREAT

SPRING '12



A Commission with a River Mission

THE *MISSISSIPPI V* pulls away from the dock at Memphis's Mud Island River Park, rumbling its way downstream as the Hon. Sam Angel finds his place card in the ship's historic dining room.

Other guests stand, waiting for the arrival of Angel and other members of the Mississippi River Commission before taking their seats and launching into lively conversations over chopped steak and chocolate pie.

In some ways, little has changed since the days the original Mississippi River Commission (MRC) held its first meeting on a boat with the same name—some 130 years ago. A group photo that includes Benjamin Harrison, who'd go on to serve as 23rd president of the United States, hangs on the wall above Angel's head. Back more than a century ago, when silver was likely polished the same way, commissioners similarly mingled with those closest to the river and talked about its challenges and needs.

"The world has changed around them, but the commission's missions and traditions haven't," says Charles Camillo, the commission's full-time historian and author of several books on the MRC and the massive flood control and navigation system it oversees. "Some of these people who came here to testify, their daddies have testified and granddaddies and great-granddaddies. It's neat to see."

What has changed is the Mississippi River itself. When the commission was formed in 1879, reporting directly under the Secretary of War, boats plying these very waters were regularly caught on snags, sandbars and uncharted shoals, Camillo has written. Navigation was the priority but flood control was seen as an integrated mission: confine water between levees and you can put it to work scouring the river bottom and keeping it deep enough for boat traffic.

Still, heated debates about what improvements were needed regularly ensued. The perceived need for help from those who best knew the river led to biannual river tours. Because civil engineering expertise was also needed from the nation's top civilian engineers, the commission requires at least two members to hold a civil engineering degree.

Among the engineers on today's commission is the Hon. R.D. James, owner of the AC Riley Cotton Co. in New Madrid, Mo. He credits public input received on trips like this annual

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"The world has changed around them, but the commission's missions and traditions haven't." —CHARLES CAMILLO, MISSISSIPPI RIVER COMMISSION HISTORIAN

ABOVE: ***The MV Mississippi** plies the waters of its namesake river at sunset, between Cape Girardeau, Mo., and St. Louis.*

PHOTO: NICOLE DALRYMPLE.

Our Mississippi is a quarterly newsletter of the U.S. Army Corps of Engineers about its work in the 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.

2012, The Summer of Paddling, PAGES 4–5

Onlookers check out the Motor Vessel Mississippi *in Tunica, Miss., as it docks for a tour of the Riverpark and Museum.* LEFT (LEFT TO RIGHT): *Commissioners Sam Angel, Maj. Gen. John Peabody and R.D. James react to some engaging testimony.*

high-water inspection tour with the effectiveness of the Mississippi River and Tributaries System. What the commission now oversees is not so much a hazardous river but the successful conglomeration of levees, spillways and reservoirs credited with protecting so many lives during last year's record flood.

"I can't imagine being a commissioner without the public hearing process," James said. "To my knowledge, we're the only one like this in the country. The local passion and knowledge of specific river areas are invaluable to me in my analysis and decision-making."

AT PRECISELY 9 A.M., Maj. Gen. John Peabody calls the 387th meeting of the Mississippi River Commission to order. A standing-room–only crowd of more than 100 has gathered in Memphis to bring forward requests—some calm, some passionate—for fixes and funding.

Peabody starts with an assurance. Repairing levees and the rest of the flood control system is the single focus of the current command, which has $990 million allocated to get a good start on the estimated $2 billion needed for repairs. Some 80 "Class 1," or highest risk projects, will be completed this year.

But that's followed by a warning against complacency. Even with favorable weather forecasts, the river system is at an increased risk due to levee damage. "Water," he tells the group, "finds the perfect path to destruction."

Col. Vernon Reichling, commander of the Memphis District, gets knowing nods when he describes the system's status as akin to a prize fighter—after the fight. "If anybody here saw *Rocky*, they'll know [Rocky opponent] Apollo Creed won, but he didn't look like he won. That's what the MR&T system looks like today. But we're bringing down risk."

Part of the annual spring high-water meeting is about listening; the other part is about inspection. From their perch onboard this five-story-high vessel—the largest towboat constructed to date in the United States—commissioners and guests chug past President's Island. There, the river nearly cut a new path during the flood. They end the day touring a Tunica Island and museum that suffered some flood damage but has repairs well underway.

But it's the personal interaction that clearly stands out as commissioners listen intently to concerns. A port manager shares his worries about dwindling dredging budgets, a local mayor about an approved but unfunded project that could mean a lot to one of the nation's most poverty-stricken counties, a levee board manager about some one-size-fits-all legislation he believes needs serious tweaking.

Lynn Muench, a towing industry representative back for her 13th consecutive year of testimony, says that even though the Mississippi River Commission is mainly an advisory body, it can carry her message forward to Congress. Mingling with others with an interest in the river is powerful, too, even if it's just swapping individual stories and perspectives over coffee or a meal.

No promises of action are made, but Maj. Gen. Peabody, the group's President, compliments the group on its professionalism and passion. He pledges to carry concerns forward to those in government responsible for final decisions. The testimony will be summarized in a report prepared at trip's end and submitted both to the Chief of Engineers and Secretary of the Army.

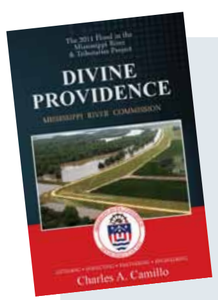
A second annual trip will follow in August, when the group takes its annual low-water trip on a river tributary. This year they'll explore the Missouri, and in 2013 the Upper Mississippi, where Camillo says the commission will likely again be hearing from constituents as familiar as friends.

"I can't think of anywhere in the country where there's a bond between a government entity and people like you see here," he said. "It's a personal bond. That's why the commission is still here." —K.S.

MRC at a glance

The Mississippi River Commission was established on June 28, 1879, as an executive body reporting directly to the Secretary of War. Commissioners are (and always have been) appointed by the President and until 1966 were appointed for life—and now to nine-year terms. By mandate, the commission must be comprised of three U.S. Army Corps of Engineers' officers, one member from the National Oceanic and Atmospheric Administration and three civilians. Over time, 150 Army officers and just 29 civilians have served. Just five towboats, all named the MV (Motor Vessel) *Mississippi*, have served as the group's ambassadorial vessel, three of them powered by steam. Today's MV *Mississippi* is the largest towboat ever built in the United States. It actually spends 90 percent of its time as a working boat, moving barges, equipment and supplies on the Mississippi, but during crises like Hurricane Katrina it is used as a floating command center.

BELOW: *The original Mississippi River Commission*



Read all about it

You can now go behind the scenes with the Mississippi River Commission as it makes its most agonizing recommendations of the Flood of 2011 in the new book *Divine Providence*. The book was written by Charles Camillo, the commission's historian, who was on the scene during the decision-making and recorded the process, in the words of one reviewer, "with a reporter's instinct and novelist's narrative skill." The book describes the ultimate test of the Mississippi River and Tributaries Project, making the title apt. The flood control system was designed to hold "should divine providence ever send a flood of the maximum predicted by meteorological and flood experts as a remote probability but not beyond the bounds of ultimate possibility." Print versions of the book will be available in late April or early May, downloadable copies mid-April, at mvd.usace.army.mil/mrc/history/docs/DivineProvidence2011MRFlood.pdf

Trying 'in a humble way' to improve the Mississippi over time

Commissioner R.D. James

The role of the Mississippi River Commission has changed in some important ways since he was appointed by then-President Ronald Reagan in 1981, says Commissioner R.D. James. But one thing hasn't—the group's vigilance in keeping commerce flowing and people in the watershed safe.

"I think our number one mission is to safely pass floods down the Lower Mississippi River valley," he said. "If we don't do that, people will lose their lives, and that is not acceptable."

"In addition to flood safety, the commission is increasingly looking at the blending of some missions relatively new to the lower stretches of the Mississippi." —COMMISSIONER R.D. JAMES

In addition to flood safety, the commission is increasingly looking at the blending of some newer river missions. Unlike when he first joined, every decision made today strongly considers environmental impacts and ways to improve the environment, he said. Structures like rock dikes are now being built with notches to reconnect the river to backwaters and improve fish habitat. Even areas of the river long feared as treacherous are being considered for recreation opportunities.

"We're looking at anything we can do within our flood control and navigation authorities to make that happen," he said. "But between currents and eddies, velocity of the water, the towboats... It's not like the Upper Mississippi where we have a series of pools to recreate in. The first time I ever went to Minnesota, to Red Wing, what I could not get over was the volume of pleasure boats. I thought, 'What in the world?'"

Recreating on the river isn't a new concept to James, though. Growing up in Hickman, Ky., he'd swim and water ski in the Mississippi, and buy the fresh fish available daily at local docks. He moved away to get a degree in civil engineering but moved into the Birds Point–New Madrid spillway to farm cotton and run his father-in-law's cotton gin. While there, he became active in local levee boards and drainage districts, which nominated him for the high honor of Mississippi River Commissioner in 1981.

Of the seven members, he is the second-longest serving member behind Sam Angel, who was appointed in 1979. None represents a particular river stretch; instead, all look out for the interests of the entire watershed. James has been in the spotlight for his home turf since participating in the heart-wrenching decision to activate the Birds Point–New Madrid floodway—one that flooded his own land and livelihood as well as his son's and many neighbors'.

The experience left him overwhelmed at the kindness of those neighbors and the effectiveness of a system that passed a record flood without loss of a single life.

"You can go back into the 1800s, and the decisions and designs that were made still are used and are successful," he said. "I'm not going to say we haven't improved on some of those ideas, but those ideas were there, and we basically built this system based on them."

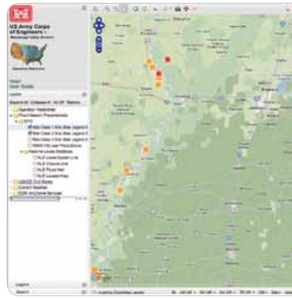
Similar foresight is what the commission aims for today, he says. A 200-year vision for the watershed is this commission's effort, "in our humble way, to influence things 200 years from now, rather than taking them by decades the way we all normally try to do things," he said.

James hopes to continue to serve for decades more. His biggest frustration in the role, he said, is seeing the critical need for improvements in navigation structures like aging locks but having to wait a "terribly long time" for things to get done. And the greatest rewards?

"Seeing a flood go down the Mississippi River and not kill anybody, seeing barges and towboats travel up and down the river on a daily basis without hitting snags and without running aground and seeing environmental areas with wildlife and waterfowl using them. This doesn't happen immediately, but over time, I see things that we're enjoying now that weren't being enjoyed when I was first appointed to the commission." —K.S.

Flood planning includes new 'map-your-own-risk' site

The U.S. Army Corps of Engineers is using a multi-pronged approach to reduce potential spring flood risks on a system severely weakened by last year's record floods. With construction still underway on most levee systems, emphasis has been placed on identifying, managing and communicating risk, says Scott Whitney, Regional Flood Risk Manager for the Corps' Mississippi Valley Division.



1. **CorpsMap.** The new site, found at mvd.usace.army.mil (click on Operation Watershed CorpsMap) takes a previously internal Corps planning tool public to help floodplain dwellers better measure their risk from flooding. Risks are high due to not-yet-completed levee repair projects resulting from the historic 2011 flood. This site will let people know what they might expect in their own back yard should floodwaters rise. To use the map, users zero in on a particular river stretch to see the status of nearby levee projects as well as navigation channels or harbors. Scheduled repair projects—some 400 in all—have been classified according to risk to life safety—Class 1 (depicted in red) as most critical, Class 2 (orange) next, and so on. A map feature allows access to detailed information papers on a particular project. That includes a description of what damages might be incurred, what structures might be flooded, how many people would be at risk, and the repair strategy and schedule.
2. **Creation of detailed and coordinated flood-fighting strategies.** Not every damaged levee or flood control structure will be fixed this flood season, Whitney says, so the Corps has prepared detailed plans, shared with local entities, for a flood fight at the most vulnerable structures. Plans include events, such as heavy rainfall, that would trigger a heightened level of awareness, and then details on best measures and evacuation routes based on a particular site's vulnerabilities. If needed, a flood fight is not unlike a military campaign without the bullets, Whitney said. "Many flood fighters and citizens unite to draw up battle plans to fight off the raging flood waters," he said. "You mobilize forces, and they're directed from one location to the next based on severity, urgency and consequences. It's like fighting a battle except on hundreds of fronts rather than one main front.
3. **Regular updates of construction fact sheets.** At least every 30 days, Whitney says, the Corps will update the construction status at every site in which it is conducting repairs. Updates will share estimated time to completion as well as the percentage of the project that's been completed to date.
4. **Putting new high-tech tools to the test.** Working in part through the Corps' Engineer Research and Development Center in Vicksburg, Miss., Corps employees are exploring new tools for assessing flood conditions and damages. That includes new technology that allows engineers using smart phones to immediately record the condition of a given levee into a central command database. —K.S.

MEANDER THE MISSISSIPPI—SAFELY

When Cindy Samples heads out to promote the Mississippi River's new Summer of Paddling initiative, she occasionally gets raised eyebrows and a response along the lines of, "Paddle the Mississippi? Where?"

There can be a fear factor to navigating this busy commercial navigation highway on just paddle power. But what many don't realize is that the Mississippi River offers many designated paddling trails through winding backwaters and lower river bayous. Just as speeding down a busy highway offers a different experience than a meandering back road drive, not every Mississippi River trip is created equal.

"Paddling is the time you can go out at your own pace, and it allows you to see the turtles, the warblers, and the birds that have built nests in the snags hanging over the bank," says Samples, outdoor recreation planner for the Upper Mississippi River National Wildlife and Fish Refuge. "While you're gliding, the fish jump, beavers slap their tails right alongside your kayak or canoe. It's that opportunity to immerse yourself in the rhythms of the river. You're almost as close as you are when swimming."

The trick to not getting literally immersed is being smart. Staying safe is easy if you're aware of potential hazards posed by navigation structures, other river traffic and the limits of your own paddling ability, says Janet Mifflin, natural resource specialist with the U.S. Army Corps of Engineers' National Great Rivers Museum.

Beginners to Mississippi River paddling should start in a backwater or bay with little river traffic and work their way toward the main stem as their skill level improves, she said. Corps-sponsored events break paddlers into groups based on skill levels to ensure a safe and enjoyable experience. Another suggestion is to go out with a guide (check the Summer of Paddling site, SOP2012.org) or on a designated group outing.

Dozens of events for paddlers of every skill level, some highlighted below, have been organized to connect more people to the river and its watershed. One features the chance to sip shade-grown organic coffee on a slow-going birding trip. Another, a partnership between the Mines of Spain State Park and National Mississippi River Museum and Aquarium, includes a group paddle with a musician who'll later spin the experience and stories of paddlers together in a song performed at a post-paddle concert, free to the public at the museum and aquarium in Dubuque, Iowa.

The Summer of Paddling coincides with the creation of the first-ever National Water Trails System, set up like the national recreational trails system. In early March, Secretary of the Interior Ken Salazar announced the Chattahoochee River Water Trail near Atlanta, Ga., as the first so-designated. But Jo-Ellen Darcy, Assistant Secretary of the Army for Civil Works, pledged the U.S. Army Corps of Engineers as one of many trail system partners, and it already has a head start.

The Mississippi River Water Trail (Saverton, Mo., to Cairo, Ill.) is applying for inclusion in the national system, as is another Corps-created trail in Alabama. The goal is to create a Mississippi River trail that connects from the headwaters to the Gulf. Complete so far are some 121 river miles in Pools 24, 25, 26 and 27 to the Arch. In just that stretch you'll find 21 primitive campsites, 50 day-use areas and many interpretive panels that tell the stories of area history and culture, even the story of the intriguing Piasa bird, the subject of a local native legend.

When completed as early as 2013, the St. Louis District trail portion will cover 300 river miles from Saverton, Mo., to Cairo, Ill., and the lower 80 miles of the Illinois Waterway. The trail website (GREATRIVERWATERTRAIL.ORG) offers paddling and safety information relevant to any stretch of the river.

"Many people say they want to get on the river but don't know where to go," Mifflin said. "We've created maps showing put-ins, take-outs, rest areas, places to eat and use a phone.

"We want people to be inspired by the river, to learn about it, to feel connected to it so they'll want to take care of it. Our mission is stewardship of the Mississippi. Paddling is our doorway to get that message out." —K.S.

For more: SOP2012.org From there, click to the project's Facebook page to make your own paddling pledge.

To Paddle Safely on the Mississippi

- Always wear a properly fitted, Coast Guard–approved life jacket.
- Opt for a sea kayak for better stability in potentially turbulent waters.
- Be careful of river training structures like the wing dams, evident by the way water breaks over them.
- Bring along a cell phone or marine radio if you plan to enter a lock. If you don't have one, alert lock personnel by pulling the small-boat chain found in a ladder recess on the lock wall.
- A stoplight lets you know the availability of the lock chamber; red means the lock is unavailable, amber that it's being made ready and green that it's ready for you to enter. Lock staff will sound a long horn blast when you can enter the lock.
- For more detailed information on paddling safety and how to lock through, use the guide prepared by the Corps of Engineers at **mvr.usace.army.mil/brochures/LocksAndTheRiver.asp** or go to **greatriverwatertrail.org**

2012

It's the year for Mississippi River paddling

By Kevin Foerster, Refuge Manager, Upper Mississippi River National Wildlife and Fish Refuge

A NEW BUZZ PHRASE has been introduced on the Mississippi River: "Summer of Paddling 2012." Connecting the presidential initiative America's Great Outdoors with the growing sport of paddling, the U.S. Fish and Wildlife Service has partnered with the National Park Service, Army Corps of Engineers and several local and state organizations to create the Summer of Paddling 2012.

The Summer of Paddling 2012 is a series of events designed to get Americans outside to enjoy the Mississippi River on a canoe, kayak, rowboat or standup paddleboard. Paddlers of any skill level can join a refuge ranger or other trained paddle guide to explore the river and all its wonder on half- to full-day trips—or longer. Paddlers will splash through the backwaters, bayous and braided streams on America's River. But be warned, you might create a lifelong craving for outdoor adventure. I know because paddling is one of the outdoor sports that I've enjoyed my entire life.

I began paddling at a young age with my friends and family on Lake Tahoe in California. We spent long days out on the water splashing and admiring the natural beauty of the Sierra Nevada Mountains. I now appreciate the opportunity to paddle when I was young because I know the activity contributed to the conservation ethic I carry with me today.

Having a strong connection to the silent sport, I knew it was a natural fit for the America's Great Outdoors initiative. But the Summer of Paddling 2012 didn't just come from my experiences as a boy on Lake Tahoe. It all started during a conversation with Cindy Samples, visitor services manager at the Upper Mississippi River National Wildlife and Fish Refuge. We reminisced about the importance of paddling in our lives and wanted to make paddling accessible to others. We decided one way would be to highlight the America's Great Outdoors initiative (AMERICASGREATOUTDOORS.GOV) in our part of the National Wildlife Refuge System.

That informal hallway meeting led us to an initiative that now involves 10 states, multiple Fish and Wildlife Service regions, local agencies, non-governmental organizations and one of our partnering organizations—the Mississippi River Connections Collaborative. Each organization involved in the Summer of Paddling 2012 helped develop the theme: "1 river, 10 states, 100 events."

I hope you get outside this summer on a paddling adventure. For a complete list of events during the Summer of Paddling 2012, visit SOP2012.org. **PADDLE ON!**

PHOTOS: COURTESY CORPS RIVERS PROJECT.

MY MISSISSIPPI

Markevius "Dinky" Jones, 18, Clarksdale, Mo., river guide for Quapaw Canoe Co.

"I grew up on the river, but I never fished or swam or canoed in it until I met John Ruskey, who founded Quapaw Canoe. My cousin worked there and started telling me about it, and John took me in. I was like a newborn baby when I got started and learned as I went on: how to build canoes, how to guide canoe trips with strangers, how to paddle through whirlpools. John paid me, as an apprentice, but it was never about the money. What I love about this work is that it's peaceful and quiet, and you get to see what most people don't ever get to see: wildlife like alligators and river otters, snakes and beavers, and beautiful little islands.

"I've never been afraid, like some people are on the largest waterway in America, because I've always had fun on it. I've been on lots more than 100 outings, usually with John along, too, including one for a month from St. Louis to the Gulf; sometimes I have to stay out of school because they need me. When I learn a route I like, I take people out by myself. I've been doing this six years; I know what I'm doing. I can count on one hand the people who didn't love the river by the end.

"Camping overnight alongside the river is something I like, too. You can hear the wolves and coyotes howling, and see all the stars most people don't see.

"John is a very nice, giving guy. To be honest, he feels like a father figure to me. We've become really close. When I graduate this spring, I most likely will become a full-time river guide. I really enjoy it, and it keeps you out of trouble."

SUMMER of PADDLING HIGHLIGHTS BY STATE

ARKANSAS
JUNE 1-JUNE 8, HELENA | **Muddy Waters Wilderness Paddle**. island63.com

ILLINOIS
APRIL 22, HAVANA | **Earth Day Paddle**. museum.state.il.us/ismsites/dickson
JULY 9, ALTON | **"Up a Creek" Kids Kayak Camp**. lc.edu/corporate/Community/c4k

IOWA
JUNE 2, WAPELLO | **Moonlight Paddle**. lccb.org
AUGUST 18, DAVENPORT | **Floatzilla 2012**. riveraction.org

KENTUCKY
MAY 18–20, LOUISVILLE | **Paddle from Blue Heron Campground**. louisvilleareacanoeandkayak.org/events/56011042/

LOUISIANA
APRIL 28, LACOMBE | **Paddling Through Time**. fws.gov/southeastlouisiana/calendar.html#canoe_tours

MINNESOTA
MAY 20, 26, JUNE 2, 9, 17, 27, MINNEAPOLIS | **Mississippi River Gorge Half-Day Canoe Paddle**. wildernessinquiry.org/destinations/index.php?itinerary=mississippiriverdaytrip

MISSISSIPPI
APRIL 28, VICKSBURG | **BluzCruz Canoe & Kayak Race**. bluzcruz.com

MISSOURI
MAY 20, WEST ALTON | **Riverlands Paddle Festival** through the Migratory Bird Sanctuary, 618-462-6979
JULY 31-AUGUST 3, KANSAS CITY | **Missouri River MR340**. rivermiles.com

TENNESSEE
JUNE 16, MEMPHIS | **The Outdoors Inc. Canoe and Kayak Race**. outdoorsinc.com/pages/canoe-race

WISCONSIN
MAY 20-25, NAMEKAGON RIVER | **St. Croix River Association (SCRA) Paddle**. stcroixriverassociation.org/featured/registration
JUNE 22, TREMPEALEAU | **Sunset Canoe Tour**. fws.gov/midwest/trempealeau

For a full list of organized events, go to **SOP2012.org**.

Paying It Forward

Veterans curate history as bridge to civilian future

SMALL ARMS REPAIR is a valuable job in the U.S. Marine Corps. But finding a way to spin those skills into a job back home is anything but obvious, says Jake May, a former Marine Arms Technician now based in St. Louis, Mo.

Ditto for work as a front-line Army medic, especially when, as for Jorge Carrion, it's important to avoid the horrors you witnessed on the front lines in Afghanistan and Iraq.

The two men are among some 100 returning war veterans, many suffering war-related wounds or disabilities, who are transitioning to a civilian life by helping to curate a backlog of historic artifacts collected over the years at U.S. Army Corps of Engineers project sites. While preserving prehistoric cultures, the project helps bridge a cultural gap that most Americans don't even realize exists, says Michael "Sonny" Trimble, founder and director of the U.S. Army Corps of Engineers' Veterans Curation Program.

"They're all having a hard time getting jobs and transitioning from a war to a civilian environment. It's difficult, and most of the American public doesn't get it because less than 1 percent of the population serves in the military now."

Trimble gets it better than most. The St. Louis District Archeology Chief was assigned to lead an unusual demonstration of the power of archeology—in Iraq. He led a field team that collected forensic evidence against Saddam Hussein by excavating nine mass graves and determining the circumstances and cause of death. His testimony in Hussein's trial helped lead to eventual conviction. But the team couldn't have survived, mid-war, without the help of American troops.

"They need people to understand what they're going through and, as archeologists and anthropologists, that's what we try to do here—understand others' viewpoints..."

"I want to kind of pay them back in any small way I can for frankly keeping us alive," he said, "and because I think it's the right thing to do."

Trimble's brainchild was launched in 2009, when American Recovery and Reinvestment Act funds were used to establish veterans curation centers in Augusta, Ga.; Washington, D.C.; and St. Louis, Mo. Facilities were designed to accommodate disabilities, and laboratories were outfitted with state-of-the-art equipment and software. Flexible hours were established, and job- and life-development skills were woven into the work day. Staff had to learn about traumatic brain injuries and post-traumatic stress disorder, issues present for many veterans returning from Afghanistan and Iraq, said Andrea Adams, a laboratory supervisor.

"They need people to understand what they're going through and, as archeologists and anthropologists, that's what we try to do here—understand others' viewpoints. We tailor the lab environment to suit them."

Maj. Gen. John Peabody, who visited the lab in his early days as Commander of the Mississippi Valley Division, said he's proud of the way the program helps veterans while preserving the nation's past. "The effort is so inspirational because it repays a debt we owe to these brave men for their service and sacrifices," he said, "while also preparing them for post-service civilian employment and productive lives."

Plenty of work gets done too, Adams notes, and importantly so. The U.S. Army Corps of Engineers, by law required to curate any cultural resources found on project sites, has an extensive collection of artifacts—most of it in boxes. The backlog of collected artifacts and related paperwork could fill an entire football field or about 30 semi-trailers, organizers say.

"We've gone through 669 boxes," Adams says of the project. "We're slowly chipping away."

Some 100 veterans have participated in the six-month program, with 65 moving on to new jobs or continued schooling. Several were placed at the Martin Luther King Center in Atlanta where they're digitizing some of the nation's most important civil rights documents, while others secured employment at the National Archives and Records Administration.

Jake May, the former arms repairer, has been inspired by repacking artifacts like projectile points and historic tools, so much so that he'll pursue further training in history. Carrion, the former medic, will pursue a job in information technology. Thanks to the project, he knows how to translate military jargon into terms civilian employers might understand.

"They help us find the right words," he said of the supervisors. "They explained that squads aren't squads, they are co-workers, that your platoon sergeant is your supervisor. I've been doing this for 18 years. The military side is pretty much all I know." —K.S.

FROM TOP: ***U.S. Army Corps of Engineers Maj. Gen. John Peabody learns how records and photographs are archived from Steve Wahle*** (LEFT) ***and Jake May. A veteran processes projectile points in preparation for permanent curation. Veterans learn photographic and scanning technologies, helping create a digital archive for public research.***

DID YOU KNOW?

In the 1780s, Louisiana's governor general banned Mississippi River travel for flotillas too small to repel bandits because there had been so many pirate attacks.

Corps park to celebrate forgotten chapter in U.S. history

Laid to rest

For decades, relatives have traveled to the grounds of two former Louisiana plantations to pay their respects to ancestors—former slaves, some of them former Union soldiers—buried in the Bonnet Carré Spillway, despite the absence of visible grave markers. Come fall, a new memorial will allow members of the public to pay their respects, too.

A Veterans Day unveiling is planned to commemorate those buried in the private cemeteries of two sugar plantations and explain more about a troubling time in U.S. history.

The U.S. Army Corps of Engineers is creating an accessible and portable memorial area with landscaping and markers outlining the Kenner and Kugler Cemeteries Archaeological District. The cemeteries are on the National Register of Historic Places, and the Corps maintains a buffer area and staff to protect them. The spillway itself is eligible for the National Register, and the area now attracts some 350,000 visitors a year for recreational opportunities such as biking, hiking and catching crawfish. In addition to the new memorial area, the Corps will hold occasional lectures and tours and plans to provide access to oral histories of those buried there. Artifacts and a detailed history of the role of slaves on plantations and in the Civil War will be available in the spillway office.

The existence of the cemeteries came to light years after the government purchased the land in 1928 for use as a spillway. Operation of the spillway in 1937 and 1945 inundated the site with water, and some wooden markers and iron crosses were washed away or moved and the gravestones were covered with sediment from the Mississippi River.

In the mid-1970s, a crew clearing land disturbed some of the burials, strewing bones of at least five people. A criminal investigation ensued, but it wasn't until 10 years later that an archaeologist looking at old records recognized the remains and markers found nearby as signs of a cemetery, said Chris Brantley, spillway project manager.

During the research that followed, several artifacts were found that revealed more about burial customs of the area and the people buried there. A headstone was found that marked the grave of Sanders Royal, a one-time slave who'd gone on to serve in the 10th Regiment United States Heavy Artillery Unit. That unit was positioned around New Orleans to protect against Confederate attacks, Brantley said. Royal, like many other former plantation slaves, perhaps returned as a sharecropper and was later laid to rest in the plantation cemetery.

Five of Royal's relatives attended a public meeting to help the Corps determine the nature of a ceremony to rebury the exposed remains and provide input on the history for the interpretive panels.

As a result of public suggestions, Corps historians will make minor revisions to panels and consult with the National Park Service experts on the Underground Railroad to ensure correct interpretation of the area's history. Portable panels will describe the Kugler and Kenner Cemeteries, both established during Antebellum times as places to bury slaves of the Roseland and Hermitage Plantations. Both cemeteries were used into the early 1900s and, combined, contain an estimated 300 graves.

By the end of the Antebellum period, Corps research showed, 56 percent of the St. Charles parish was being cultivated for sugarcane. An 1860 census showed 900 whites, 200 free men of color and 3,719 slaves living there. After the 1864 abolition of slavery, numerous former slaves—including several eventually buried in these cemeteries—enlisted into the Union Army.

No grave markers will be visible at the new site, but the landscaping will delineate the cemetery size and location, says Brantley. The goal is to help visitors understand the contrast between slave life and the lives of those living on the same site in the grand mansions populating the Great River Road.

The site will also mark remnants of a sugar house where slaves cut sugarcane with machetes, then fed stalks between giant rollers and hauled them on donkeys or carts past overseers with whips. A site booklet will further explain plantation life in pre– and post–Civil War times. All panels and markers will be portable so they can be moved if flooding occurs due to activation of a flood-control structure, Brantley said. —K.S.

ABOVE: ***The gravestone of a former slave and Union soldier, found within the Bonne Carre Spillway.*** RIGHT: ***Antebellum life on a sugarcane plantation often required round-the-clock toil.***

"A favored and colorful part of the Old South was the Louisiana sugar country. This area was a labyrinthine river land of ample cane plantations interspersed with narrow sugar farms, of white-columned mansions contrasting with humble dwellings, of tall-chimneyed sugarhouses in juxtaposition with primitive mule-drawn cane mills, of Anglo-American planters among Creole proprietors, of Irish and Cajun laborers in the midst of a multitude of Negro slaves, and of affluent and graceful living in the precense of rural simplicity and back-breaking toil."

—Louisiana Sugar Plantations During the Civil War, 1957

MY MISSISSIPPI

Bill Lancaster, 60, Greenville, Miss., commercial fisherman and collector of river artifacts

"I grew up on the river watching guys fish, and I figured if you could go out there and have a good time and be in nature and make a living doing it, why not. Of course it's dangerous, and I've had a lot of close calls. But I'd rather work alone, for the solitariness of it.

"I catch catfish, buffalo, gar and paddlefish, what our local fish markets handle. Most of the year I'm out every day, from just past daylight 'til mid-morning, when I distribute the fish—300 or 400 pounds on a good day—then do maintenance and get ready for tomorrow. I've got two boats I use all the time. They don't have names, but I've called them names, yes I have.

"You never know what you'll find. As a boy I collected arrowheads from Indian burial mounds on land. Now I search the gravel bars, some of them 20 or 30 acres, that emerge when the river goes down in the summer. A paleontologist friend says I've got fossilized ground sloth claws and mastodon teeth and other prehistoric artifacts. You find broken Indian pots, spear points, old soda bottles, pieces of steamships. And of course you find human remains in the river, like pieces of skulls, probably from Indian burial grounds that washed out.

"I'm part of a dying breed. Fishing is too expensive and it's lots of hard physical work, and I've seen some people interested in it, but they burn out fast. Plus the fish markets' clientele is passing away. This young generation is into buying a package of fish that's already fixed up and breaded."

Creating a Joint Vision

SEEKING NEW WAYS TO USE AND ENJOY THE LOWER MISSISSIPPI RIVER

The potential (and challenge) that sits amid the three million acres of backwaters and bayous of the Lower Mississippi River—an area even larger than the Florida Everglades—is being examined by a first-of-its-kind coalition of federal and state agencies and non-governmental organizations.

The U.S. Army Corps of Engineers and The Nature Conservancy signed an agreement earlier this year to jointly fund the Lower Mississippi River Resource Assessment, a $1.67 million study expected to last at least three years. The agreement has brought several organizations together to see how river uses such as ecosystem restoration, outdoor recreation and nature-based economic development can be developed in concert with the region's important flood control and navigation infrastructure.

"The Corps of Engineers and Mississippi River Commission have set out a 200-year vision for the river," says Bret Walters, the Corps-based study manager. "That's really what we are targeting here—cleaner water, better recreational opportunities, healthier living—everything that's laid out in the vision. This will provide a framework to help steer future decisions in that direction."

The Water Resources Development Act of 2000 first authorized the examination of the Lower Mississippi River corridor from Cairo, Ill., to the Head of Passes in Louisiana. A reconnaissance-level investigation, launched in 2008, found federal interest in looking further. Some restoration projects, done independently of the larger study, have also showed plenty of promise, Walters and other team members say.

"We got the habitat benefits we needed, it didn't impact commercial navigation and almost right away people in Memphis were out using this side channel."

The Corps' Memphis District, for example, notched 150 dikes within the District, allowing backwaters to reconnect to the main river. One of those projects, Loosahatchie Bar, reconnected 11½ miles of river at a cost of $167,000 and didn't negatively impact the navigation channel, notes Gretchen Benjamin, large rivers program director for The Nature Conservancy's Great Rivers Partnership. Studies conducted through the Corps' Engineer Research and Development Center in Vicksburg, Miss., showed endangered sturgeon entering the channel, a favored place for such species to spawn.

"We got the habitat benefits we needed, it didn't impact commercial navigation and almost right away people in Memphis were out using this side channel," Benjamin said. "They could get off the main channel and use the beaches that formed, watch birds, go fishing or kayaking."

An analysis by the Lower Mississippi River Conservation Committee, one of the study partners, identified 145 areas where reconnections between main and side channels could be made (LMRCC.ORG). Unlike the Upper Mississippi, with its massive Environmental Management Program, the lower river has no comprehensive restoration initiative. Additionally, there are fears about the dangers of river recreation, Walters said.

What the area does have is potential.

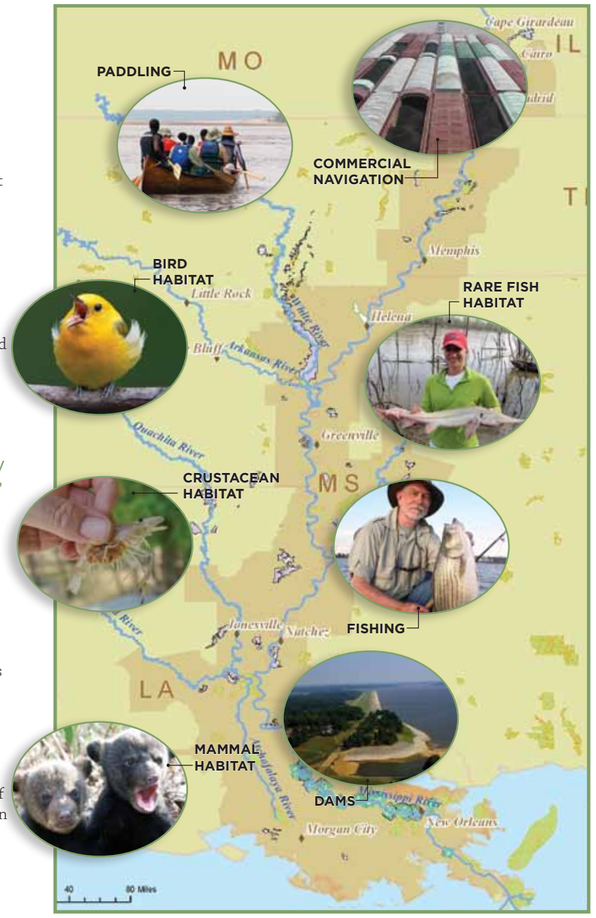
The project area includes 1,600 lakes and 145 rivers, and it supports 241 species of fish, 50 species of mammals, 45 species of reptiles and amphibians, 27 types of mussels and four federal endangered species—the Louisiana black bear, the fat pocketbook mussel, the least tern and the pallid sturgeon. Numerous state and federal parks, refuges and wildlife management areas lie within the boundaries.

The project will look at 954 river miles and adjacent floodplains reaching into seven states and 68 counties and parishes. It'll explore the value, impacts and needs relating to wildlife and fish, non-native invasive species, water and air quality, sediment, coastal wetlands, bottomland hardwoods, wetlands, the Gulf hypoxic zone and more. Economic development could be the result of recommendations as well. The reconnaissance study found nature tourism to be both a $628 billion industry in the United States and the fastest-growing market segment in international tourism.

"We've got some of the greatest natural resources in one of the most impoverished areas of the country," notes Ron Nassar, coordinator of the Lower Mississippi River Conservation Committee.

A Vast Watershed of Potential

The study, focused on the area depicted below, seeks to balance these and many other river uses.



MAP: USACE MEMPHIS DISTRICT; PHOTOS: BRUCE REID, BILL STRIPLING, U.S. FISH AND WILDLIFE SERVICE, LOWER MISSISSIPPI RIVER CONSERVATION COMMITTEE AND U.S. ARMY CORPS OF ENGINEERS.

The first phase of the project will gather information needed for future river management. Next will come more in-depth exams of wildlife habitats and human recreation and access needs.

Major cost-share partners for the project—a one-of-a-kind watershed study—include The Nature Conservancy, National Audubon Society, Delta Wildlife, the Lower Mississippi River Conservation Committee; and the Mississippi River Corridor – Tennessee, Inc. The groups will jointly contribute $461,000 through in-kind work.

Team members say they're excited to work with the Corps to focus attention on some neglected river uses—and see what can be accomplished by pulling together such diverse resources and expertise.

"More and more, the government knows it can't do everything by itself," Benjamin said. "Certainly, one agency or organization by itself can't solve the problem. It's got to be everybody working together if we want to see these issues solved." —K.S.

FROM THE PROJECT MANAGER

Kent Parrish

Project Manager, Mississippi River and Tributaries Levees

Kent Parrish

For people not familiar with them, what is a levee?

Levees began in the alluvial valley in the early 1700s in New Orleans to protect the city as civilization came to the lower valley. In order to make a reliable place to live and grow crops, people saw the need of levees to protect their property, and they started as small mounds of dirt that individual landowners would put up around their fields or property. With the flood of 1927, it became apparent we needed a more unified, system-wide approach by the federal government, and the Flood Control Act of 1928 made that a mission of the U.S. Army Corps of Engineers. Levees are still just generally mounds of dirt, but now they have a roadway on top. On the Mississippi River levees, sides slope 4:1 on the river side and 5:1 on the land side. They're generally made of clay material, thereby minimizing seepage when water rises, and they're anywhere from 10 feet to 35 feet tall in the 1,610-mile system from Cape Girardeau, Mo., to the Gulf.

What is the status of levees after the big flood of 2011?

Basically, the levees were damaged. We did have some seepage and sand boils. The damage assessment team has gone out and assessed those places, and we've been ranking them. We finally got money around Christmas time, and now we're putting together design contracts—some in 2012 and a lot more in 2013 to fix the damaged areas. We'll hopefully be completed with construction prior to the flood season in 2014.

How prepared do you feel for the upcoming flood season?

We're in the middle of the high water season now. There have been lots of meetings in preparation. There is a lot of awareness. And a lot of measures used to flood fight in 2011—sandbags and berms are still in place to address the seepage should we have another high water situation of that magnitude. Local levee boards know where seepage begins and will be watching for places that might generate a sand boil. We think we're as prepared as we could be.

You've got a new project called CorpsMap. How does that help people better understand their flood risk?

You can click on that in your area. It'll give you a fact sheet that tells where we are with projects in that area. I think it'll be used more so in spring months when flooding is on everybody's mind, when the weather channel issues the latest forecast. Folks will see a lot of progress this year in channel improvements and dikes and revetments (sloping structures to stabilize streams), but levees take a lot more design before we can put out contracts.

Do you have any message you'd like to get out to the public about the levees?

We have identified the weak areas, have prioritized them. We're working as fast as humanly possible. Should we have high water, the Corps and our sponsors will be out watching it, doing everything humanly possible to keep from having a disaster. We know the hot spots. We've been watching them for years, and some have gotten worse. We've finally gotten money so we can fix them, but it's still a band-aid approach. There's still more than $1 billion in work to get the Mississippi River levees improved to the level Congress authorized. We've got money to fix the bad spots, and we've got a lot of really bad spots. It will take many more years to complete all of the work. As the general has said, "Mother Nature can always throw something bigger at us that we haven't planned for." —K.S.

DID YOU KNOW?

The Mississippi Valley Division levee system, if placed end to end, is longer than the Great Wall of China. (Levees=8,400 miles; Great Wall of China=5,500 miles)

River safety message crosses language barriers

ABOVE: ***Lou Ann McCracken, a natural resources specialist with the U.S. Army Corps of Engineers Mississippi River Project, presents water safety information to local refugees.***

The Mississippi River Project in the Rock Island District has been taking its water safety message global, working with refugees from five countries, in languages like Thai, Swahili, and Tongalese, to explain the dangers of the river's currents, locks, wing dams and snags.

Key word translations and native translators were the key to communicating the safety message, said Lou Ann McCracken, a natural resources specialist with the Mississippi River Project.

The office was contacted by some Quad Cities–area organizations for help in water safety training after an 11-year-old who'd moved four years earlier from Burundi, Africa, drowned in the Mississippi. The key messages aim to help refugees from parts of the world with traditionally shallow rivers and no current to better understand recreation risks.

"We're always looking to expand our water safety education to as many individuals as we're capable of reaching," said McCracken. "If even one life is saved because of these efforts, then our water safety mission is a success." - H.M.

For more on the national water safety program: watersafety.usace.army.mil

MY MISSISSIPPI

Quinta Scott, 70, photographer, Waterloo, Ill.

"My fifth-grade teacher in St. Louis taught me and several generations of kids to love the river. Ever since I picked up a camera at age seven and called myself a photographer, I have wanted to do a book on the Mississippi.

"I found my topic along Mississippi Route 1, where I stepped in my first nest of fire ants and photographed an old oxbow, stranded in a field of soybeans. [President George] Bush, Sr., was promising 'no net loss of wetlands.' I decided that would be the subject of my book: the river and its wetlands. *The Mississippi: A Visual Biography* came out in January 2010. It has 200 color photographs, most shot on 4-by-5 film.

"In my research, I found a book with great maps the size of beach towels that showed how over the last 10,000 years the Mississippi has meandered across its floodplain, from valley wall to valley wall, leaving behind wetlands before settling into its modern course.

"To me, the river is way scary. I swam across it once. I was young and stupid. And I don't often go out in boats. Much of my work is done from solid ground. I did canoe the headwaters to celebrate my 60th birthday, and we dunked three times. But my camera survived."

OUR MISSISSIPPI KIDS

PLAY RIVER BINGO! As you explore the river, mark off the things you see. The first person to fill a straight line wins!

Nice to eat you.*

**What'd the frog say to the fly?*

What kind of shoes do frogs wear?
Open toad!

What do frogs do with paper?
Rip-it!

What happened to the frog's car when his parking meter expired?
It got toad!

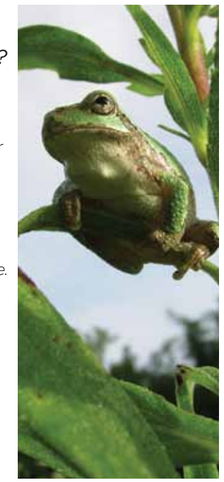
What is a frog's favorite time?
Leap Year!

Why are frogs so happy?
They eat whatever bugs them!

Why did the frog say meow?
He was learning a foreign language.

Why are frogs such liars?
Because they are amFIBians.

SOURCE: BOYSCOUTTRAIL.COM



FROGGY RIVER

THESE PEEPING HARBINGERS OF SPRING CAN ALSO TELL US WHAT'S GOOD—OR NOT SO GOOD—ABOUT A RIVER HABITAT.

IT'S NIGHTFALL, on the edge of a Misssippi River wetland. An observer sits silently as the last traces of sunlight are absorbed into the darkness. Then it begins—a sound akin to someone pulling a fingernail across the teeth of a comb. Within minutes, the air fills with a chorus of preeps and peeps. It's the ballad of the western chorus frog, one of nature's most anticipated harbingers of spring.

Fourteen frog and toad species are represented throughout the Minnesota region of the Mississippi basin, each with its signature song. That number grows southward along the river corridor to 28 species in Louisiana. Six species of frog and one toad are common along its entire length. And they are found in the wetlands, woods and grasslands adjacent to the river.

For volunteers and professional herpetologists alike, the variety of unique songs and calls instill fascination. Jeff Briggler, a herpetologist with the Missouri Department of Natural Resources, says some are unforgettable. That includes a Louisiana frog that snorts like a pig and, Briggler's favorite, the southern leopard, which seems to always be chuckling. He says the Eastern Narrow Mouth sounds just like a sheep—*baaa, baaa*.

While most frogs produce several sounds—some to attract a mate, others as a distress signal—their more telling message may be the collective statement they make about the environment. Because frogs live and breed in both aquatic and terrestrial environments (some deposit eggs in damp leaf litter, others in the leaf axils of plants), they are, perhaps, the *canary-in-the-coal-mine* of healthy habitats.

"Tadpoles are sponges that soak up everything [absorbing chemicals] through their skin," Briggler says. Since they begin their life in water they are particularly good indicators of environmental conditions.

The biggest threat to frog populations, he says, is habitat. Perhaps most at risk are populations that inhabit roadside ditches exposed to runoff, exhaust fumes and pesticides, and those in areas being clear-cut, drained or urbanized.

Some frog populations have been tracked since the 1960s, and advances in detection and evaluation methods have shed more light on population trends in the last decade in particular. Compared to studies originating in 1983, recent surveys show that the endangered cricket frog has been "declining rapidly" in Minnesota. That trend is advancing southward, but researchers still aren't sure why. A decline in spring peeper populations in the Twin Cities area is speculated to be due to the loss of forested wetlands.

While most regions have relatively stable fluctuations in populations, concerns are growing about the spread of some species—for example, the American Bullfrog. Native to the eastern U.S., they were likely introduced accidentally through fish stocking to areas out west. Now considered invasive, they are voracious predators of birds, rodents, reptiles, bats and other frogs.

Much of today's research uses information gathered by enthusiastic volunteers who traipse through those wetlands each spring, ears tuned to the frog chorus. Surveys conducted by many of the DNR offices in states bordering the Mississippi River recruit knowledgeable surveyors to identify species by call and record the time and surrounding conditions along specific survey routes.

Whether on official frog alert or just a stroll, people along the Mississippi encounter many opportunities to enjoy a concert of frog songs.

Briggler says: "People ask me where to look. I tell them just drive up, turn off your lights and follow the frogs." —T.W.

Learn how to volunteer for a survey program near you, or just take a frog quiz at: pwrc.usgs.gov/naamp

IDENTIFY THE CHORUS

American Toad: Long, musical trill
Boreal Chorus Frog: Rising "cree" some compare to fingernails across a comb
Bullfrog: bass *jug-o-rum*
Northern Cricket Frog: long rattling sound
Northern Leopard Frog: series of taps followed by a sound like a rubbing balloon

PHOTOS, COURTESY IOWA DNR. ILLUSTRATIONS: DIANE KOLAK.

OUR MISSISSIPPI TRAVEL

IT'S TWAIN TIME

Childhood home and museum marks 100th year of sharing author's life and work

ABOVE: ***Twain at his boyhood home in 1902.***

The longevity of the Mark Twain Boyhood Home and Museum offers a reason to celebrate with a visit this summer—with a slate of activities planned to honor the museum's 100th year of existence. It's also a good time to remember why Twain's books themselves are as relevant today as they were when first published, says Executive Director Cindy Lovell.

"The more you read *The Adventures of Huckleberry Finn*, the more you have to love and admire him," she said. "Huck defied convention, was very looked down upon… That book will poke you with a sharp stick and make you squirm and make you a better person. Whether it's a war of poverty or racism, Twain has something to say about these things."

Born Samuel Langhorne Clemens, Twain lived in Hannibal from age four to 17, and the town served as inspiration for his famous *Tom Sawyer* and *Huckleberry Finn* books. The museum idea began when a local attorney saved Twain's family home from scheduled demolition, just a year after his death. What opened as a house museum in 1912 expanded gradually into the eight buildings that now comprise the museum complex.

Today, the museum includes a stone building built by the Works Progress Administration in the 1930s; there you'll find a timeline of the life of Sam Clemens focused on Hannibal and the true stories that informed his tales. A one-time department store features interactive exhibits that bring the books to life and a gallery of 15 original Norman Rockwell paintings made to illustrate Twain tales. The Becky Thatcher house will open this summer and focus on childhood history, joining a Huck Finn house themed around the story of Huck and his brother Ben Blankenship, whose real-life help of a runaway slave inspired a part of *Huck Finn*, Lovell said.

As a key part of the year's celebration, current and past museum visitors are invited to share photos or stories on how the museum inspired them. The May 15 centennial re-dedication ceremony will, among other events, feature photos and remembrances of visitors from over the years—treasures that'll be collected throughout the year. The year's events also include free Thursday concerts on the riverfront by artists who performed on the Twain CD released last year.

Lovell hears stories daily as she strolls downtown Hannibal, asking people what brought them here. They come from more than 60 countries, often literally planning trips from China, Russia, Denmark and Germany to "see Mark Twain." A 25-year-old man from India really struck a chord when Lovell came upon him, his eyes big and looking out over the river.

"He said, 'When I was a little boy in India, we would play Tom and Huck, and we used to wonder how this man in America knew what we boys in India liked.' He burst into tears and said, 'We're all alike. We all love the same things.'" —K.S.

To submit your memories or photos for the exhibit, go to marktwainmuseum.org and click on Community Projects.

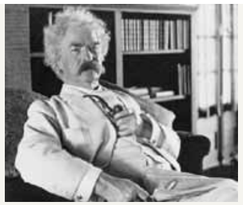
Classic river cruises are back for 2012

Cruise trend watchers are calling this "The Year of the Mississippi" as two new cruise lines bring river cruising back to the river's northern and southern stretches—some with themes like the U.S. Civil War, Mark Twain, southern culture and traditional river music.

American Cruise Lines features a Sept. 15 Mark Twain tribute cruise from St. Louis on its brand-new *Queen of the Mississippi* paddlewheeler. The boat is a re-creation of an 1800s riverboat, down to the dining salon with crystal chandeliers (ABOVE). AMERICANCRUISELINES.COM

The Great American Steamboat Company offers several cruises on its *American Queen*, a 436-passenger luxury boat, including Civil War voyages with 1860s-style entertainment, history lectures and actors. GREATAMERICANSTEAMBOATCOMPANY.COM.

WHAT MARK TWAIN SAID ABOUT THE CORPS OF ENGINEERS



Samuel Clemens, better known by his pen name Mark Twain, was a steamboat pilot on the Mississippi River before the Civil War. In 1882, as a famous author, Clemens traveled down the Mississippi River and wrote *Life on the Mississippi*—equal parts travel book, social commentary, memoir, and tall tale. It's as relevant today it was when first published in 1883. Chapter 28 focuses on how the river changed since his days as a steamboat pilot, much due to the Army Corps of Engineers. —B.T.

As we approached the famous and formidable Plum Point, darkness fell, but that was nothing to shudder about—in these modern times. For now the national government has turned the Mississippi into a sort of two-thousand-mile torch-light procession. At the head of every crossing, and at the foot of every crossing, the government has set up a clear-burning lamp. You are never entirely in the dark, now; there is always a beacon in sight, either before you, or behind you, or abreast.

One might almost say that lamps have been squandered there. Dozens of crossings are lighted that were not shoal when they were created, and have never been shoal since; crossings so plain, too, and also so straight, that a steamboat can take herself through them without any help, after she has been through once.

Lamps in such places are of course not wasted; it is much more convenient and comfortable for a pilot to hold on them than on a spread of formless blackness that won't stay still…

But this thing has knocked the romance out of piloting, to a large extent. It and some other things together, have knocked all the romance out of it. For instance, the peril of snags is not what it once was. The government's snag-boats go patrolling up and down, in these matter-of-fact days, pulling the river's teeth. They have rooted out all the old clusters which made many localities so formidable; and they allow no new ones to collect…

Plum Point looked as it had always looked at night, with the exception that now there were beacons to mark the crossings, and also a lot of other lights on the Point and along its shore; these latter glinting from the fleet of the United States River Commission, and from a village that the officials have built on the land for offices and the employees of the service.

The military engineers of the Commission have taken upon their shoulders the job of making the Mississippi over again, a job transcended in size only by the original job of creating it. They are building wing-dams here and there to deflect the current; and dikes to confine it to narrower bounds; and other dikes to make it stay there. For unnumbered miles along the Mississippi they are felling the timber-front for fifty yards back, with the purpose of shaving the bank down to low-water mark with the slant of a house-roof, and ballasting it with stones; and in many places they have protected the wasting shores with rows of piles.

One who knows the Mississippi will promptly aver, not aloud but to himself, that ten thousand River Commissions, with all the mines of the world at their back, cannot tame that lawless stream, cannot curb it or confine it, cannot say to it, Go here, or Go there, and make it obey; cannot save a shore that it has sentenced; cannot bar its path with an obstruction which it cannot tear down, dance over, and laugh at.

But a discreet man will not put those things into spoken words; for the West Point engineers have not their equal anywhere; they know all that can be known of their abstruse science. And so, since they conceive that they can fetter and handcuff that river and boss him, it is but wisdom for the unscientific man to keep still, lie low, and wait till they do it…

—Mark Twain, *Life on the Mississippi*, 1883

Our Mississippi

PARTNERING TO KEEP AMERICA'S RIVER GREAT

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News Briefs

Teacher trainers needed for "Our Mississippi" curriculum guide

The "Our Mississippi" curriculum guide is printed, and the first series of facilitator workshops is scheduled for this spring: April 30 (National Great Rivers Museum, Alton, Ill.), May 2 (Rock Island, Ill.) and May 4 (St. Paul, Minn.). Once trained, facilitators will conduct educator workshops throughout the Upper River, sometimes in concert with the group Living Lands and Waters. Educator workshops are scheduled from June through October but will be ongoing. Some will be held on the group's barge, best known for its river cleanups.

The curriculum guide targets grades 5 and 6, with extension activities for upper and lower grades. Units cover river ecosystem, history, culture, commerce and more. To attend a facilitator or educator workshop, contact Angie Smith, Interpretive Services and Outreach Manager, National Great Rivers Museum (618-462-6979). The 300-plus page guide is also downloadable at ourmississippi.org. Participanting educators will receive a free printed copy. —K.S.

Scan here with your smartphone to go to the *Our Mississippi* website. Here, you can subscribe to our e-edition, read past editions and find river-related education materials.

Chart your way down the Mississippi

New Upper Mississippi River Navigation charts are now available for purchase. The bound sets of river charts pinpoint potential hazards such as wing dams and low bridges as well as the river's locks and dams. They also guide boaters to areas perfect for exploration—navigable sloughs, open channel areas and wildlife sanctuaries. The Corps updated the charts using the most recent aerial photography and survey data available. Charts can be purchased for $30 (plus shipping) through a cooperative agreement between the U.S. Army Corps of Engineers and the Quad Cities Convention and Visitors Bureau. Order by phone (309-794-5338) or in person at the Mississippi River Visitor Center on Arsenal Island in Rock Island, Ill. Or download charts for free: WWW2.MVR.USACE.ARMY.MIL/NIC2/MRCHARTS.CFM. —K.S.

Stories sought about the *Mississippi IV*

The Motor Vessel *Mississippi IV* will open as a floating museum this August, docked in Vicksburg, Miss., as the centerpiece of the U.S. Army Corps of Engineers' Lower Mississippi River Museum and Riverfront Interpretive Center. In the meantime, a Florida-based cultural resource management company is seeking stories about life and work on the boat with plans to use them to shape displays within the one-time working tow and inspection vessel. Teams have already heard tales about the famously yeasty breakfast rolls and the way the rumbling of diesel engines earned the boat the nickname "The Big Shaky." Displays in the works will recreate a cabin of one employee who'd use a manual typewriter (no computers yet) to record hearing testimony, create a scale model of the Mississippi River and allow for simulated steering. But people with firsthand knowledge of daily operations or times testifying at the Mississippi River Commission meetings held onboard from 1960 through 1993 are asked to share stories or photographs with Southeastern Archeological Research (800-406-8758) or the Corps Vicksburg District (601-634-7047). Or follow the museum progress at FACEBOOK.COM/LMRMIC. —K.S.

Our Mississippi

Send story ideas to editor@ourmississippi.org

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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.