



US Army Corps
of Engineers®
Vicksburg District

THE Water's Fall 2010 Edge

Good Works

LiDAR Data

ERDC Develops Greenhouse Gas Collection Tool

The Water's Edge



US Army Corps of Engineers®

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

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**DeGray Lake Receives Good Works
Grant 16**

Commander's Corner

with Colonel Jeffrey R. Eckstein



Greetings and Happy New Year to All,

What a tremendous effort in the past fiscal year. We executed over \$240 million, awarded more than 1200 contracting actions, completed obligation of \$182 million of ARRA funds with more than 70 contracts this past year, and hired 126 new full time employees.

Some of our highlights included meeting all of our ARRA reporting requirements; supporting the tornado recovery operations in Mississippi; building the bench and exceeding our manpower goals; implementing regional approaches in Real Estate and Planning while moving forward with Engineering and Operations regional development; conducting our first Tribal Consultations in many years; exceeding the small business goals in all categories; and delivering our ViPER support mission for the Hurricane and Storm Damage Risk Reduction System. I look forward to another fantastic year with just as many accomplishments.

We have an updated Operations Plan that will assist us as we progress through the year. There were three themes within our plan for this year: development, regional outlook, and writing it down. Many of the metrics involved how we train our new folks, professionally developing them with challenging and rewarding assignments, and then maintaining their currency throughout their career. Contingency operations assignments, professional certification, membership in professional organizations, and a safe work environment lead to developing, sustaining and retaining our world class workforce. We also have metrics that look to the region. Our success depends on other Districts and how we get the mission accomplished. Whether it is doing appraisals in New Orleans or having external hired labor crews do work for us, we are part of a big team. We also have several tasks and metrics that get to writing things down. This goes from our individual development plans, our success stories for the media, communicating with our customers, or formalizing a process in the Quality Management System. We need to write it down so others can learn and develop.

This year's Leadership Development class is serving as baton holders for each of the supporting tasks. You can check them out on the Inet to hear them discuss their task. This is one aspect of gaining input from the District as well as developing our future. We have developed the supporting task so most apply to every Division within the District. In order to succeed, we will need everyone to do their portion.

I want to thank everyone for their outstanding support to the Combined Federal Campaign. Ramona Warren and all the volunteers did a great job. A big thank you and job well done to Jason Mothershed and David Tate for completing their tours of duty overseas. Tom Shaw (PPMD), and Cliff Geter (E&C), departed in October for their tours of duty, Ki-sha Craig (CT) departed in November for her tour of duty, and Jimmy Waddle, Chief of Operations Division, is scheduled to deploy before the Holidays. These individuals are true patriots and command our respect and appreciation.

2011 Vicksburg District Operations Plan Chart

TASK DETAILS (parenthesis captures MVD IPLAN metric that aligns with task)	METRIC CATEGORIES	METRICS (listing is only a sampling; not exhaustive)
1. Contingency Operations at Home or Abroad (1a.1, 1c.1) Task Champion: Jonathan Pennington Baton Holder: Cynthia Lewis	Overseas Contingency Operations Emergency Operations	3% of MVK Employees qualified and prepared to deploy at all times in FY11 (quarterly) Ensure all RFO/EFO team positions are filled and ready (quarterly).
2. Regional Interdependence and Collaboration (2a.1, 2a.2) Task Champion: MAJ McRae Baton Holders: Toni Lowe-Fisher, Adam Staples	Deliver Real Estate Regional Workload Regional Training Hydropower	Improve in-house usage of appraisals to 80% in FY 11 Support RPEDs Regional Planning Workload Management - 25% for FY 11 Meet Regional Engineering requirements in FY 11 - 25% Meet Regional Operations workload requirements in FY 11 - 20% (Hired Labor Goal-5% externally sourced) Train the trainer - offer 4 courses (in-house) in FY 11 Switch remote operation of Cannon Dam from Truman to Blakely
3. Increase External Collaboration (2b.1, 2c.1) Task Champion: Jacob Brister Baton Holders: Tony Lobred, Amanda Hanks	CW Customer Surveys Stakeholder Engagement Regulatory Customer Survey Congressional Responses Contractor Safety	Improve any Civil Works survey response below 4.0 received on the '10 surveys to 4.0 or above in 2011. Maintain an average of 4.5 on all Civil Works survey responses PMs, OPMs, REs, and others engage 100% of the Stakeholders quarterly (include pre-survey checks) Achieve feedback response rate of 35% monthly Achieve a monthly customer satisfaction rating of 3.9 or greater All Congressional Responses will have a response within 10 days of receipt 100% of contractors have been briefed on the MVK Safety Policies/SOPs annually
4. Build, Strengthen, and Sustain the Bench (4a.1, 4d.1) Task Champion: Tim Shows Baton Holders: Sandy Gerbitz, Jessica Strider	Certifications Training Professional Org. Participation Retention Employee Safety	Baseline employee certifications and establish appropriate targets (by NOV 2010). Reach target % of certification in each career program among eligible employees (by Sep 2011) Refine (by FEB 2011) and implement (by JUN 2011) new employee orientation process 98% supervisor participation in at least one professional organization by Sep 2011 (May 2011) 50% non-supervisor participation in at least one professional organization by Sep 2011 (May 2011) Develop and/or update IDPs for 90% of workforce (95% of updated IDPs fully executed). Increase participation in mentor program by 100 (by Sep 2011). 100% of injured employees are fully aware of employee medical options on the same day of injury.
5. Strategic Communications (4b.1, 4b.2) Task Champion: Kavanaugh Breazeale Baton Holders: Lee Grant, Pam Samuels	Publication Customer Safety Project/Activity Updates	Publish 15 media releases from existing articles in FY 11 Perform 8 courtesy Watercraft/boats inspections at MVK Lakes in FY 11. Increase number of press/media releases in FY 11 (10 per wk)
6. Disciplined Action in Utilization of Tools (4c.1, 4c.2) Task Champions: Barbara Petersen Baton Holders: Stacy Thurman, Andrew Strickland	QMS P2 Corporate Policy and Regulations	Input a minimum of 3 internal processes into QMS by each Division. Workload over/under resource report (+/- 5% by 30 Sept 2011) Identify and Revise top 3 regulations/policies (those requiring DE signature) in each DIV

Readiness Branch's role in 'from Good to Great'

By Ashley Ebersole

Whether you started with the Corps today or ten years ago, you understand that we accomplish our goals as a team. If it wasn't for the work that we do as a team there would be no accomplishment within the Vicksburg District, the Mississippi Valley Division, or the Corps world-wide.

At the Town Hall meeting on October 20th, 2010, the importance of our roles and supporting tasks for the FY 2011 MVK Operations Plan was expressed. The Ops Plan lays out the strategic process of accomplishing our goals as a District, and contributing to the MVD IPlan, and essentially the USACE Campaign Plan.

As our Commander, Col. Jeffrey R. Eckstein, stated that day, "If you don't understand your piece of the plan, we will never get to our goal." Knowing your individual role in achieving these metrics will determine whether our District succeeds, and whether the Corps progresses from good to great.

Here in the Emergency Operations Center (EOC), it is our responsibility to coordinate disaster preparedness work and emergency operations. Members of our team are constantly planning, evaluating, and preparing to meet the need for assistance during a time of crisis. That work has been designated within the Ops Plan as Task 1: Contingency Operations at Home and Abroad.

The metrics assigned to the readiness branch are not checked off when completed; they are a continual process of maintaining contingency operations. We are fortunate to work with Corps employees District-wide in order to meet our goals.

Our baton holder is Cynthia Lewis in the resource management branch. She works closely with the readiness branch to ensure these metrics are met, and those successes depend on you, the volunteers at home and abroad.

We coordinate both Overseas Contingency Operations (OCO) (Task 1 Topic 1) and Emergency Operations (Task 1 Topic 2). The metric of OCO is to have 3% of MVK employees identified and prepared to deploy abroad at all times in FY11. In order to meet

our goal (29 volunteers), we aim to: provide information on deployment and the process of volunteering; encourage supervisors to communicate with their teams in regards to deployment; and maintain an OCO recognition display board for those deployed.

Recently, we created an OCO Deployment Information brochure detailing the facts and benefits of deployment as well as steps to volunteer. This brochure is available in all brochure display cases at MVK and online at <https://kme.usace.army.mil/MVD/MVK/EM/default.aspx>.

In order to prepare those who have volunteered for deployment, our office does the following: establish and track the tasks required for deployment, assist volunteers with the process, coach supervisors on the approval process, and ensure that individual requirements are met. The EOC also provides weekly status reports on those deployed and the status of those volunteering.

The metrics for Emergency Operations at home include sustaining teams ready to deploy to the Emergency Field Office (EFO) and Recovery Field Office (RFO) in the event of a disaster. To have these teams ready to deploy we must lead supervisors to ensure all position requirements of their employees are met and report their progress monthly.

Are you an RFO/EFO team member? Are you current on a medical screening and immunizations? Have you completed your level one certification? Make sure your deployable status is up to date! If a disaster occurs, these are just some of the tasks that are required before deploying.

Our office has scheduled, and will participate in, at least six emergency response exercises (i.e. Hurricane and New Madrid Earthquake exercises) in the next year, to make certain we are ready to respond. In addition to practicing response efforts, we will also contribute reports to the Quality Management System (QMS) in order to capture current knowledge of emergency management practices.

These are the accomplishments we are working towards in the EOC. We are aspiring to the USACE

(Continued on page 14)

Engineer Research and Development Center develops Greenhouse Gas accounting and reporting tool

By Shirley J. Smith

Photo by Kavanaugh Breazeale

Earlier this year, President Obama announced a federal government-wide target of a 28 percent reduction by 2020 in direct Greenhouse Gas (GHG) emissions, and a target 13 percent reduction by 2020 in indirect GHG emissions. Benefits resulting from this Order could create clean energy jobs, and reduce pollution. Due to the fact that the federal government is the single largest consumer of energy in the United States, President Obama signed Executive Order 13514 which commits the federal government to leading by example toward a clean energy economy. This has resulted in the government-wide requirements for measuring and

reporting greenhouse gas (GHG) emissions associated with federal agency operations.

In order to meet the requirements of EO13514, Corps Headquarters (HQUSACE) elicited the Engineer Research and Development Center (ERDC-CERL) to develop a reporting tool. This past summer the Vicksburg District performed a “beta” or pilot test of the tool. The tool helps to gather and consolidate information on energy and water usage at Corps facilities such as pumping plants, locks and dams, recreational areas, field offices, and waste water treatment plants. The tool also tracks GHG emissions generated by official

travel and employee commuting to comply with the requirements of EO 13514.

John Coho, the USACE Senior Advisor for Environmental Compliance stated: “Vicksburg District stepped-out in partnership with HQUSACE and ERDC-CERL to conduct a field-level trial evaluation of training materials and the USACE-developed energy and water data collection and reporting tool. Vicksburg personnel engaged quickly and effectively, providing detailed feedback to HQ USACE within less than a week. Vicksburg’s feedback enabled HQUSACE and ERDC-CERL to substantially improve both the training and the data collection tool, ultimately reducing the potential for questions and confusion and helping us to better serve the Corps. By voluntarily engaging early and effectively, Vicksburg District did a great service for all of USACE as we strive to achieve the USACE Sustainability goals for energy, water, petroleum and greenhouse gas reduction.”

The Corps will develop baseline usage for the year 2008 which will be compared to the 2010 usage in order to determine the Corps’ status with regards to meeting the reduction goals. Reporting will continue annually so that the Corps’ progress in meeting the 2020 reduction goals can be assessed. ◀



Mike Seal and Camille Gray with Vicksburg District’s Operations Division, look at data from craft tool.

District improves topographic mapping with

By David Longmire, contract writer
Image rendering by Photo Science

The Vicksburg District's Delta Light Detection and Ranging (LiDAR) Project is scheduled for completion in December 2010. This project will provide the Corps with an updated aerial survey that will dramatically increase the accuracy of the District's topographic quad maps. The maps will increase from 50-feet to one-foot accuracy over the 14,000-square-foot project area.

"The primary project products include an elevation model in a standard LiDAR LAS format along with true color digital orthophotos. Ancillary products include DTMs and DEMs in multiple formats, contours, and metadata," said Mark Meade, chief technical officer of Photo Science Geospatial Solutions, Lexington, Kentucky. Photo Science Geospatial Solutions is one of two contractors that flew the 9.3-million-acres project area from Memphis to Vicksburg including the Mississippi River and the Corps' reservoir lakes and tributaries.

"This project will greatly improve the accuracy when you are looking at one-foot increments versus 50-foot increments in ground terrain," said Rick Shelton, LiDAR project manager. "The Corps is going to use this data for numerous types of drainage analysis and hydraulic modeling. There are a lot of our customers, such as the U.S. Geological Survey, the U.S. Department of Agriculture, the Mississippi Department of Environmental Quality and the Mississippi Levee Boards, who are interested in this information because of the depth, quality, and accuracy of the project data," Shelton said.

LiDAR is an optical remote sensing technology used in aerial surveying and 3D mapping that measures properties of scattered light to map the Earth's terrain. The range from the aircraft to an object on the ground is determined by measuring the time delay between transmission of a pulse and detection of the reflected signal. "When you are shooting LiDAR you are getting a light image back," said Elijah Hunt, team leader for the District's technical data section CAD

mapping. "The LiDAR almost looks like a picture, but it is individual points that are so dense they look like a picture. The first post is when the LiDAR shoots the ground and the last post will show the tops of trees and buildings, then the last post can be stripped and only the ground elevation will show," Hunt said.

The Delta LiDAR Project was flown in two phases. The first phase, flown by Photo Science, included 6.3 million acres of mainly flat delta agricultural land, while phase two, flown by Optimal Geomatics, Huntsville, Alabama, included approximately 3 million acres plus additional acres of hilly terrain and included the Corps' reservoir lakes. The Corps has received all the data from the Phase one contractor and should have all of phase two data by the end of November 2010.

"The Hill area contractor was given until September of this year to have completed the photography and LiDAR was given an additional 90 days after that to start making deliveries of the data to us. We are in that delivery process right now," Hunt said. "They have begun delivering data to us and that data is so massive that our process of reviewing it to make sure that they met the specs of the contract is now in process, and it is a tedious one because of the size of the data. Even though the hill data is of a smaller area, because of the one-foot contour intervals, processing the contours is taking more time because there is more relief than in the delta areas. It's taking more time, computer power and man power. From my review process to this point everything looks good, as good as what we saw during phase one," Hunt said.

Handling such massive amounts of data is no easy task explained Jack Smith, the District's GIS manager. "I'm in charge of managing the data on servers here and disseminating it out to the other agencies and the public. It is a very massive job. The phase one or 6.2 million acres is almost 7 terabytes of data for all the products and we are expecting the phase two data to be close to the same size. Even though it's a smaller area, it has more relief; so right now I am burning the data to hard drives for people in outside agencies.

Delta Light Detection and Ranging project

They send me a hard drive and I send it back with the data.

“We are working with the Mississippi GIS coordinated council who may possibly host some of this data, but our main thrust is the Engineer Research and Development Center (ERDC) lab at the Cold Regions Research and Engineering Laboratory (CRREL). CRREL is going to host the data on the Corps’ map public website. The public will be able to access all the different products from there,” Smith said.

“The Vicksburg District has done a number of LiDAR projects but this is by far the largest. Both of our contractors are very experienced in LiDAR and aerial

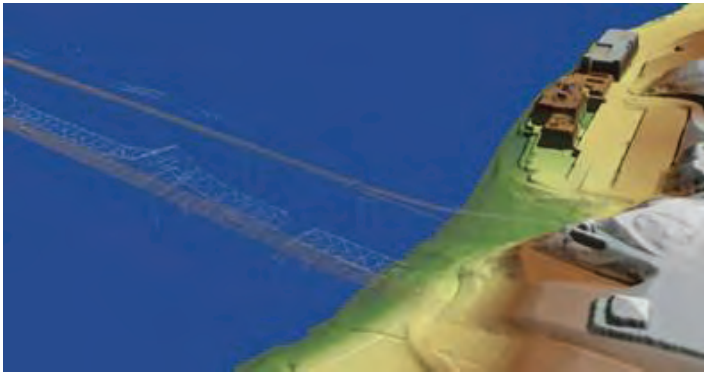


Image rendering showing the first return color shaded LiDAR data of the Mississippi River bridge at Vicksburg.

photography and have been doing it for a number of years. Both said that this is the largest project that they have ever done with this number of deliveries. It’s a massive project. So far the data is very accurate and everybody that we have talked to who has used the data is very pleased with it,” Hunt said.

“This project is among the largest ever undertaken by Photo Science. There were significant challenges with this project beyond just the scale. Land use, primarily farming, and prevailing weather conditions presented considerable obstacles to LiDAR acquisition,” Meade said.

“One obstacle to this LiDAR project has been the fact that LiDAR doesn’t penetrate high water,” said

Shelton. “We had high river stages in 2009 that limited the flight time. You can’t fly with too much foliage so you have to fly during the winter months; during 2009 to the beginning of 2010 we had high river stages. We needed river stages to be low so we could get the maximum LiDAR coverage of the terrain,” Shelton said.

“The biggest challenges for this project were weather and logistics,” Meade said. “LiDAR is best flown when the deciduous vegetation is free of leaves. For this project we had to carefully monitor the state of crops as well as trees and brush in the late fall, waiting until we had good visibility of ground through this vegetation. But we also had to be careful to acquire the data in times with no standing water or flooding in the project area as the LiDAR’s energy is absorbed by standing water or wet soils. This narrowed the window of opportunity to just a few months, typically in early to mid winter.

“By late winter and early spring we had significant rainfall and ground conditions that were too wet for acquisition. Any project that requires multiple aircraft for acquisition poses considerable logistical challenges. Safety is critical and therefore maintaining safe distances between the different aircraft that are flying at exactly the same altitude took careful planning. Also, keeping track of project completion was crucial in making effective decisions on where to deploy aircraft on a day-to-day basis,” Meade said.

“You could use this LiDAR data for a quick analysis of what a specific terrain might look like,” Shelton said. For instance, somebody asked me recently which way a road was going and where the low spot was in the road. Having access to this data I was able to quickly pull it up and did a plot of it and very quickly did a crude analysis of where the low spot was without having to send a survey crew out there. Obviously, for the final design we will send out survey crews. You can pick out very quickly where you need to concentrate your efforts,” Shelton said.

(Continued on page 11)

Bat friendly gate mine shafts installed on Lake Greeson's project owned lands

By Ned Hollenbach, Lake Greeson

It has long been known that the Southeastern Myotis, recognized as a species of concern in Arkansas, has used the cinnabar adits during the winter season, or hibernation roosts, for many years. These bats don't truly hibernate, because even during the winter they will leave the adits on warm nights. They typically hibernate during winter in dense colonies. Sometimes there may be 50 or more in a single square foot of adit ceiling. Other bats, such as the Eastern Pipistrelle, various salamanders, and other larger animal species also call these adits home.

To reduce human interference and predation by indigenous predators, the installation of bat-friendly gates at the Corps' Lake Greeson's project owned lands have restricted access. Budget packages in support of this project have been submitted in years past but were never funded. In 2009, Bat Conservation International, a group dedicated to studying and protecting bats, approached Lake Greeson's natural resources manager, Ned Hollenbach, in an effort to form a partnership with the goal of protecting the Southeastern Myotis on Lake Greeson's project owned lands. Lake Greeson straddles the most productive band of ore producing rock. While cinnabar production in this area ceased in the late 1940's, evidence of this activity still exists along the shorelines and hills of Lake Greeson's project lands.

Cinnabar, an ore of mercury, has long since been removed from the southern foothills of the Ouachita Mountains. Mining activity hit its peak in the late 1930's and early 1940's, and was principally located in central Pike County, Arkansas. Many old cinnabar mines are located on the southern half of the land adjacent to the lake. While all the miners are now gone,

the mines are far from abandoned. The mine shafts, or adits, as the horizontal tunnels are referred to, provide very stable environments with temperatures that remain relatively constant and are protected from the weather. These adits provide excellent habitat for a number of animal species, including bats.

Because there usually exists a large pile of mine tailings near the entrance of the adits, the location of the past mining activity is very easy to spot – especially during the winter months after the trees have lost their leaves. Many of the cinnabar mines are located near the shoreline, which provides easy access by boat. Most mine and cave dwelling animal species are not tolerant of human disturbance. The easy access from water means that these adits are visited fairly often by Lake Greeson boaters. Most times human visitors mean no intentional harm to the adit dwellers, but oftentimes mere human presence is enough to make the bats leave.

Mylea Bayless, conservation biologist and program coordinator, with Bat Conservation International, was confident, through a partnering effort; funds could be obtained to construct the bat-friendly gates over several of the old cinnabar mines entrances. A partnership was formed between Mylea Bayless, Bat Conservation International; Ned Hollenbach of Lake Greeson; Thomas Risch, Arkansas State University; David Saugey, Southeastern Bat Diversity Network; Blake Sasse, Arkansas Game and Fish; and Eric Britzke with the Corps' Engineer Research and Development Center (ERDC).

Bat Conservation International (BCI) drafted a proposal to gate the mine openings and submitted it to the Arkansas Game and Fish Commission in an effort to seek funding through the Arkansas State Wildlife

(Continued on page 21)

District selects Dulaney Chief of Engineering & Construction Division

By Shirley Smith

The District recently selected Henry Dulaney as chief of its Engineering and Construction Division.

Dulaney will be responsible for the planning and managing of all projects and design activities, and for providing technical engineering consultant and advisory services to and construction contract management for the Commander, and other technical divisions within the Vicksburg District. Leading a team of experienced professional engineers, scientific disciplines, technical support and administrative staff; he will also coordinate with other Districts within Mississippi Valley Division to manage

regional execution of engineering and construction work products.

Dulaney began his career at the Vicksburg District in 1986 as a design engineer. Prior to his current position he served as chief of the design branch.

A native of Vicksburg and a graduate of Vicksburg High School, he earned his Bachelor's Degree in electrical engineering, and a Master's Degree in engineering management from Mississippi State University. He is a registered professional engineer in the state of Mississippi.

He is married to the former Melissa Jordan, and they are the parents of five children.



Henry Dulaney

District selects Crawford for Strategic Planner position

By Alice Bufkin

Brian Crawford was recently selected as the strategic planner for the District. He will serve as special assistant to the Deputy District Engineer for programs and project management. He is responsible for managing the future directions, activities, and initiatives of the District.

His career with the Corps began in 2001, serving as system administrator in the information management division. Prior to his most recent selection, he was serving as computer-aided design (CAD) manager, where he developed and supported CAD solutions and other engineering applications for the District.

Crawford earned a Bachelor of Science Degree in computer engineering from Mississippi State University. He is a member of the Society of American Military Engineers, and serves on the Board of Directors of Central Mississippi Prevention Services. He is also a graduate of Mississippi Valley Division's Emerging Leaders Program.

A native of Vicksburg, he is married to the former Candi Perkins, and they are the parents of two sons. He is the son of E.J. and Jean Crawford of Vicksburg.



Brian Crawford

Hemphill Among 50 Leading Business Women in Mississippi

By Shirley Smith



Pat Hemphill

Pat Hemphill, assistant chief of planning, programs, project management division, has been selected as one of Mississippi's 50 Leading Business Women for the class of 2010. She was selected from a broad field of highly qualified nominees.

This recognition is sponsored by the Mississippi Business Journal and its sponsors. Pat was recognized at a dinner and an awards luncheon at Eagle Ridge Conference Center, Raymond. The Mississippi Business Journal will produce a special publication to honor the recipients.

Hemphill's duties at the Corps include long-range planning, management, and supervision of the District's Program and Project Management's business process functions, organization, and staff. Her responsibilities include participation in execution of the annual Civil Works Program, which averages more than \$300,000,000.

A native of Vicksburg, she earned her Bachelor of Science Degree in engineering from Mississippi State University, and has completed the Harvard Kennedy School Executive Education Program, Army Management Staff College.

Hemphill is a member of the Society of American Military Engineers, Chamber of Commerce, and is a registered professional engineer in the state of Mississippi.

The daughter of the late Peter and Rosielee Kent Williams, she is married to G. A. Hemphill.

Dirt flies at Meto Groundbreaking Ceremony

By Jim Pogue, Chief,
Memphis District Public Affairs Office

Preparing for the groundbreaking are left to right, Holly Porter and Tracy James.



"It's been a long time coming." That's how Bayou Meto Water Management District's (BMWMD) president, Gary Canada, opened the groundbreaking ceremony

for the Bayou Meto Basin Project. Representatives from the diverse coalition of partners who made the project possible gathered in a field near Scott, Ark., just east of Little Rock, to celebrate the start of construction on an effort that began 60 years ago.

The Bayou Meto Basin project is designed to control flooding, protect waterfowl habitat, protect the underground irrigation aquifer and help to irrigate about 300,000 acres of Arkansas farmland in Lonoke, Jefferson, Prairie, Arkansas and Pulaski counties.

According to BMWMD Executive Director Gene Sullivan, the project was first authorized in the Flood Control Act of 1950. Appropriation challenges and other problems delayed construction until now.

However, Sullivan said he was confident of the path ahead. "You'll see some dirt moving this calendar year," he told the crowd of about 50 people gathered under a tent for the celebration.

Sullivan has held his position with the organization since 1990. He explained that Pumping Station #1 (to be built near the groundbreaking site), along with the Little Bayou Meto Pump Station to be built near Reydell, Ark., at the southern end of the region, will help irrigate approximately 300,000 acres of valuable cropland. Pumping station #1 will remove water for

(Continued on page 14)

Corps begins work at Lower Lake drawdown structure

This project was first proposed in 1994 as a safer and more efficient way to drain water levels from the lower lake during de-watering inspections which are normally conducted every 5-6 years. Sardis received gates and operating mechanisms for the project from construction division in 2001. A contract for gate installation in the amount of \$1,077,100.00 was awarded to Bickerstaff Bros. Inc. Construction on this project began in Nov 2010, and is expected to last for several months. During this construction period visitor access to the weir boat ramp located on the Little Tallahatchie River below Sardis' Lower Lake will be closed. ◀

(Concluded from page 7, District improves topographic mapping with Delta Light Detection and Ranging project)

“Before LiDAR the Corps had to use traditional survey methods. People on the ground had to gather this kind of data. This was a lot more costly and a lot more time consuming. The data from this project is another tool to use in the design and analysis process at the Corps,” Hunt said.

“The imagery included a total of 2,618 exposures captured along 25 individual flight lines,” Meade said. “This acquisition totaled more than 3,000 miles of flight lines. The LiDAR was flown considerably lower with a much narrower swath as compared to the imagery. That acquisition required a total of 954 flight lines and totaled almost 20,000 miles of flight lines. The average LiDAR flight line was approximately 20 miles in length.

“LiDAR was primarily acquired in specially modified Cessna 206 single engine aircraft. This platform is nearly ideal for the relatively slow speeds of about 110 to 120 knots required for LiDAR acquisition. The digital imagery was captured in a Commander Twin turbine aircraft at much higher speeds, and higher altitudes. Each aerial platform included a two person crew-the pilot and a sensor operator. Additional ground personnel were required to simultaneously operate GPS base stations that were subsequently used for the post processing of the positional data of the aircraft during all flights.

“Six different aerial crews performed acquisition for this project; there were multiple crews simultaneously over the project site on many days. Ten surveying personnel were involved in the base station monitoring, GPS control surveys, and QA surveys. About 50 different technical specialists worked on the post processing of the LiDAR and imagery data in the office,” Meade said. ◀

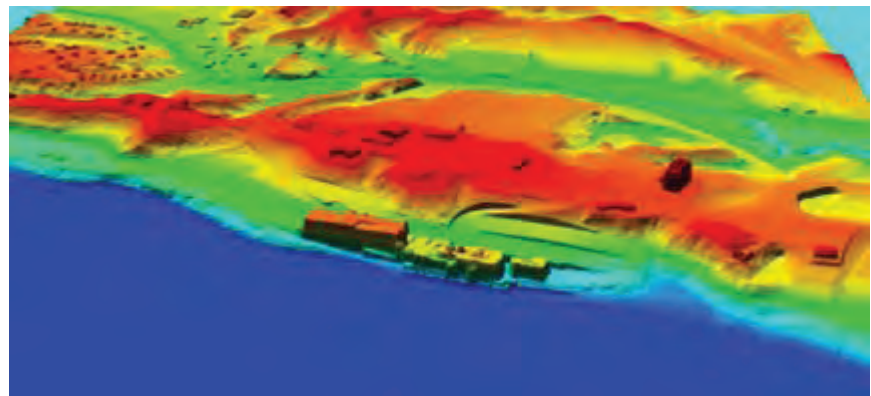


Image rendering of same area north of the Mississippi River bridge at Vicksburg with color intensified triangulated irregular network (TIN) file with tops of buildings included.

COMBINED FEDERAL CAMPAIGN KICKOFF

**CFC's Goal was \$60,000.00,
Total Contributions are
\$64,855.00.**



Photos by Alfred Dulaney

DISTRICT TEAM MEMBERS NETWORK WITH LOCAL SCHOOLS, FORM PARTNERSHIPS



Photos by
Alfred Dulaney



(Concluded from page 4, Readiness Branch's role in 'from Good to Great')

Campaign Plan Goal of 'delivering support to combat, stability, and disaster operations through forward deployed and reach back capabilities.' It is easy to see that without individual progress and the efforts of our volunteers, we cannot meet the goals of the District or the Corps.

At the Town Hall meeting, the strategic planner, Brian Crawford, mentioned that there has been great effort exerted to ensure each and every employee knows his/her role in the District's Operations Plan. What do you do to progress us from good to great? ◀

(Continued from page 10, Dirt flies at Meto Ground-breaking Ceremony)

irrigation from the Arkansas River while the Little Bayou Meto Pump Station will remove excess water and return it to the river.

"To give you an idea of the capacity of the pumps, it would take them about a minute to fill 40 residential swimming pools," Sullivan explained.

Sullivan thanked the members of the Arkansas Congressional delegation for their support and assistance, particularly Sen. Mark Pryor and Rep. Marion Berry (both in attendance at the ceremony), and Sen. Blanche Lincoln who was unable to attend. He also applauded the efforts of several federal and Arkansas state agencies who all worked together, including the Arkansas Natural Resources Commission, the U.S. Natural Resources Conservation Service, the Arkansas Game and Fish Commission, the U.S. Fish and Wildlife Service, the Arkansas Natural Heritage Commission and the Corps.

Mississippi River Commission member Sam Angel, from Lake Village, Ark., attended the ceremony and spoke briefly. "Water, in the next 15 to 20 years, will be the most valuable resource," he said. "This project will be the envy of everyone in the Nation."

Representing the Corps' Mississippi Valley Division at the ceremony was Director of Programs Mark Mazzanti. "This is an important step in protecting

(Continued on page 17)

Corps lakes annual winter drawdown

By Kavanaugh Breazeale

The District has begun the annual winter water level drawdown at Arkabutla, Sardis, Grenada and Enid lakes. The gradual lowering of the water level is to give each lake more flood control capacity in preparation of the normal winter and spring rains.

These low water levels always expose hundreds of acres of mudflats. Exploration of these mudflat expanses are popular recreational activity for many lake visitors. These mudflat areas provide a variety of interesting and unique features but also present a number of hazards and dangerous features.

The District encourages visitors to always keep safety and resource protection in mind and to always use caution when exploring low water areas. Always be observant of hazards such as trotlines, dead timber and sinkholes.

Visitors are also reminded that archaeological sites on U.S. Government properties are under strict protection by federal laws and regulations. The destruction, defacement, removal or any alteration of any artifact or public property is prohibited. Archaeological sites are fragile and irreplaceable and important to the understanding and preservation of our nation's heritage and offer a vast knowledge about the prehistoric past.

Public property and natural artifacts include items such as natural formations, mineral deposits, historical and archaeological features, old house sites, arrowheads, pottery and other Native American artifacts. ◀

DeGray Lake hosts 32nd annual Shoreline Cleanup

By Renea Guin

Photo courtesy of Ranger Update

The 32nd Annual DeGray Shoreline Cleanup was held recently at DeGray Lake. Fantastic weather and a great turnout made a perfect Public Lands Day! That day also marked the first “Nature Rocks” Day which coincided with Public Lands Day.

More than 450 enthusiastic volunteers assisted with the cleanup, and collected 4.3 tons of litter along with 27 tires. Volunteers almost doubled the litter picked up this year compared to the previous two years. This was probably a result of low water levels in the lake which allowed access to litter that had been inaccessible and under water.

Colonel Eckstein and his family, along with Jimmy

Waddle, chief of operations division, enjoyed going out on a barge with Boy Scout Troop 59 and cleaning up along remote shorelines. The groups found some unusual items during the cleanup which included a very large industrial fan, a very old anchor, an old headlight lens, lots of fishing lures, old tin beverage cans, and a large tarantula!

Prior to lunch, Colonel Eckstein thanked the volunteers for their work in maintaining the beautification of DeGray Lake.

Keeping DeGray Lake Beautiful (KDLB) has been the hosting organization for this event since 2005, and has done an outstanding job in acquiring funding and volunteers. KDLB was formed to promote educational awareness of litter prevention, recycling, and beautification efforts throughout the DeGray Lake and Caddo River areas. Through the creation of KDLB, now a non-profit organization, the community has been able to expand the scope of projects accomplished throughout local communities. Individuals and businesses came together to form an organization that can create and fund programs and projects that will have positive impacts on the communities and DeGray Lake. ◀



More than 450 enthusiastic volunteers were responsible for cleanup at DeGray Lake, resulting in the collection of 4.3 tons of litter, and 27 tires.

DeGray Lake receives Good Works Grant

By Renea Guin
Photos by Stacy Sigman

Keeping DeGray Lake Beautiful (KDLB) has recently finished a project to aid in the DeGray Lake Fishing Derby.



Each year the Corps partners with the Arkansas Game & Fish and offers a fishing derby for physically/mentally disabled individuals.

For the past two years the derby has been held at the Lakeview Pond. Access to the pond has been difficult but has been DeGray's best option to date. Fishing time was limited on the deck for individuals in wheelchairs so that all would have a chance to fish.

Wal-Mart has generously awarded the Good Works Grant to Keeping DeGray Lake Beautiful for their efforts in promoting environmental stewardship programs and projects for the past two years.

The Community Grant Program is the largest program funded by the Wal-Mart and Sam's Club Foundation and includes both matching and direct grants. The Matching Grant program allows local non-profit organizations plus other charitable organizations to plan projects within the community of the local Wal-Mart or Sam's Club and be eligible for funding when a Wal-Mart or Sam's Club associate is actively involved in the event. Mike Hancock and Charlie Bradford from the Arkadelphia Wal-Mart have encouraged more than 70 volunteers to participate with the DeGray Lake Cleanup. These volunteers came from several Wal-Mart stores to assist with the cleanup to ensure our environment here at DeGray Lake stays beautiful for generations to come.

Wal-Mart also provided the food and its employees cooked for the 337 volunteer during our cleanup this past fall. A new deck was built

LAKES AND RECREATION

through the Good Works Grant which allows more individuals to fish along the ponds edge.

Volunteers are our backbone. We cannot accomplish our goals without those individuals that care about our natural resources. With these projects and more to come we hope to further educate individuals on the importance of keeping our environment pristine. We are spreading the message that our environment is a valuable asset and giving our visitors a place to enjoy during their recreational visit. ◀

Shown cutting the ribbon at the fishing derby pond are left to right, Wal-Mart managers Hancock and Bradford along with KDLB treasurer Vickie Egleston, and Corps Team members Renea Guin and Jody Dvorak.



(Concluded from page 14, Dirt Flies at Meto Ground-breaking Ceremony)

and restoring our natural resources and is consistent with the 200-year working vision of the Corps,” he said. “Partnerships like this are keys to our future.”

Memphis District’s Deputy Commander Maj. Craig Hamilton also spoke at the ceremony. “The thing I have heard most about (this project) is the successful collaboration between a wide diversity of agencies, groups and individuals that have made it possible to get to this point today,” he said.

Maj. Hamilton also talked about the regional solutions the Corps is bringing to this project. “Two Corps districts – Memphis and Vicksburg – are ... bringing our combined knowledge and expertise to produce a regional solution,” he said “We are a team of teams, devoting our most talented professionals to deliver first class water resource solutions for the people of central Arkansas.”

The \$66.5 million worth of work now scheduled, \$37 million of it from federal sources through the American Recovery and Reinvestment Act of 2009 and another \$29.5 million through the Arkansas Natural Resources Commission, will primarily consist of the two pumping stations. Station #1 is the responsibility of the Memphis District and the Little Bayou Meto Pump Station the Vicksburg District.

Memphis District’s Tracy James is the senior project

manager for the work. “We’ve all worked long and hard to get here, but days like this make it all worth the effort,” James said. “Lots of other people have contributed their efforts to get us here and I am honored to be able to do my part to keep things moving and hopefully see the work through to completion.”

Senior project manager Holly Porter leads the Vicksburg District team working on the Little Bayou Meto Pump Station. “We are working the pump station from design to completion,” Porter said of her District’s involvement. “We did all the design work in-house while staying in close touch with the Memphis District so that the work and our basic designs were similar.”

Porter said both Districts worked to ensure there were no major differences between the two pump stations.

“Our project management, engineering, and contracting teams worked and continue to work very closely together to keep each other informed, meet our schedules and milestones and to ensure there are no surprises.”

Two of the last dignitaries to speak were Sen. Mark Pryor and Congressman Marion Berry. “This is a smart project whose time has come,” Pryor told the crowd. “It’s a model project that others will want to emulate.” Congressman Berry, who plans to retire following his current term in office, added, “This is an amazing example of what can happen when people come together for the common good.” ◀

DeGray Lake hosts 10th annual mobility impaired hunt

Courtesy of Ranger Update

Photo by Derick Walker

Corps of Engineers along with the Arkansas Game and Fish Commission partnered to provide a hunting experience for sportsmen with disabilities. With the recent establishment of the DeGray Lake Wildlife Management Area, the hunt was held outside of the regular muzzle loading season guidelines. This improved safety concerns by reducing the chances of interaction with other hunters and enhanced the opportunity for hunting success.

Participants selected from the pool of applicants were two Arkansas sportsmen, Sue Huskey of Tuckerman and Randy Hays of Bryant, this being the first trip to DeGray for both.

Six sites were selected in prime areas for deer activity. Some were located in and near wildlife openings, while shooting lanes were created in the thicker wooded areas. Safety issues considered at each site were the direction of the shot, accessibility, and proximity of roads.

While rainy and cold weather greeted the hunters, deer movement proved to be good. Although numer-

ous deer were sighted only one shot was fired, but unfortunately missed the mark. Each participant showed restraint and practiced ethical hunting practices by passing on several marginal shot opportunities.

Through donations from area businesses, each hunter and assistant were presented with a T-shirt commemorating the event and a quality pocket knife.

One of the participants, Sue Huskey exclaimed, "I enjoyed the fellowship, the nice people and hope to come back next year. Thank You!"

As stewards of public lands, the Corps is dedicated to providing a safe, quality, recreational experience for all visitors. The deer hunt for the mobility impaired is an outstanding example of natural resource management partnering to provide a unique outdoor experience for Arkansas hunters. In addition, DeGray also conducts a waterfowl hunt each January. It is the only Corps sponsored event of its kind in Arkansas.

Ranger Luke Nivens stated, "I look forward to this each year, it is one of the most rewarding endeavors that we sponsor." ◀



Randy Hays (seated) and Jeffrey Lockwood practice firing muzzle-loader at Lakeview Fishing Pond prior to hunt.

Rangers at Louisiana Field Office bring outdoor fun to 2000



By Brandi Bradford
Photos by Suzanne Odom



Rangers left to right, Joey Minter and David Oliver walk with Bobber.



Forester Tommy Jones demonstrates archery to young participant.

Rangers, vendors and volunteers presented the Wildlife and Forestry Festival at Bayou Bodcau. The festival was held in recognition of National Hunting and Fishing Day.

More than 2000 visitors of all ages participated in hands-on events such as archery, canoeing/kayaking, fishing, casting games, and other activities. Visitors chatted with Bobber the Water Safety Dog and his ranger friends to learn about boating and hunting safety. Families saw demonstrations of wild hog and deer cleaning techniques, as well as live birds of prey. The festival also included crafts made from natural materials, with live music provided by a country music band.

This 30th annual festival, held at the Tom Merrill Recreation Area campground, was presented by rangers from the Louisiana Field Office, Louisiana Department of Wildlife and Fisheries, and the more than 40 vendors and 50 outstanding volunteers interested in wildlife and fisheries conservation and enjoyment. ◀



Lake Ouachita celebrates National Public Lands Day

*Volunteers rake the trail
at Denby Bay.*

*Park ranger Joe Bailey is
pictured with volunteers
from the Lake Ouachita
Job Corps and the Trail
Dogs after clearing the
Vista Trail.*





The Corps has consistently been one of the National Public Lands Days' largest providers of sites and volunteers.

By Amy Shultz
Photo by Joe Bailey

In celebration of National Public Lands Day, twenty dedicated volunteers from the Ouachita Job Corps partnered with the Lake Ouachita "Trail Dogs" and the Lake Ouachita staff to clear a portion of the Lake Ouachita Vista Trail at Denby Bay.

The Corps has consistently been

one of the National Public Lands Days' largest providers of sites and volunteers. At Corps events last year, more than 13,000 volunteers donated approximately 46,000 hours of service to help keep our public lands beautiful.

The students from Ouachita Job Corps joined the "Trail Dogs" and

park rangers Joe Bailey, Bill Jackson and his son, Eli, ready to work. They worked on a quarter of a mile spur of trail that will eventually connect the Lake Ouachita Vista Trail to the Denby Point Campground. The volunteers cut brush, tree limbs and roots, and raked the new tread smooth. They completed nearly 75% of this new section of trail. Jerry Shields, member of the Lake Ouachita Citizen Focus Committee and lead "Trail Dog," related that the Job Corps volunteers enjoyed the idea of helping create a new section of the trail and offered to help on future sections. Shields stated that the work completed by these volunteers would have taken the "Trail Dog" team more than a week to complete. In appreciation for their generosity and work the volunteers were given honorary "Trail Dog" t-shirts. ◀

(Concluded from page 7, Bat friendly gated mine shafts installed on Lake Greeson's project owned lands)

Grants program. In February 2009, the Implementation Team of the Arkansas Wildlife Action Plan met to review pre-proposals for further consideration. The Implementation Team is composed of administrators from the Arkansas Game and Fish Commission and other partners. The pre-proposal was selected for further consideration. A final proposal was then submitted to the Implementation Team and was awarded funding in December 2009. The total project cost was \$72,332, with \$24,132 coming from the Arkansas State Wildlife Grant Program and \$38,825 provided by the partners through labor, equipment, and supplies.

The actual gate construction and placement was accomplished in April 2010. Two cinnabar mines

were selected for gating. All materials were ferried by boat to the worksite, and then transported by foot up the hills to the mine entrances. The gates were constructed on site. The construction and placement of the gates was accomplished in three days. Data loggers were installed in the gated mine shafts to monitor temperature, humidity, and light changes inside the adits during the winter months. Also during this three-day period, adjacent lands were surveyed to locate additional cinnabar mines that could provide additional wintering roost sites.

The winter of 2010/2011 will provide the first opportunity to evaluate the success of the project. Each of the gated cinnabar mines will be entered and visually checked for roosting Southeastern Myotis bats. Information will also be gathered and analyzed from the data loggers placed in the adits during construction. ◀

Gopher Tortoise survey

By Shelby Staten
Photos by Mark Corner

Twenty one people from federal and state agencies including Mississippi Department of Wildlife, Fisheries, and Parks, United States Fish and Wildlife (USF&W), Department of Marine Resources, Nature Conservancy, Mississippi Museum of Natural History and the Corps' Mobile and Vicksburg districts, participated in the annual gopher tortoise survey at Ward Bayou Wildlife Management Area. Ward Bayou Wildlife Management Area (WMA) is a mitigation project within the Mobile District located along the Pascagoula River. The site was purchased from International Paper Company approximately 12 years ago. Approximately 400 acres of the 1500-acre project was composed of hilly terrain stocked with slash pine.

Upon further evaluation of the project it was determined that there were seven active gopher tortoise

burrows on the site. The site was cleared of slash pine and reforested with native longleaf pine. The area has been intensively managed for several years in an effort to establish the planted longleaf pine, nurture the gopher tortoise population and remove nuisance exotic species such as cogon grass, Chinese tallow tree, and feral hogs. Due to the intensive efforts of the Corps, the population of gopher tortoise on Ward Bayou



Pictured above is a gopher tortoise with tracking device at Ward Bayou.

Pictured to the bottom left is an equipped gopher tortoise entering a burrow.



WMA has now reached an all time high of 52 active burrows. Many of the newly established burrows are juvenile and hatchling burrows which show that populations are not only surviving but also thriving.

The survey was conducted during a three-day period which included walking transect lines through the newly established longleaf plantations. Surveyors looked for active, inactive, and abandoned burrows. Each burrow had its status recorded, and position referenced with GPS. Each burrow was returned using GPS, and markers will be placed with corresponding numbers. This project was and is an excellent opportunity for federal and state agencies to cooperate for the betterment of an endangered species.

The gopher tortoise is listed on the federal endangered species list within its western range which includes Mississippi's coastal plain. The project has been such a success that the USF&W is in the process of relocating Mississippi gopher frogs to Ward Bayou WMA. The Mississippi gopher frog is nearing extinction with only three remnant populations located within the state. The frogs spend much of their lifespan living exclusively within gopher tortoise burrows. Therefore, the welfare and existence of Mississippi's gopher frog populations are completely dependent on the presence and abundance of gopher tortoise. ◀

Enid Lake hosts Fishing Day for the physically challenged

By Chris Hannaford and Frank Laster
Photos by Deborah Freeman and Chris Hannaford

Personnel at Enid Lake and the Chickasaw Hill Volunteer Association held the 19th annual Physically Challenged Fishing Day at Chickasaw Hill Recreation Area. Fifty-Five physically challenged individuals ranging from small children to older adults attended. Over fifty volunteers along with more than a hundred friends and family members were also present.

Many participants for this event were contacted through the following agencies: Veterans Hospital Memphis, Baptist Memorial Rehabilitation Center-Memphis, the Coalition for Citizens with Disabilities-Tupelo, and the Methodist Rehabilitation Center in Jackson.

The Chickasaw Hill Volunteer Association along with residents



Participants wait to be loaded onto pontoon boats for the fishing day.

from the local community provided pontoons boats, bait and poles for the fishing trip, and all the essentials for a first class fish fry. During the event volunteers not only provided boats, fishing equipment, and food for the fish fry, but they assisted participants in loading and unloading boats, taking participants fishing, and preparing lunch.

The day was favored with great weather and fellowship. Everyone

enjoyed a beautiful and successful morning of fishing followed by a fabulous fish fry and the awarding of door prizes.

This event is held annually to give individuals who do not usually have opportunities to enjoy the great outdoors one of the most enjoyed recreational sports - "Fishing". ◀



Participants drift fishing for catfish.

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Grenada Lake (662) 226-6391
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Aerial Photography (601) 631-5709
Corps Wetland Permits (601) 631-5289
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Mississippi River History Center
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Corps impacts to your property
Employment Questions (601) 631-5859
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Historical Photographs (601) 631-5021
Environmental (601) 631-5410

Other Vicksburg Engineer/Federal Organizations

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(601) 634-5760

Vicksburg National Military Park
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Engineer Research and Development Center
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U.S. Coast Guard Cutter Kickapoo
(601) 636-8304

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