



US Army Corps  
of Engineers®  
Vicksburg District

# THE Water's Summer 2012 Edge

**Milestones with  
Challenges**



### US Army Corps of Engineers®

News magazine of the Vicksburg District  
U.S. Army Corps of Engineers

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At Leland Reach, two tows pass along Trapley  
Cutoff dikes located upstream of Greenville.

Photo by Steve Coleman

# Commander's Corner

with Colonel Jeffrey R. Eckstein



## Greetings once again,

We have closed out another successful fiscal year. Thank you to everyone that had to work through the closeout procedures. Also, thank you to everyone for accomplishing so much last year. We barely missed executing all of our regular appropriations while we exceeded our supplemental and ARRA appropriations. That means we delivered emergency or stimulus work faster than originally scheduled. As you know, much of the supplemental funding goes to restoring the levees system to pre-2011 Flood condition. That demonstrates our value to the Nation; rapid restoration of critical infrastructure. Additionally, we achieved all 17 of our Headquarters tracked milestones. Great team effort!

As we transition to the new fiscal year, we also start a new District OPLAN. This year we are still waiting for changes to the Corps Campaign Plan and MVD IPLAN. We developed a few tasks we will implement now and leave room for further tasks as directed from Headquarters. Our new tasks focus on training and internal communication. We will also carry over our QMS task from last year. Regarding training, we have increased our training percentage in the operating budget from 3% to 4.5%. The goal is to provide quality and relevant training to you. We need to balance the individual's desire for specific training with the training required by the series or other mandatory requirements. We will also focus on training for our supervisors. Most of our supervisors also direct charge to projects and do not get sufficient time

for their leadership duties. We will set aside time this year to insure our supervisors get some focused training. This year the senior staff will validate training plans in IDPs and conduct most of the supervisor training.

In terms of communication, our team that developed the OPLAN task wanted to improve our communication within their offices, branches, and throughout the District. Email is a good way to communicate but most people wanted a little more personal, face-to-face interaction. Just as the USACE chaplain mentioned during his session with the District, we all do better when we have a connection with other people. Another aspect of the internal communication is passing on our knowledge of our own job. We developed two different metrics for this task. One is focused on our soon-to-be retirees and the other one on everybody else. For both groups, we are asking you to provide a one-page guide to your job. Describe your critical tasks or functions, where to locate your processes or information, and your points of contact. The team will get a format published.

As we move into the new fiscal year, we will complete a majority of our supplemental work to restore the MR&T system from the damages of the 2011 flood. It is important that we stay focused on improving the system on the ground and delivering improved risk reduction to everyone living behind a levee. We must still execute some ARRA funding. Most of this is in the 592 program in support of the small water or sewer districts or municipalities throughout Mississippi.

It is great to get the money but our value comes when we deliver the final project.

As we reset the counter on all of our safety metrics, now is a good time to commit to doing better than last year and begin this year with a goal of no accidents. We are still very busy executing projects so there are many opportunities for a mistake. Review your hazard analysis and implement preventative measures. We will sacrifice production for safety; we will not permanently injure anyone so we can keep the job going. We need to inspect and maintain our old equipment. We have a mix of youth and experienced team members, both need to review the safety procedures. As a team looking out for each other, we can achieve zero accidents.

Thank you all for your service and dedication to execute our mission. Our work force is what sets us apart from other federal agencies. Be **proud** of your efforts and the value delivered by the Corps of Engineers.

# Geotechnical data section lays groundwork for successful design and construction

By Brian Jordan

Photos by Rusty Penley and Heather Sibley

“Is there a problem out there that you just don’t see?” That’s the question that haunts a geotechnical engineer. “Everything we fear is taking place under the surface...” Chuck Mendrop, *Divine Providence*, 2011.

The primary mission of the District’s geodata section’s drill crew is to provide a clear picture of subsurface conditions at project sites throughout the nation, and remove uncertainties. In addition, they lend their expertise to other critical efforts such as relief well rehabilitation and,

when called upon, aid in essential emergency response. Hard work, adverse conditions, and attention to detail are the trademarks of these critical team members and their work.

The skill level that allows operators to feel changes in soil types as they advance a drill or cone penetrometer test (CPT) simply cannot be taught, it is developed through mentoring and experience. The geodata field crew is separated into two distinct but interchangeable teams.

The drill crew, Christopher Woodward and Christopher Bontje, perform classic borings by removing and collecting samples for laboratory testing; and the CPT crew, Cecil Crosby and Rusty Penley, use cutting edge technology to determine subsurface conditions through data collected by forcing a sensor equipped, cone-shaped probe through the layers of soil without removing them. While these teams are separate, they function as a unit to provide accurate and reliable field data

*Soil strength, skin friction, and pore pressure are measured by this conical tip and sleeve as it is advanced through soils to determine material type and other soil characteristics.*

to geotechnical designers for any number of critical infrastructure improvements. “High quality field and laboratory information is the lifeblood of geotechnical engineers. Our geodata section works hard to collect quality data since our analysis is only as good as the input data,” stated Brad Arcement, regional geotechnical specialist for Mississippi Valley Division (MVD).

The drill crew is capable of penetrating to a depth of over 150 feet in order to determine soil stratigraphy from the ground surface to tertiary deposits. Sampling of material can take the form of disturbed or undisturbed. Disturbed sampling is common in borrow pit investigation and means that the material can be remolded to fit in a transport container as long as there are no changes in its water content or classification characteristics. Undisturbed sampling is accomplished using a thin walled extractor known as a Shelby tube. The Shelby tube is forced into the soil and removes the material in a “plug”. The samples are removed from the ground with no changes in their shape or other physical characteristics (i.e. water content, composition, etc.) and transported to the soils laboratory for testing.

After they reach the District’s soils lab, the untested samples and boring logs are scrutinized by geotechnical engineers to determine what material qualities are critical for the design process and testing. Hattie Johnson, engineering technician, is the final stop for soil samples in subsurface investigations. At this stage, Atterberg limits, water contents, particle size distributions, as well as more specialized testing such as unconfined compression testing, organic content, and standard proctor compaction testing are conducted under her experienced eye. Her findings are then conveyed to geotechnical engineers and designers and constitute the product produced by the geodata section’s drill crew.

In a CPT, a cone is pushed into the ground while a computer measures the force required on the conical tip to penetrate the material. This test also measures skin friction, the resistance to movement acting on the smooth sides of the cone sleeve as it passes through different materials. Another useful piece of data collected during a CPT is pore pressure, or the water pressure held within the gaps

## PROCESS



*The drill crew adds a drill rod to advance a foundation boring on MRL Item 377.*

between soil particles. Material classification and strength of the soil are two important geotechnical parameters that can be correlated using the CPT data.

The flood of 2011 created challenges the District and MVD had never faced, and the geodata section was no exception as they executed their emergency duties for the District. However, their real challenge continued long after the flood waters had subsided. Later that same year, the District's drill and CPT crews began collecting data necessary for engineers and designers to develop and construct further risk reduction measures at sites along the system that were identified as a result of the 2011 flood event, also known as "reset" sites.

"The MRL project team had an aggressive schedule to reduce the risk in areas of greatest concern on the Mississippi River Levee System during the Flood of 2011. Our objective is to have designs complete for 20 sites and contracts awarded by the end of FY2013" stated Rick Shelton, the District's project manager for the Mississippi River levees. Due to the critical nature of this information, the crews

worked long hours during the spring and summer to ensure that design engineers had a clear and accurate picture of the materials and conditions with which they were dealing.

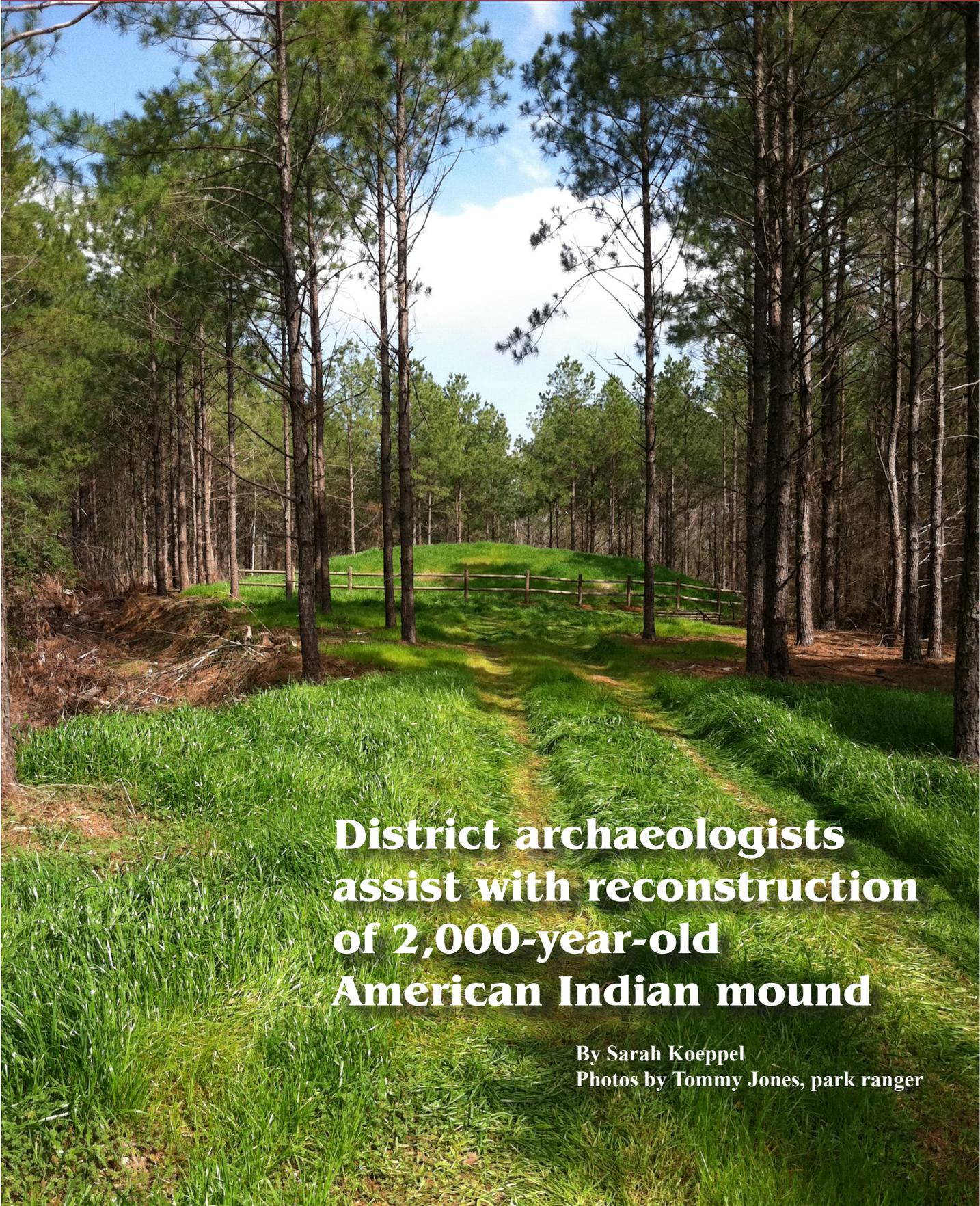
Tertiary and seepage borings were necessary to determine the precise thickness of clay blankets and sand layers on both the flood side and protected side of the levee. Depth, thickness, and material properties of various soil layers are key factors affecting underseepage that can produce sand boils potentially leading to internal erosion of the levee foundation. Many of these reset sites would require berms to force seepage water beyond the point where it might influence the levee. This required investigations into borrow pits to confirm the suitability of the material for use in the construction of these berms. In less than eight months, District crews had gathered all but a small portion of this data, 20 sites stretching from Francis, Mississippi south to Lake St. John in Louisiana.

The Vicksburg District is not the only District within the Corps that reaps the benefits of the efforts of the geodata section's crews. In 2011, the drill crew was dispatched to Fargo to face the North Dakota winter as they gathered foundation information for the Fargo-Moorhead Metropolitan Flood Risk Management Project. Despite freezing temperatures that affected equipment as much as the crew, they were able to provide an invaluable resource to the St. Paul District, while exemplifying the Corps' regionalization successes.

From weather to equipment failure to the basic perils of working outdoors, being part of the Vicksburg District drill crew requires diligence, expertise, and a certain "iron man" mentality to perform to the standard required by the Corps. While they may perform a number of services to the nation such as rehabilitating relief wells for the Fort Worth District, or performing Vane Shear testing for New Orleans; this team is first and foremost-drillers. Even with the finest designers in the world, the first step toward a successful infrastructure improvement is behind the rig, throwing mud and sweat. ◀



*The drill crew breaks down 60 feet of drill rod to mobilize to next boring site.*



**District archaeologists  
assist with reconstruction  
of 2,000-year-old  
American Indian mound**

By Sarah Koeppel  
Photos by Tommy Jones, park ranger

## PROJECT

In 2009 the purchase of one acre of land in Bossier Parish, Louisiana provided more than access to a boat launch for the Vicksburg District. Sitting atop that property was the remnants of a 2,000-year-old American Indian mound. First documented in 1953 by Robert L. Fulton of the University of New Mexico and Dr. Clearance H. Webb of Louisiana, timber activities, site looting, and erosion had badly damaged this once 10-foot-tall, 80-foot-wide oval shaped mound.

District archaeologist Sarah Koeppel, working with Jeff Girard of Northwestern State University, regional archaeologist for the Louisiana Office of Cultural Development, Division of Archaeology, regulatory and operations, began contacting federally-recognized tribes. These tribes had an interest in the District's undertakings to determine which group should be consulted on the future of the mound. Robert Cast, Tribal Historic Preservation officer, and Bobby Gonzalez, Native American Grave and Repatriation Act coordinator for the Caddo Nation of Oklahoma answered the call purporting ancestral ties to the area. (The Caddo traditional homelands were located in western Arkansas and Louisiana and eastern Oklahoma and Texas prior to European contact in the 16th century.) Consultation officially began in 2010 among the Vicksburg District, Caddo Nation, and the Louisiana Division of Archaeology. All parties involved agreed that the mound was significant and needed to be stabilized and protected.

In July 2011, rangers Tommy Jones and Randall Bordelon, and District archaeologists Sarah Koeppel, Rodney Parker and Jennifer Ryan met Jeff Girard and several volunteers for fieldwork to ascertain the amount of damage the mound had sustained over time. Remaining sensitive to the Caddo Nation's requests and the District's desire to disturb the mound as little as possible, excavations were minor. Several historic and prehistoric artifacts were found and organic material was collected and sent to a laboratory for Carbon-14 dating. Unfortunately the sample was from more recent occupations in the 1900s, or burnt tree roots, and was unable to provide dating information of the mound. However, past excavations and artifact analysis from the 1950's era indicated that the mound was built around the early and middle Woodland time period (200 B.C. – A.D. 500).

*Pictured on left is the reconstructed mound that is now protected by a four-foot-tall fence and is available for public viewing.*

After excavations concluded, approximately 500 cubic yards of river sand was delivered to the site and gently placed on the eroding mound. A thick layer of geotextile/erosion blanket was placed atop the now reconstructed mound; rye and bermuda grass seeds were planted. In order to deter local off-road vehicle enthusiasts and curious neighbors from visiting the mound during reconstruction. A temporary wire cable was placed at the only entrance with a sign indicating the area was federal property.



*District Archaeologist Jennifer Ryan, rangers Jones and Bordelon excavate a test unit near the mound with two volunteers.*



*Trees surrounding the mound were cleared by hand; and fill systematically was placed atop the mound to avoid disturbing the contents.*

In January 2012, a four-foot-tall fence was installed around the mound and a permanent wire cable was placed

*(Continued on page 15)*

## 2012 SAME/ARMY ENGINEERING AND CONSTRUCTION CAMP

By Henry Dulaney  
Photo by Alfred Dulaney



The tenth annual Engineering and Construction Camp was held in Vicksburg, June 17 - June 23. As in the previous nine years, this one week program was sponsored

by the Society of American Military Engineers and was supervised by professional engineers and volunteers from engineering organizations in the lower Mississippi Valley.

The campers were housed at the Mississippi Army National Guard 168th Engineer Brigade Headquarters. Although the 168th has been involved since the first year of the camp, this is the first year that the campers were housed at their facility. This year's camp hosted forty students from Alabama, Illinois, Louisiana, Maine, Maryland, Mississippi, New Jersey, New York, North Carolina, Pennsylvania, Puerto Rico, South Carolina, Tennessee, Texas, and Virginia.

The Engineering & Construction Camp is designed to provide high school students with an excellent opportunity to gain hands-on experience in engineering and construction skills in Vicksburg's wide-ranging engineering community. The campers, consisting of 14 girls and 26 boys, were exposed to various activities to provide insight into available career choices in the fields of engineering and construction. Topics covered in this year's curriculum were various fields of engineering: civil, environmental, electrical, mechanical, geotechnical, river, and military; and geographic information systems, and information technology.

The forty campers were divided into four teams of ten students each. The camp director, Mike Turner, chief of the District's technical support branch of Engineering and Construction Division, along with the camp counselors, known as pilots and firstmates, led the students during the week-long journey into the field of engineering. The teams were scored on each activity for accuracy and team spirit. The winning team members were awarded a Northface backpack.

The campers not only worked hard on the engineering activities, but they also engineered some fun during the week. They participated in a Mardi Gras-themed jambalaya

party, a swim party cookout, a college themed bowling night, a survivor type activity, and a luau.

The camp fee was \$50, with the operating cost of the camp being about \$350 per camper. The camp relies heavily on the volunteer efforts of those associated with the camp to decrease costs. The funds for the camp were provided by contributions from individuals, Society of American Military Engineers (SAME), sustaining member firms, SAME posts, and other professional societies. The local engineering community all pitched in to make this camp affordable.

The 168th National Guard Engineer Group, the Vicksburg Warren School District, Entergy, the Engineer Research and Development Center, Mississippi Valley Division, Vicksburg National Military Park, Louisiana Department of Transportation, Mississippi State University's Center for Advanced Vehicular Systems, Mississippi Materials, Nissan America, and the Vicksburg District, each played an active role in the planning and execution of the camp.

The parents of the campers could stay abreast of the week's activities by visiting the camp's Facebook site. The photos on the site were updated daily. The camp's staff received calls and e-mails expressing appreciation for the impact that the camp had on the campers. They were also impressed with the insightful words of Major General John W. Peabody, Commander of the Mississippi Valley Division, who was the guest speaker at the graduation ceremony and Lieutenant General Thomas P. Bostick, Commanding General of the Corps of Engineers, who spoke during the luncheon on the Motor Vessel William James. The staff

*(Continued on page 15)*



*Pictured above are students, sponsors, and instructors of the 2012 camp.*

## Trust Your Instincts

We rely on our senses every day of our lives. If a behavior or activity makes you feel uncomfortable, report it!

Here are some examples of suspicious activities reported by concerned individuals that saved lives:

*A video store clerk saw anti-American material on a DVD he was asked to copy. Police captured and arrested individuals planning an attack against a military installation.*

**If it doesn't LOOK right, report it!**

*A grandmother smelled bad odors from the neighboring apartment and noticed that the empty apartment was frequented by various people. Police discovered a poison gas factory.*

**If it doesn't SMELL right, report it!**

*Residents were concerned with a person's threats of violence. Police captured and arrested a group planning a subway attack.*

**If it doesn't SOUND right, report it!**



## What Should I Report?

Give as many details as you can. Here is a checklist to help you.

1. The date and time.
2. Where it happened.
3. What you witnessed.
4. A description of who was involved
  - Male or female?
  - How tall?
  - Build?
  - Hair color, skin color, age?
  - English speaking or another language?
5. Was there a car? Note the license plate number.
6. Have you seen this activity in your neighborhood before?

## How Do I Report?

There are [three] ways to make a report:

- ★ Call [insert phone number]. An expert will answer the call and advise you.
- ★ Call your local military police station [phone number] and make your report to the desk officer.
- ★ In an emergency call [local hotline]

All information will be kept confidential. Information submitted will be carefully assessed and, if warranted, investigated by trained investigators. All information gathered and all investigative activity will be subject to strict policies designed to protect the privacy and civil liberties of American citizens while protecting our Nation from terrorism.



**A Simple Observation**  
A Single Report can lead to actions that may STOP a terrorist attack

THINK ABOUT THE POWER OF THAT. THE POWER OF iWATCH ARMY.

**See Something Say Something**

**SUSPICIOUS ACTIVITY REPORTING**

## What is iWATCH ARMY?

iWATCH, iREPORT, i KEEP US SAFE (iWATCH ARMY) is a community program to help your neighborhood stay safe from terrorist activities.

You and your fellow Army community members can report behaviors and activities that make you feel uncomfortable and do not look right (suspicious behaviors).

iWATCH ARMY is a program and partnership between your community and your local law enforcement.

iWATCH ARMY asks you to report behavior and activities that are unusual or seem out of the ordinary.

## Why Report These Behaviors and Activities?

It is your awareness reported to local law enforcement that can help predict and prevent attacks before they happen.

Since 9-11, we can and must work together to prevent future attacks.

It is always better to report suspicious behaviors than to refrain from doing so.

The iWATCH ARMY program is about behaviors and activities, not individuals.

## What Activities Do I Report?

Here are examples of behaviors and activities to report:

- ★ People drawing or measuring important buildings.
- ★ Strangers asking questions about security forces or security procedures.
- ★ A briefcase, suitcase, backpack or package left behind.
- ★ Cars or trucks left in No Parking zones in front of important buildings.
- ★ Intruders found in secure areas.
- ★ A person wearing clothes that are too big and bulky and/or too hot for the weather.
- ★ Chemical smells or fumes that worry you.
- ★ Questions about sensitive information such as building blueprints, security plans or VIP travel schedules without a right or need to know.
- ★ Purchasing supplies or equipment that can be used to make bombs or weapons or purchasing uniforms without having the proper credentials.

## Example Situations

*"There's a chemical smell coming from my neighbor's apartment."*

*"I saw someone taking measurements. I don't want to get them in trouble. What should I do?"*  
(This activity may be repeated at other locations and you may be reporting one piece of the puzzle.)

*"Maybe someone just forgot their briefcase on the bus."*  
(Do not check it yourself. It may be a test.)

*"I saw someone watching our offices, and the next day my co-worker was asked a lot of questions about our building by someone else."*  
(Do not check it yourself. It may be a test.)

Unsure what to do?  
Let the experts decide!

## Important Places to Watch

- ★ Unit Headquarters
- ★ Installation access points
- ★ Religious facilities
- ★ Amusement parks
- ★ Sports/entertainment venues
- ★ Recreation centers, fitness facilities
- ★ Barracks, lodging facilities
- ★ Mass gatherings—parades, fairs, etc.
- ★ Schools, libraries, day care centers
- ★ Hospitals
- ★ Commissary, PX, gas station, bank
- ★ Public transportation



# Lower Mississippi River Museum and Riverfront Interpretive Site is now a reality

By Mike Renacker

Photos by Alainna O'Bannon and Alfred Dulaney



*Front exterior of Museum.*

*Guests will have the chance to 'take her down the Mississippi River', thanks to our boat simulator.*

For many of us here at the District, we understand how the Mississippi River levees work, however, explaining their role within the MR&T system is a little more complicated. Trying to tell the story to the public can become even more confusing. As we know, the system is much more than just levees. Along with a strong levee system, the MR&T features channel improvements, basin improvements, and environmentally sustainable projects. Together, they create the most comprehensive and effective system the Mississippi River Valley has ever seen. Describing it to the public definitely takes more than just sound bites; it requires an educational approach.

This is the primary function of the Lower Mississippi River Museum and Riverfront Interpretive Site (LMRM).

The museum, first authorized in 1992, began to formalize after 2000, when further authorization and funding became available. Many District team members worked behind the scenes to design and develop the plans and specifications. For the public, the project would begin to come to fruition on September 25, 2008. That's when the Motor Vessel Mississippi IV was transported from the Yazoo Diversion Canal, down Washington Street, and to her permanent destination. The 1,450-ton, 218-foot tugboat was the flagship of the Mississippi River Commission from 1961 until 1993. Now, having been removed from water to land, it is a major museum exhibit.

"Moving the vessel was phase one of the Corps' three-phase plan to construct a facility that will promote

# PROJECT

an understanding of the river and the Corps' role in developing and managing the Lower Mississippi. This was the Mississippi River Commission's first diesel powered flagship. Motor Vessels I, II, and III were all steam powered," said Tommy Hengst, then senior project manager.

Now, visitors can board the Motor Vessel Mississippi IV and go back in time, seeing her as she was when she was in operation. Guests can learn about the boat, the people who served

her, and they will have the chance to 'take her down the Mississippi River', thanks to our boat simulator.

In addition to experiencing virtual tours or just reading about the river, visitors can actually step inside the Mississippi River main channel – at normal flow or at flood stage, thanks to the Engineer Research and Development Center's (ERDC) river flood model located next to the main building. As part of a cooperative effort between the District and ERDC,

modelers took the District's original ideas and created a scaled model of the main channel between Greenville and Vicksburg. The model's purpose is to provide a better understanding of how the river reacts within the Mississippi River levee system. It is also a way for visitors to get their feet wet, walking and playing in the model.

The overall goal of the LMRM is to provide visitors with the best possible entertaining experience while providing the needed education regarding life on the river. Each display is unique, covering a variety of topics on river history, Corps history, and flood risk management. The District's design and construction teams have worked extremely hard to make sure that children of all ages will not only leave the museum with a better understanding of the river, but continue to revisit the site over and over again. In the end, this project meets the needs of its designers, the public, and all of us who assisted with making it a reality. ◀



*Mike Renacker, senior project manager, discusses the museum with the media.*



*Exterior landscaping.*



*Alainna O'Bannon, design team member, issues museum brochure to Maj John Tucker, Deputy Commander for the District.*

# LOWER MISSISSIPPI RIVER MUSEUM AND

Photos by Alfred Dulaney and  
Alainna O'Bannon



# RIVERFRONT INTERPRETIVE SITE



# Ol' Man River is challenging ... again

By Shirley J. Smith

Photos by Richie McComas, Steve Coleman,  
Freddie Pinkard, and Charles Stokes

Within the Corps, all team members work for a common cause—accomplishing the Corps' missions. Sometimes though, accomplishing those missions can present challenges – just like Ol' Man River doing it again.

Unlike the current river conditions, during the spring and summer of 2011, the Mississippi River surpassed all previous flood levels, almost a foot higher than had ever been recorded. During the flood of 2011, the most pressing needs in the Vicksburg District involved saving lives and properties, building sand berms and relief wells, or both.

This summer, the pressing needs were quite the opposite: Lives were not at risk and properties were not flooded; however, transporting commodities along the river was challenged due to record low river levels.

The spring and summer of 2012 were dry seasons with little or no rainfall for weeks, more than a month. Working around the clock, five dredges directed by the Corps battled extreme low-water conditions along the Mississippi River to keep commercial navigation moving on America's super highway.

With dredges moving rapidly from one trouble spot to another to keep up with dynamic low water operational demands, the Corps also worked very closely with the

navigation industry and the U.S. Coast Guard to communicate concerns, groundings and changing conditions to avoid accidents and river closures.

Based on average stages on the Mississippi River at Vicksburg from 1941 to 2011, the river is now reaching its "dry or low period". The average stages along the river are lowest September through October. The low average stage at Vicksburg is about 8 ft on the gage it has been below that since mid-June.

During the past six-month period, which includes a "wet period" March through June, the Lower Ohio River Basin, which is the largest contributor for the Lower Mississippi River Valley, has received approximately 25% of the rainfall that would normally fall based on daily average rainfall totals from 1971-2000.

The same was true for the Upper Mississippi and Missouri rivers during that period, with the area receiving less than 25% of normal rainfall.

The year 1988 has been the measuring point for low water since the river level dropped to -1.6 ft on the Vicksburg gage. This year has threatened that number but due to some rainfall the river rose approximately 3 ft in September. However, due to persistent dry conditions on the Ohio and Upper Mississippi rivers, the stages fell again and dropped below 0 ft.

The all time low record stage at Vicksburg occurred in February of 1941 when the river reached a stage of -7.0 ft. However, due to many changes that were made to the river



*Seven Oaks Dike 3, located at RM 523.3R approximately 6.5 miles downstream of the Highway 82 Bridge at Greenville.*



*A tow boat pushes barges on the Mississippi River near Greenville.*

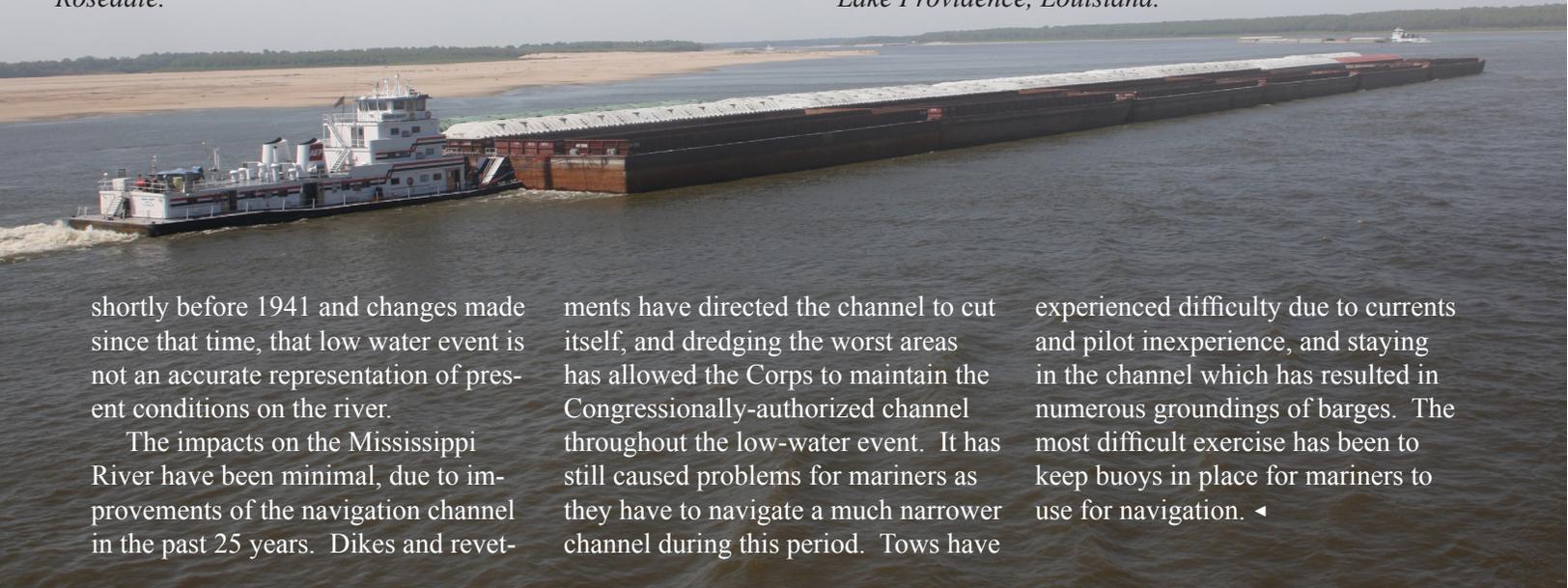
# PROCESS



*A tow navigates Victoria Bend, river mile 595, upstream of Rosedale.*



*The Dredge Jadwin dredges the navigation channel near Lake Providence, Louisiana.*



shortly before 1941 and changes made since that time, that low water event is not an accurate representation of present conditions on the river.

The impacts on the Mississippi River have been minimal, due to improvements of the navigation channel in the past 25 years. Dikes and revet-

ments have directed the channel to cut itself, and dredging the worst areas has allowed the Corps to maintain the Congressionally-authorized channel throughout the low-water event. It has still caused problems for mariners as they have to navigate a much narrower channel during this period. Tows have

experienced difficulty due to currents and pilot inexperience, and staying in the channel which has resulted in numerous groundings of barges. The most difficult exercise has been to keep buoys in place for mariners to use for navigation. ◀

*(District archaeologists concluded from page 6)*

at the entrance. Koeppl and ranger Jones will continue to work with the Caddo Nation and the Louisiana Division of Archaeology on the final stages of this project, including a nomination to be placed on the National Register of Historic Places. Public education is key to the future protection of this site. Signage telling the story of the peoples who occupied the area as well as reminders of federal laws associated with illegal digging on federal property

will be created through further consultation. Additionally, educational materials will be displayed at the Bayou Bodcau field office.

Although the Corps is usually not involved with mound reconstruction, with the help of dedicated personnel, the expertise of Girard, and successful consultation with the Caddo Nation, Bellevue Mound will be protected and available for future generations to enjoy. ◀

*(2012 SAME/Army Camp concluded from page 8)*

is dedicated to making the camp a success every year so that information on the field of engineering is available to the students, thus enhancing their knowledge of informed career choices. This camp also aids the field of engineering which is a critical need for our nation's prosperity and defense.

The campers all said that the camp involved more than they expected. ◀

# District celebrates annual Founder's Day

By Shirley J. Smith  
Photos by Alfred Dulaney

Many events, changes and significant contributions have impacted the building of the Vicksburg District during the last century. A video depicting those events, changes, and significant contributions began the District's eighth annual Founder's Day program.

Following the video, Kendall Smith, hydraulic engineer (E&C), welcomed everyone to the ceremony. District Commander, Col Jeffrey R. Eckstein, made opening remarks by stating that the ceremony is due to the value the District adds to the Corps and the Nation. He stated that what makes this worthwhile is the people. He recognized the retirees and stated, "Some of you never leave because you stay connected in some way." To the other team members he stated, "I appreciate what you all do whether you have been here 50 years or a couple of years."

Following the Town Hall Meeting the Length of Service Awards were presented to those team members having 20, 25, 30, 35, 40, and 50 years of service.

These individuals were recognized as having played integral roles in shaping the District into the premier organization it is today, and the proud tradition on which it stands.

"Over the years, specific missions and roles changed and each change was in some ways a rebirth of the District. It is important to remember that individuals, people, led those changes. It is after all, people, not machines, not projects, not contracts, lakes or dams, but people, who build the levees, master the motor vessels, meet the visitors and lead and implement changes. Today we celebrate not only our first beginnings, but our ever changing missions and the people who were responsible then, and now, for the building of this



*Pictured from top to bottom are Length of Service Awards for 20, 25, 30, 35, 40, and 50 years of service.*



## PEOPLE

great District,” stated Ben Robinson, a project manager (PPMD).

Team members graduating from the Emerging Leaders Program, and the Vicksburg District Leadership and Development Program (VLDP) were also recognized. Emerging Leaders graduates were Cindy Mathes and John Wilburn. VLDP graduates were Tonya Acuff, Rich Feibelman, Ella Lewis, James McRae, Dereck Redwine, Ben Robinson, Kendall Smith, Shana Thomason, and Nita Woodson.



*Pictured with COL Eckstein are Emerging Leader graduates John Wilburn, left, and Cindy Mathes, right.*



*Pictured with COL Eckstein are VLDP graduates left to right Nita Woodson, Shana Thomason, Kendall Smith, Ben Robinson, Dereck Redwine, James McRae, Ella Lewis, Rich Feibelman, and Tonya Acuff.*

Team members recognized for receiving National Awards were Henry Dulaney-Black Engineer of the Year for Career Achievement; Ron Goldman-USACE Engineer of the Year; and Chris Koeppel-2011 Planner of the Year Award.

The Modeling Mapping and Consequences (MMC) Production Center Team received recognition for exceptional innovation, creativity and effectiveness for the MMC Production Center’s public inundation map products and

web viewer tools. The team includes Kathy Breaux, Wesley Crosby, Coral Cruz, Phil Dye, Keith Flowers, Dave Johnson, Richie McComas, Robert Simrall, Drew Smith, John Smith, Michael Sorrels, Ben Stubbs, Cory Winders, and Joey Windham.



*Pictured is the Modeling Mapping and Consequences (MMC) Production Center Team.*

C. C. Hamby, retired chief of design branch of Engineering Division, was inducted into the Gallery of Distinguished Employees. (See related story on page 17).

At the conclusion of the program, a cake-cutting ceremony was held in honor of the District’s birthday. The cake-cutting was led by Col Eckstein and the least tenured employee, Linda Mordecai, and a retiree, Bobby Fleming. ◀



## District inducts new member into Gallery

By Shirley J. Smith  
Photos by Alfred Dulaney

At its recent Founder's Day Program the District inducted one of its former team members into the prestigious Gallery of Distinguished Employees.

Clifton Charles Hamby, III ("C.C."), retired chief of the design branch of Engineering Division, was the 2012 inductee.

Hamby's career spanned more than 35 years, and 34 of those years were spent working in Engineering Division at the District. His career began in 1972 as a civil design engineer at the Waterways Experiment Station; in 1973 he transferred to the structures section of design branch, Engineering Division, at the District.

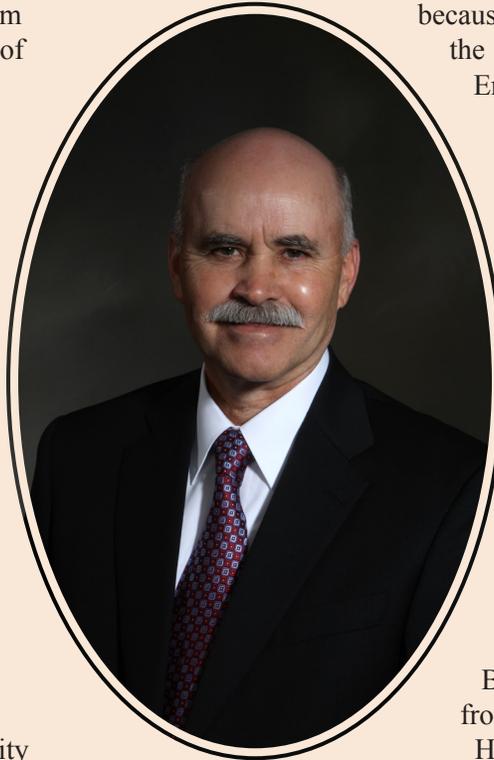
In 1983 he was selected to serve a dual assignment as assistant chief of the structures section and technical coordinator specialist for the Red River project. He served in this capacity until 1988 when he was promoted to chief of the navigation structures section. In 1992, he was

selected assistant chief of the design branch and because of his technical expertise was voted the 1996 Society of American Military Engineers' Engineer of the Year. In 2003 Hamby was promoted to chief of design branch, a position he held until his retirement in 2007.

Throughout his career with the Corps Hamby was a valuable member of the Vicksburg District team. He exemplified the Army values in his approach to solving problems and in working with others on the District team. He was a role model and mentor to other engineers. He continuously demonstrated his personal character, integrity, and leadership abilities throughout his career.

A native of Grenada, he earned his Bachelors Degree in civil engineering from Mississippi State University.

He is married to the former Bettie Sue West, and they are the parents of five children.



*Henry Dulaney, chief of Engineering and Construction Division, congratulates Hamby.*



*Hamby and COL Eckstein admire the new photo on the Gallery Wall.*

## USACE selects Vicksburg District team member Engineer of the Year



*Ron Goldman*

**By Shirley J. Smith**  
**Photo by Alfred Dulaney**

The U.S. Army Corps of Engineers' (USACE) Headquarters, Washington, D.C., recently named Ronald C. Goldman the 2012 USACE Engineer of the Year. This award is based upon nominee's engineering achievements relating to design, construction, environmental, research, contributions, innovations, successes, engineering leadership and other notable achievements.

Goldman is director of the Modeling, Mapping and Consequences Production Center (MMC) at the USACE Vicksburg District, which he established in 2009. He has advanced USACE capabilities not only through technology advancements, but also through his innovative and strategic vision. He has since developed state-of-the-art technologies, standards and processes that are used throughout USACE. This implementation, and success, has led to partnerships with external agencies that include the Department of Homeland Security, Federal Emergency Management Agency, National Weather Service, and the United States Geological Survey.

As a registered professional engineer, he supports the en-

gineering vocation by actively sharing innovative ideas and development strategies at professional conferences. He regularly serves as an advisor and educator at local, regional and national conferences. Goldman and the MMC joined forces with USACE Hydraulic Engineering Center in order to customize advanced training to increase USACE modeling core competencies. He has elevated the MMC as a reliable center of excellence that the Corps and outside agencies can depend upon for professional services and products. The Vicksburg District's MMC Production Center has increased supported core competency development for more than 120 hydraulic engineers, geospatial information system professionals, and economists throughout 22 USACE districts.

A native of Philadelphia, Goldman earned his Bachelor of Science Degree in civil engineering from Mississippi State University, and is a Registered Professional Engineer in the State of Mississippi. He is an active member of Bowmar Baptist Church, a member of the Chi Epsilon Honor Society of Engineers, and the Vicksburg Post Society of American Military Engineers.

He and his wife, the former Rita Dickinson of Carthage, are the parents of two daughters, Heather Hood of Southaven and Holly Porter of Vicksburg.

## Corps Headquarters selects Koepfel Planner of the Year



*Chris Koepfel*

**By Shirley J. Smith**  
**Photo by Alfred Dulaney**

District team member Christopher Koepfel recently received the Planner of the Year Award. The Director of Civil Works established a U.S.

Army Corps of Engineers (USACE) "Planning Excellence Award" to provide honorary recognition to an outstanding USACE District employee in a professional planning position.

This award is designed to recognize an individual's contributions to advance state-of-the-art practice of civil works water resources planning. The award recognizes innovation, analytical sophistication, and creativity in the development of a planning product that achieves the principles of the Civil Works Strategic Plan. The award is a plaque signed by the Director of Civil Works that recognizes the "Planner of the Year."

Koepfel was nominated for his work at the Multi-Agency

Interpretive Center in Rolling Fork. His selection for the award was based upon his collaboration and consultations with the community, stakeholders, federal and state agencies, and federally recognized tribes to complete a signed Memorandum of Agreement (MOA). The MOA provided a timely schedule to meet established project milestones with Koepfel's leadership in the archaeological investigation.

He was nominated by the chief of the Regional Planning and Environment Division South of the New Orleans District. Nominations from USACE Divisions were reviewed by a committee consisting of up to five members of senior planning supervisors or senior policy advisors within the Corps Headquarters of Civil Works.

At the District Koepfel serves as chief of the Upper Delta environmental planning section of the Regional Planning and Environment Division and supervises a multi-disciplinary team of environmental specialists to provide environmental analysis and clearance for civil works projects.

A native of Memphis, Tennessee, he is married to the former Sarah Younker of Evansville, Indiana, and they are the parents of two children.

## Modeling branch gets new chief

By Shirley J. Smith

Photo by Alfred Dulaney



Joey Windham

Vicksburg District team member Joey Windham was recently selected as chief of the modeling branch of the Modeling, Mapping and Consequences Production Center (MMC).

As chief of the branch Windham will be responsible for the overall management and coordination. He will also serve as senior technical reviewer for all hydrologic and hydraulic engineering products produced by MMC. The MMC Production Center is a national center of expertise charged with developing hydraulic engineering models, inundation maps, and consequence estimations to analyze risk and reliability for the Corps' inventory of dams and levees.

His previous assignment was hydraulic technical lead for the MMC providing technical expertise in hydraulic numerical modeling for multi-dimensional and hydrodynamic applications and hydraulic engineering associated with infrastructure risk management.

He began his career with the Vicksburg District in 2003 in the hydraulic engineering branch of Engineering Division.

Windham is a Registered Professional Engineer in the State of Mississippi, and serves as student Outreach Chair for the Board of Society of American Military Engineers. He will be inducted as Diplomat, Water Resource Engineer in May of 2013 for the American Academy of Resource Engineer.

A native of Central, Louisiana, he earned a Bachelor of Science Degree in civil engineering from Mississippi State University, and a Bachelor of Science Degree in environmental biology from the University of South Alabama. He earned his Master of Science Degree in civil engineering from Mississippi State University.

He and his wife, the former Allyson Braud, are the parents of two children.

## Water control section gets new chief

By Shirley J. Smith

Photo by Alfred Dulaney



Michael Sorrells

Michael Sorrells, a civil engineer with Engineering and Construction Division, was recently selected as chief of the water control management section.

As chief of the section Sorrells will be responsible for leading the water control team in accomplishing the water control activities of the District. He has served as a team leader in the Modeling, Mapping and Consequences Center with responsibility for leading engineers from five other districts in completing dam failure analysis. He also served a six-month tour as a project engineer at Camp Adder, Iraq.

Sorrells began his career with the District in 2003 as a student aide in the hydraulics branch, and after graduating from college he became a civil engineer working in hydraulics in 2007.

He earned his Bachelor's Degree in civil engineering from Mississippi State University, and is a Registered Professional Engineer in the State of Mississippi.

He is the son of Darrell and Barbara Sorrells of Pattison.

## Lake Greeson hosts annual Fun Day at the Lake for 4-H members and others

By Marty Reynolds, Lake Greeson  
Photos by Robin Lammers

Personnel at Lake Greeson Field Office, Ouachita Project Management Office, and Narrows Power Plant recently hosted the annual Fun Day at the Lake for members and sponsors of the Pike County Chapter of the 4-H Club.

Representatives from the Lake Greeson Field Office, Ouachita Project Management Office, and Narrows Power Plant offered a variety of interpretive programs to 30 Pike County 4-H Club members and sponsors.

The 4-H Chapter in Arkansas is a youth development program conducted by the University of Arkansas, Division of Agriculture, and the Cooperative Extension Service. The mission of 4-H is to provide opportunities for youth to acquire knowledge, develop life skills, maintain positive attitudes, and practice behavior that will enable them to become self directing, productive, and contributing members of society. The Corps offers interpretive programs each year to 4-H Club members in Pike County, Arkansas.

The day began with a presentation by natural resources specialist, Marty Reynolds, about the history of Lake Greeson and Narrows Dam. Reynolds began by stating that the man, for whom the lake is named, Martin White Greeson, was born in 1866 in Clinton, Arkansas. Mr. Greeson later moved to the Prescott, Arkansas area, which is downstream of present day Narrows Dam. Prior to the completion of Narrows Dam, Mr. Greeson strived for 50 years to help find a solution that would alleviate flooding from the Little Missouri River. His initiative

and determination led to the construction of Narrows Dam and the development of what is now known as Lake Greeson. Construction began on Narrows Dam in April 1947 and Narrows Dam was dedicated in July 1951. Mr. Greeson passed away in 1949; in 1952 Congress named the body of water Lake Greeson for all of his efforts.



Left to right are John C. Shewmake, resident engineer; Martin W. Greeson, and L. E. Dixon, president of L. E. Dixon Company.

This historical presentation was followed by a demonstration of water safety devices that were included in water safety packets distributed to all participants. Water safety is among the highest priorities for the Corps.

The next tour stop was Narrows Dam. Jack Bennett, senior mechanic at Narrows Power Plant, conducted an informative tour of the dam and power plant, which was well received by the attentive group. His presentation began with an explanation of how hydroelectric power is generated, transformed, and distributed. Bennett emphasized the benefits of hydroelectric power from both an economical and environmental standpoint. He then led the group through the power plant explaining how each major component



Johnny Cantrell explains to students how to identify a Silverside Shiner.

works and how it is maintained. The primary equipment of Narrows Power Plant is three 8,500 kwh generating units with trash racks, penstocks, gates, switchyard, and control equipment. The group also toured the inside of Narrows Dam which included explanations on how a dam works. Narrows Dam is the only all-concrete dam within the Vicksburg District.

The final stop on the 4-H Fun Day agenda was a trip to the Parker Creek Recreation Area. Project biologist, Johnny Cantrell, provided two “hands-on” interpretive programs which included identification of forage fish, and the relationship of aquatic vegetation to fisheries. Cantrell’s primary goal was to explain forage fish identification and their importance to the eco system. A large net was used to seine fish for identification purposes. The majority of forage fish that were caught, identified, and released were silverside shiners (*Notropis candidus*).

Water willow (*Justicia Americana*) was the featured species of the aquatic vegetation discussion. Water willow is considered a non-invasive species on Lake Greeson, which grows fast in and out of the water, and provides excellent cover for fish and their fry, (Fry is a term used to describe young fish). In August of 2007 the 4-H group helped establish a bed of water willow in the Cowhide Cove Area of Lake

*(Continued on page 22)*

## Water safety goes first class

By Brian Westfall, DeGray Lake

The Corps' long-standing commitment to water safety has succeeded in reducing recreational related fatalities. Our commitment is primarily based on interpretive outreach and visitor assistance. During the initial years these efforts were led in large by Corps park rangers. Later, partners and volunteers joined the effort and the team reduced the number of fatalities from about 500 annually in the early 1970's to a much lower number today. However, fatality trends show that the water safety program has reached a plateau.

To reduce loses below the plateau level the Corps has re-affirmed its commitment to visitor safety. A renewed safety mindset encourages all Corps employees to promote water safety. The program emphasis has shifted towards a total team approach. Now, project delivery teams composed of rangers, public affairs, safety and real estate specialists work in conjunction with partners and volunteers to promote water wise education. The federal government's leave and earning statements now include a water safety message. Technology savvy Corps employees are utilizing social media venues to reach our customers.

An outstanding example of a very creative approach regarding a key water safety message, Life Jacket Wear, is a contribution made by Shana M. Thomason, workforce management support specialist at the Ouachita Project Management Office. With the installation of a new office postage machine, she recognized the fact that the system had the capability to upload various advertisement messages for print on outgoing mail. Thomason, a communications major and recreation/

tourism major, began her Corps career as a student aide at the DeGray Lake Field Office. She made a great contribution to the water safety program at DeGray Lake by writing articles, producing and recording public service announcements, and assisting with developing briefings and presentations.

"With our new postage machines, we found that we had the option to place ads on every piece of mail that goes out of our office. Some of the most common ads include the U. S. flag, the words URGENT, IMPORTANT, holiday scenes and messages. Why not a water safety slogan or logo?" asked Thomason. She contacted postage machine manufacturer, Pitney Bowes, and explained to them what her office wanted to do. From there, she uploaded the ad, received a proof, and upon approval it was downloaded to the Ouachita Project Management's postage meter. Overall, it was a very simple process.

Thomason stated, "An interesting aspect about postage ads is the potential number of contacts that one piece of mail can make. From the time a piece of mail leaves an office until it reaches its recipient 4-5 people may have seen the message. Sometimes it's the small things that can make the biggest impact."

"I once worked for a non-profit organization where we would mail thousands of pieces of mail monthly. When we had a special event or message, we would create an ad for our postage machine so that our message was one of the first things the recipients saw before opening their mail. It's a great eye catcher and basically free advertising as the cost is low,"



she stated. "It's a great way for us to spread the water safety message. We may never know how many people see it, but it's a small thing we can do that will hopefully make a big impact on someone, even if we never know it!" she added.

Manpower and budget restraints, along with increasing recreational use, offer considerable challenges for the Corps' water safety program. To reduce accidents and fatalities, we must have assistance from all Corps employees. Thomason's creative talents exemplify efforts that are needed to save lives on the water. ◀

*(4-H concluded from page 21)*



*At the Parker Creek Area Johnny Cantrell teaches students about how important Water Willow is to Lake Greeson.*

Greeson. The 4-H group assisted with planting water willow which was transplanted from DeGray Lake. Since that time subsequent plantings on Lake Greeson have greatly enhanced the fisheries habitat development program. water willow continues to thrive in areas such as Parker Creek where it was introduced in August 2010. ◀

## Arkabutla Lake waits on a normal recreational year

By Ernie Lentz, Arkabutla Lake Field Office

Photos by Rob Hoff

To peak interest, one can normally find numerous types of recreational opportunities at Arkabutla Lake. From mountain bike riding, horseback riding, and disc golf to fishing, boating, and swimming, usually the opportunities are endless. However, recent environmental conditions have been anything but normal.

For the past six years many of the recreational activities have been severely impacted by both the over abundance and lack of the precious commodity - water. Starting in 2007, Arkabutla Lake experienced a drought scenario that prompted the staff to close the designated swimming areas due to safety considerations. The beaches became unsafe because the water was outside of the prepped area and numerous underwater obstructions made it unwise to safely extend the designated swimming areas.

Years 2008-2011 resulted in high water events during the recreational season which caused the beaches and many other recreational areas and camp sites to be closed to the public because they were flooded. During these high water years, most of the areas remained closed long after the water receded due to the inability to clean debris and repair damaged areas because of the reduction in manpower and funding.

After the Great Flood of 2011, the Arkabutla Lake staff was anxiously anticipating a normal recreational year in 2012 with the beaches open and all recreational areas ready to once again receive the normal 2 million visitors an-

nually. But, in March 2012 the spring rains quit falling and the summer heat made an early appearance. On May 1, the lake was at 210.67 national geodetic vertical datum (nvgd), which is in line with the rule curve for the lake. Usually at this time a slow rise of the lake begins, nearing 220.00 nvgd (recreation pool) which normally occurs on May 15, just in time for Memorial Day. However, with no rain and a mandated minimum discharge of 50 cubic feet per second (cfs), the lake level dropped. The lower lake level not only closed all of the designated swimming areas but restricted boat access to the lake to two ramps, one at each end of the dam. The lack of water in the lake, while a fishermen's dream because it's easier to locate the fish, was a nightmare for recreational boaters.

Public safety announcements were immediately distributed to the local newspapers warning visitors about the hazards of recreational boating. Several of the Memphis, Tennessee, television

stations assisted in spreading the word about the low water circumstances.

Historically, the lowest recorded lake level for Arkabutla Lake was in November 1957 when the lake stage was recorded at 207.40 nvgd. Due to a period of 50 days with no significant rain, the area was more than 12 inches below the average rainfall; the lake stage reached its second lowest recorded level in history of 207.61 nvgd on June 29. Since that date, the area has, thankfully, experienced intermittent showers, not necessarily here at the lake but east of the lake in the main drainage area. This rainfall has allowed the lake to rise to 210.26 nvgd which is near the level when the recreational season begins.



*Vegetation grows in the lake bed at the Dub Patton Day Use area due to low water conditions at Arkabutla.*



*Hernando Point Beach was closed due to low water level.*

So, as the Arkabutla Lake staff begins planning for the 2013 recreational season, we are excited about the prospect of a normal recreational year with beaches open and filled with visitors, and a lake stage that is conducive to facilitate recreational boating. After all, as Alexander Pope stated, "Hope springs eternal." ◀

## District Field Offices & Services

**U.S. Army Corps of Engineers,  
Vicksburg District  
4155 E. Clay Street  
Vicksburg, MS 39183  
www.mvk.usace.army.mil  
email: cemvk-pa@army.us.mil**

Lake Ouachita (501) 767-2101  
Lake Greeson (870) 285-2151  
DeGray Lake (870) 246-5501  
Sardis Lake (662) 563-4531  
Arkabutla Lake (662) 562-6261  
Enid Lake (662) 563-4571  
Grenada Lake (662) 226-6391  
Bayou Bodcau (318) 322-6391  
JBJ Waterway (318) 322-6391  
Ouachita-Black Rivers (318) 322-6391

Aerial Photography (601) 631-5709  
Corps Wetland Permits (601) 631-5289  
*Apply, ask questions, or report violations*  
Contracting & Bids (601) 631-7706  
*Vendors, status of bids, specs*  
Community Support (601) 631-5223  
*Tours, speakers, volunteers*  
Historical Questions & Research (601) 634-7023  
*Mississippi River History Center*  
Real Estate Issues (601) 631-5220  
*Corps impacts to your property*  
Employment Questions (601) 631-5859  
*Vacancies, status, qualifications*  
Historical Photographs (601) 631-5021  
Environmental (601) 631-5410

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## Other Vicksburg Engineer/Federal Organizations

Mississippi Valley Division  
(601) 634-5760

Vicksburg National Military Park  
(601) 634-5760

Engineer Research and Development Center  
(601) 634-2504

U.S. Coast Guard Cutter Kickapoo  
(601) 636-8304

412th Engineer Command  
(601) 636-1686

U.S. Fish & Wildlife Service  
(601) 629-6607

168th Engineer Group  
(601) 313-5290

U.S. Army Recruiter  
(601) 618-1203

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