

Corps provides national solutions

By Lt. Gen. Robert L. Van Antwerp, Headquarters USACE

Another April, another opportunity for those of us fortunate enough to be part of the U.S. Army Corps of Engineers to once again pause and reflect on our environmental work.

It's an arena where I am proud to say we have made strides during my tenure as the 52nd Chief of Engineers.

We are becoming greener and truly beginning to reflect our seven Environmental Operating Principles in all aspects of our work, but much work still remains.

We've linked our environmental work with both sustainability and energy reduction – three legs of the same stool. All of us are familiar with the Army's Triple Bottom Line of sustainability: mission, environment and community with the fourth tenet or the "Plus" factor – economic benefit.

While we strive to build our sustainability program in step with the Triple Bottom Line Plus, I would argue that within the Corps, we have been going a bit beyond.

Our environmental programs have evolved quite a bit throughout the years, just as the nation's attention to environmental and sustainability issues have. When I look at the dictionary on my desk, granted I've had it for awhile, I can't find the word "sustainability."

It reflects a new way of thinking, just as our programs and the world have changed.

We know that being a good steward of the environment is vital to the planet's survival.

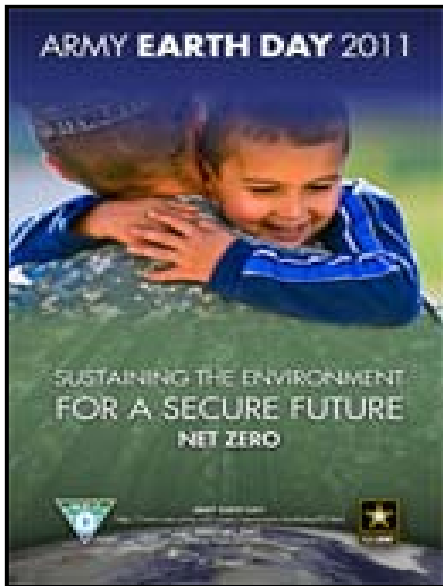
With 37,000 Corps of Engineers employees spread among more than 90 countries throughout the world, our extremely diverse and global mission has given us an incredibly valuable and unique opportunity to make a significant impact on the environment and the sustainability of our global resources and the security of our nation.

We have been using the talents and innovation within the Corps of Engineers and engineering communities to help preserve our planet and build our Army strong for years to come. I call it "building to last."

As not only the nation's engineers, but the nation's environmental engineers, we are evaluating how the Corps of Engineers will function today and deep into the 21st century.



Lt. Gen. Van Antwerp



Earth Day is April 22.

That means we must be part of the nation’s solutions through smart leadership and groundbreaking engineering, and introduce sustainable building designs that minimize energy, water and petroleum consumption requirements.

One example can be found at ERDC-EL, the new Corps of Engineers-owned building. The new laboratory building is on track to achieve the U.S. Green Building Council Leadership in Energy and Environmental Design Gold certification, the first Corps-owned building to do so. That type of achievement should be the norm, with achieving Platinum certification the ideal.

We’re trying to not only be good to the environment, but seeking to reduce our greenhouse gas emissions by testing the use of biodiesel (B100), an almost 100 percent non-petroleum fuel, in five selected vessels within our floating plant.

Working with our partners at the National Oceanic and Atmospheric Administration, we have already begun testing the fuel on the Raccoon, one of San Francisco District’s debris vessels.

We expect the testing to run through May. At that time we will evaluate its use in a wide range of our vessels, from debris ones to towboats and everything in between, to see if this more sustainable option works for the Corps.

Again, an initiative that hits on all three legs of that stool – good for the environment, promotes sustainability and reduces energy compensation.

Our environmental initiatives and projects will have lasting impacts. We’re becoming a Corps of “solutioneers” – doing what’s needed to provide solutions to the nation’s environmental problems by working in concert with others sharing the same goals and philosophies whether they be in the military, the federal government, private industry, academia, with non-governmental agencies or the public at large.

It’s a job we don’t take lightly – it requires commitment, perseverance and vision. But it’s one we heartily embrace.

I would like to recognize all of you this month while we celebrate the 31st anniversary of Earth Day for the work you do every day to make the Corps of Engineers “greener” and sustainable.

All of you are working hard to do your part to build our environmental programs, the Corps, the Army, and our nation strong.

BUILDING STRONG®

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LT. GEN. ROBERT VAN ANTWERP
Chief of Engineers
and Commanding General
U.S. Army Corps of Engineers



ERDC News

CHL hosts GIS workshop

Patrice Creel, ERDC PAO

The Second Annual Geographic Information System (GIS) Workshop on the Corps' GIS research and development efforts was conducted at ERDC-CHL's Conference Facility March 14. The theme of the conference was "Navigation Uses and Needs."

ERDC Director Dr. Jeffery Holland, the keynote speaker, talked about the strides in building applications that automate business processes which take advantage of an enterprise system. He questioned how Web services could best be standardized across USACE, adding the need to "share the way we do analysis, not just the data itself."

Coordinated by CHL Civil Works Technical Director Jeff Lillycrop, the 70-plus attendees listened to other expert speakers and vendors' representatives on the latest GIS technologies, trends and how they are being applied in the Corps' navigation business line.

Other ERDC speakers included Dr. Kenneth (Ned) Mitchell, Cheryl Pollock, Brian Tetreault, Tim Welp, CHL; Mark Graves, EL; and Michael Stewart, ITL; among others.

Stewart spoke on the Enterprise Coastal Inventory Database project. He explained how this software system can be used to inventory structures and their conditions for better risk analysis and budget projections for upgrades and repairs.

The workshop included vendor booths and demonstrations. There are plans to conduct another workshop next year.

For additional information, contact at Jeff.Lillycrop@usace.army.mil.



From left, Maggie Sabol and Carolyn Ables register Bowhead Science and Technology Director Don Sloan at ERDC-CHL's Second Annual Geographic Information Systems Workshop March 14.



A Look Around the Labs . . .

Monitoring technology plays critical role following Mississippi River barge crash

By Megan Holland, Contract Writer

A recent Mississippi River barge crash gave a new structural health monitoring (SHM) technology a chance to shine, as the Louisiana Department of Transportation and Development (LA DOTD) called for back-up to ensure motorists could safely cross the river bridge connecting Vicksburg, Miss., with the State of Louisiana. The structure, which had been hit by a grain-filled barge, was closed for hours as state employees scrambled to quickly assess the damage.

The SHM system was conceived and developed by ERDC and a team of contractors as part of the Office of the Secretary of Defense/Army Corrosion, Prevention and Control program. The SHM technology monitors the long-term degradation of steel bridges and determines any effect on the structure when conditions change such as corrosion, fatigue, or other forms of deterioration. Collected information gives inspectors a head start in biannual assessments and aids in maintenance and repair planning. A similar system is installed on the Swing Span of the Government Bridge at Rock Island Arsenal, Ill., to monitor the many dynamics and loads this 100-plus year old bridge section experiences in everyday service, as well as long-term changes in condition.

“The I-20 Mississippi River bridge was selected as one of the two SHM demonstration sites because it is a critical crossing of the Mississippi, with the next closest bridge about 50 miles away. It is also part of the Defense Strategic Highway Network and close to ERDC-Vicksburg,” said Steven Sweeney, structural engineer at ERDC-CERL and SHM project engineer. “Following the barge impact, LA DOTD called upon the system, along with subcontractor support, to check for any indication of structural problems.”

The I-20 Bridge SHM was installed in November 2010. The technology continuously observes structures on which it is installed to provide real-time monitoring and dynamic assessment of structural health. The dynamic assessment part of the SHM system is achieved through a set of algorithms that contain preset limits for each structural variable based on a finite element model of the bridge. For example, if the bridge design parameters do not exceed the preset limits, the traffic light indicator will remain green, indicating no problems with the bridge operation. The information on sudden changes provided by the SHM makes it a perfect fit for post-crash needs.



A screen grab from the SHM system depicts barge removal efforts along the I-20 Mississippi River Bridge.

“Bridge engineers were en route but were still a distance away when we received the call for help,” said Sweeney. “We checked for structural problems in the strain, displacement and tilt data. In addition, the system includes three cameras and we were able to look for visible problems.”

In the aftermath of the recent crash, the ability to see the river bridge at close range proved particularly useful. After the 30-barge tow vessel struck the old U.S. 80 Bridge in the river’s annually flooded waters, the offending barge floated down stream and didn’t simply strike one of the I-20 structure’s piers – it also lodged against it. The barge eventually sank but remained lodged against that pier, leading to a multiple-week effort to remove the wreckage.

“In the hours following the crash, we monitored the system closely, continuing throughout the night, and our subcontractor provided the LA DOTD with updates every three hours. We have continued to closely watch the structure and have offered our services as the clean-up efforts continue,” said Sweeney.

Nearly 23,000 vehicles cross the I-20 Bridge each day.



Spotlight on People

Marsh receives Tibbetts Award



Dr. Charles Marsh, ERDC-CERL, (center) displays the Tibbetts Award with industry partners Drs. Daan Alsem (left) and Sean Green, Hummingbird Scientific, at the Small Business Administration (SBA) award ceremony in Washington, D.C. An article about the award appeared in the ERDC Information Bulletin 5-11, March 29, 2011. (Photo courtesy of SBA)

ERDC employees serve as science fair judges

ERDC employees served as judges for the Vicksburg – Warren School District Science Fair, Feb. 24, at the city auditorium. Discussing which student earned the best overall project trophy (shown in foreground) were, from left, Tim Shelton, GSL; Aaron Lee and Earl Edris, CHL; Michelle Wynter, EL; and Education Outreach Coordinator Rick Tillotson with the Human Capital Office, which coordinated ERDC’s participation. (Photo by Kat Hilderbrand, Vicksburg – Warren School)



ITL rescuers save six goslings from high roof

By Patrice Creel, ERDC PAO

For the past several years, an expectant goose selected the 20-foot high, rock-covered roof of the centrifuge building as a safe brooding place. When David Dailey, ERDC-ITL, noticed the goose nesting from eye-level view on ERDC-EL's new parking lot hill, the 28 days-to-hatch countdown began. Cliff Grey and Dan Carr, ITL, also monitored the mother goose's progress April 10.

"She has sat diligently on her brood, while daddy frolicked in the parking lot below, till today," Grey said. Dailey calculated the goslings hatched Monday or Tuesday of that week.

"Dan and I used a step ladder to climb up there. With a small grapefruit sack, we gently picked up the chicks, placed them in the sack and lowered them all to David waiting on the ground below. He promptly released the chicks onto the grass where they were joined soon after by "mom" and "dad".

The men decided to rescue the goslings because they had no access to food or water. Grey also noted, "If they had chosen to try and get down, they would have surely suffered, if not perished, and would have landed on hard concrete and at the very least injured themselves." A prior year rescue involved recovering the goslings from a roof drainage pipe. The men believe the same goose returns to the rock to nest each year.



Pictured are the six fortunate goslings that were safely lowered to the ground. The gratefully reunited family waddled toward Brown's Lake. (Photo by David Dailey, ERDC-ITL)



ERDC-ITL employees, from left, Cliff Grey, Dan Carr, and David Dailey showed the rescue equipment rope and grapefruit sack net used to relocate the stranded goslings. (Photo by David Roberts, ERDC CSD)

The parents did not attack the rescuers on the roof. They merely raised and flapped their wings then flew to ground level as Grey and Carr handed the bag with the six goslings down to Dailey.

Then, the little family waddled off toward Brown's Lake, eating and pecking along the way. "They certainly did not mind us intervening," Grey said as the three Momma goose herding her younglings toward the lake.

"She looked back over her wing toward us and seemed to say, 'Thanks guys, see you next year.' "

Week of the Young Child turns 40 – Open House at ‘Cradle to Crayon’ in Hanover

By Bryan Armbrust, ERDC PAO

‘Cradle and Crayon,’ ERDC-CRREL’s Child Development Center, celebrated the 40th Week of the Young Child with an open house April 13.

The [National Association for the Education of Young Children](http://www.naeyc.org) (NAEYC) accredited center has supported CRREL and its surrounding communities since October 1990, when it opened as the first Department of the Army Child Development Center constructed specifically for civilian employees. The nonprofit corporation can support up to 52 children and is the only center in the ‘Upper Valley’ region that holds a New Hampshire licensure, NAEYC accreditation and DOD certification.

Related link:

www.naeyc.org/woyc



‘Cradle and Crayon,’ ERDC-CRREL’s Child Development Center, celebrated the NAEYC’s 40th Week of the Young Child with an open house L to R - Stephanie Jillson, Lead Preschool Teacher (pink), Brenda Danielson, Director (green), Sarah Shepherd, Asst. Preschool Teacher, (back turned) and Sue Koh, Chief, CRREL Human Capital Team (foreground). (U.S. Army photo by John Severance, ACE-IT)

CRREL hosts job shadow day

By Marie Darling, ERDC PAO



Local eighth graders visit a CRREL coldroom with Polar Researcher Jackie Richter-Menge for the annual job shadow day.

ERDC-CRREL hosted a job shadow day for a group of 10 local eighth graders from Oxbow and Indian River schools April 4. The day began with Dr. Justin Berman, chief, Research and Engineering Division, who provided an organizational overview and shared valuable thoughts and expectations regarding the workplace. The students were then provided technical briefings by Mechanical Engineer Michael Parker on CRREL’s vehicle simulator and associated software program, and Polar Researcher Jackie Richter-Menge on climate change studies and a trip through the coldrooms. To round out their CRREL experience, the students were paired with mentors to get a feel for a professional office

and to learn what tools are generally used in their mentor's specific profession. This year's students were particularly interested in learning more about math, marine biology, and environmental studies and how these topics are applied in the workplace. Each presenter provided insight on their personal progression through education and career development and how it helped them establish where they are today. Dr. Berman met with the students at the end of the day to discuss what they had learned during their time at CRREL. (**Student photo permission is in place.)

CRREL to showcase lab capabilities at Vermont museum

'CRREL Day at the Montshire' – From 'Duct Tape Engineering' to an 'Optimal Sensor Placement Tool' more than a dozen CRREL activities will be offered to Montshire Museum of Science visitors April 30. CRREL's Human Capital Team is using the outreach event to showcase the Hanover lab's capabilities to the younger crowd. The Saturday event runs from 10 a.m. to 5 p.m. Immediately across the river from Hanover, the Norwich, Vt., museum hosts approximately 150,000 visitors annually. (Photo by Andrew Wellman courtesy of Montshire Museum)



ERDC new faces



Dr. Jed O. Eberly has joined **ERDC-EL's** Environmental Processes Branch as a research microbiologist. Jed earned a bachelor's in biology from Montana State University, where he was involved in a collaborative project with the Montana Space Grant Consortium's BOREALIS program. He was a scholar in the SMART Scholarship for Service Program and worked as an ERDC intern for two summers. He recently graduated from Oregon State University with a degree in biological and ecological engineering. His dissertation focused on analyzing a thermophilic strain of cyanobacteria for the production of potential biofuels and other bioproducts such as PHB, a precursor for making bioplastics. Jed's primary research interests are in

biotechnology, with a focus on the development of bio-based renewable energy, and in genetically engineering bacteria and algae to produce biodiesel and other products, such as bioplastics. Jed's leisure activities include hiking, camping, traveling, reading, gardening, photography and spending time with family and friends.

Heather Farrington has joined **ERDC-EL's** Environmental Processes Branch as a research biologist. A Canton, Ohio, native, Heather earned a bachelor's with a double major in biology and business administration from Mount Union College in Northeastern Ohio. After graduation, she was a technical writer for a contract toxicology laboratory. In 2004, Heather began graduate studies in biology at the University of Cincinnati and will earn a doctorate this spring. Her dissertation focused on evolutionary and population genetics in Darwin's Finches of the Galapagos Islands. While in Cincinnati, Heather was an active member of the Ohio Bird Banding Association and the Cincinnati Bird Club. She plans to continue volunteer service in avian research and conservation with the



local Audubon chapter. Heather's leisure time includes books, movies, music and outdoor activities.



Dr. Andrea Michakova-Scott has joined **ERDC-EL** as a research chemist in the Environmental Chemistry Branch. She is a computational chemist by training with more than 30 scientific and technical publications. A native of the Slovak Republic, she worked as a lecturer of general chemistry at the Constantine Philosopher University, Nitra, Slovakia, during 2000 and 2001, and received the Inorganic Chemistry Institute of Slovak Academy of Sciences Award for the Best Young Scientist in 2001. She is a graduate of Comenius University in Bratislava, Slovakia, where she earned a master's in mathematics and chemistry and a doctorate in inorganic chemistry. She currently lives in New Hebron, Miss., with her husband. When not working on chemistry problems, she enjoys playing tennis, jogging, running, biking, and other outdoor activities (including hiking and fishing). In addition, she likes gardening, traveling and spending time with family and friends.



News You Can Use

Threat Awareness Reporting Program replaces SAEDA

By Charlie Provine, ERDC Security

The Subversion and Espionage Directed Against the U.S. Army (SAEDA) program is being eliminated and replaced by a new all-encompassing security threat program called the Threat Awareness Reporting Program (TARP). There will be upcoming training, both live and online. Operations security training, which was previously given in conjunction with SAEDA, will now be a standalone mandatory training requirement.

Effective Nov. 4, 2010, the new AR 381-12 expanded the list of threat reportable incidents to include indicators of a potential insider threat.

Success is achieved through the vigilance of all Department of the Army personnel to report threat information to local counterintelligence agents or through venues such as iSalute and iWatch.

iWatch Army is a modern version of the neighborhood watch. The program educates and empowers the Army community by making them aware of the potential indicators of terrorist behavior and suspicious activities. iWatch also encourages the process of reporting these activities to Military Police or local law enforcement for investigation. Have you heard about or seen an incident that may relate to an espionage, terrorist, or insider threat to the Army? Have you seen or heard indicators of a potential terrorist-related insider threat to the Army as defined in AR 381-12?



If so, you can help minimize the damage to national security and save the lives of Soldiers by reporting these incidents. To do so, use Weblinks at iSalute/iWatch or call ERDC Security at 601-634-2776/4595 or 1-800-CALL-SPY.

Please visit the AKO Homepage and click AKO Select Links for videos on TARP, iSalute, and iWatch.

For information, contact Charlie Provine, ERDC Security, at Charlie.Provine@usace.army.mil or 601-634-4595.

TEC to hold RM town hall May 5

Come join the fun as ERDC-TEC brings Resource Management (RM) to you with an interactive town hall meeting May 5, from 9 to 11 a.m., in Conference Room 2. ERDC Directorate of RM Director Roland Clavien will be in attendance.



You can find out everything you wanted to know about budget, management analysis, manpower, and data warehouse, finance and accounting. There will be food, games and prizes.

For more information, contact Sally Hayes at 571-451-6542 or Linda Bryson at 703-428-6607.

Review FEGLI periodically

The Federal Employees' Group Life Insurance (FEGLI) options increase in cost every five years. USACE employees are encouraged to periodically review the cost and value of their life insurance. To do this, go to <http://www.opm.gov/insure/life/>, click on "Rates" (located on the left side of the screen); then click on "Premiums for Employees." This link will take you to a chart for each option and the associated costs.

If you are unsure of the FEGLI Option you have selected, you can look on your most recent Standard Form 50, Notice of Personnel Action, in block 27, or look on your current earnings and leave statement under the deductions section to determine the coverage you currently have. For a refresher on how your FEGLI works, click on the "Life" tab at the top of the page and under "Featured Questions," "Booklets" you can select the FE 76-21: FEGLI Booklet for Federal Employees.

For more information contact Mary Young at 217-373-7213.

National Contract Management Association seeks local chapter

Individuals within the Vicksburg contracting community are attempting to charter a local chapter of the National Contract Management Association (NCMA). NCMA is a nationally recognized, nonprofit, professional contracting organization composed of individuals from industry, government and academia.

The benefits of NCMA membership include:

- ❖ Continuous Learning Points
- ❖ *Contract Management Magazine/Journal of Contract Management*
- ❖ Professional Certification Programs
- ❖ Online Education Center
- ❖ E-Learning Webinars
- ❖ Annual Conferences

Application and additional information can be found at www.ncmahq.org. Interested parties should contact one of the points of contact below no later than April 22.

Points of Contact

Davita Baloue, president pro tem 601-209-1259 or vitableue1@aol.com

Scott Humphreys, secretary pro tem, 601-259-0350 or humphreys1215@bellsouth.net

Jamaya (Rocky) Smith, treasurer pro tem 601-307-7202 or jamaya_smith@yahoo.com

Want to volunteer? FRP is just for you!

The ERDC Family Readiness Program (FRP) is looking for a few good volunteers who are interested in being a part of a program that helps support Soldiers and Civilian employees and their families before, during and after extended deployment assignments in support of contingency operations and disaster relief operations and assist them through the entire deployment process.

For questions related to the program or to volunteer to assist with FRP activities, contact Gus Black at 601-634-4411.



ERDC happening

Hanover site blood drive

A blood drive will take place at the Hanover site, April 22, 9 a.m.-1 p.m. Registration will take place in the main lobby. To sign up, please go to www.redcrossblood.org. (ERDC-CRREL's sponsor code is "3003") or call 1-800-RED CROSS.



Useful Web Links

Do you need to know who the technical director is for military engineering? Do you need to contact the director of resource management but can't remember his name? Having trouble understanding the organizational structure of the ERDC? The latest ERDC Organization Chart can help answer these questions and more. Access it at

https://erdinfo.erd.usace.army.mil/rm/org_chart.htm.

To help you stay informed, do your job better, sign up for training, or learn more about the ERDC organization for which you work, visit the ERDC Intranet site at

<https://erdinfo.erd.usace.army.mil/>.

Stay tuned . . .

The next issue of the *ERDC Information Bulletin* will be distributed **May 3**. If you would like to submit an item, contact the Public Affairs Office at your site.