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Operating principles 'reinvigorated'

By Candice Walters
Headquarters USACE

After 10 years of living by its Environmental Operating Principles, the U.S. Army Corps of Engineers has taken a step back, reassessed them, and has now released a new "reinvigorated" set of principles.

The seven principles, often called the Corps of Engineers "Green Ethics," were unveiled in March 2002 and have encouraged Corps employees to consider the environment in everything they do. But during the past 10 years, the nation's resource challenges and priorities have evolved, focusing more on sustainability and the need to conserve water, electricity, fuel and other precious resources. The Corps of Engineers, as well as the Nation as a whole, has learned more about the impacts of global factors such as climate and sea level change.

On Aug. 8, Chief of Engineers Lt. Gen. Thomas P. Bostick unveiled seven "reinvigorated" Environmental Operating Principles at the USACE Strategic Leader Conference in Little Rock, Ark.

The "reinvigorated" principles are more concise, have a clearer format and include an increased emphasis on the proactive nature of each principle.

"The Corps of Engineers level of environmental commitment must expand and intensify," Bostick said. "As with other Corps guidance and principles, it was necessary to revise the EOPs periodically to reinforce their value to how the Corps operates.

"The reinvigorated principles provide direction on how the Corps protects and restores natural systems and the environment while encouraging productive, sustainable economic development that improve the quality of life for everyone," he said.

The reinvigorated principles are:

- Foster sustainability as a way of life throughout the organization.
- Proactively consider environmental consequences of all Corps activities and act accordingly.
- Create mutually supporting economic and environmentally sustainable solutions.
- Continue to meet our corporate responsibility and accountability under the law for activities undertaken by the Corps, which may impact human and natural environments.
- Consider the environment in employing a risk management and systems approach throughout life cycles of projects and programs.
- Leverage scientific, economic and social knowledge to understand the environmental context and effects of Corps actions in a collaborative manner.
- Employ an open, transparent process that respects views of individuals and groups interested in Corps activities.

At the August meeting of the Chief of Engineers Environmental Advisory Board in Chicago, Bostick thanked the board for helping to rewrite the principles that he called "part of our culture," adding that they apply to a larger group than just the Corps of Engineers.

Dr. James Kundell, EAB chairman, said he was glad to see them updated, adding that it was time to revise them to reflect changes in knowledge, to make them more proactive and strengthened so they would be more forceful.

He, and other EAB members, called on the Corps to ensure there is more consistency in their application across the agency, to challenge the district and division commanders to lead the effort in promoting the principles, and to develop metrics to measure the principles against.

When the principles were first introduced in 2002, "we were one of the first federal agencies with Environmental Operating Principles," said Maj. Gen. Michael Walsh, deputy commanding general for Civil and Emergency Operations. "They opened the door for us to think about other criteria to measure projects against beyond just the economic cost benefit ratio, to look at other perspectives."

Throughout the years, though, many Corps employees became a bit complacent when it came to the principles, Walsh said. "The mindset became 'OK, we took care of that' and then they moved on.

"It was time to take another look, to reinvigorate them and remind everyone of their importance and applicability. Besides, it's something that people expect us to be doing."

As part of the reinvigoration process, plans are under way to ensure that Corps training courses include a small module on the principles, metrics that include long-term goals and indicators of success are being developed, and the principles are being included in any new or revised Engineer Regulations, Engineer Pamphlets, Engineer Manuals and other guidance.

More information about the reinvigorated Environmental Operating Principles can be found at www.usace.army.mil/Missions/Environmental/EnvironmentalOperatingPrinciples.

Park Ranger Christine Renzoni sets a bird free after it has been banded and its information recorded. *(Photo by Kevin Burke)*

Avian banding aids research

By Ann Marie R. Harvie
New England District

If you like bird watching, West Hill Dam in Uxbridge, Mass., is the place to go. Bird banders have netted 96 species of birds at the U.S. Army Corps of Engineers New England District project and are keeping a close eye on the populations.

The 2012 Bird Banding began the week of May 6 and ended the week of June 3. Nets were set up throughout West Hill Park in order to catch the birds to band them. "Usually these banding sessions take place in the morning from 6:30 a.m., when the nets are first opened, until 10 a.m., when the birds become less active and we see a drop in the number of birds flying into the nets," said West Hill Dam Park Ranger Christine Renzoni.

Renzoni said the netting and banding depends on bird migration. Weather and time of day are also factors in the amount of birds caught. "Birds are less active in the rain, and really sunny or windy conditions are unfavorable because the nets are easily visible to the birds," she said.

This year, volunteer Strickland Wheeler served as the licensed Master Bander for the event and held the required permit to band the birds. Paul and Beth Milke, also volunteers, served as sub-permittees

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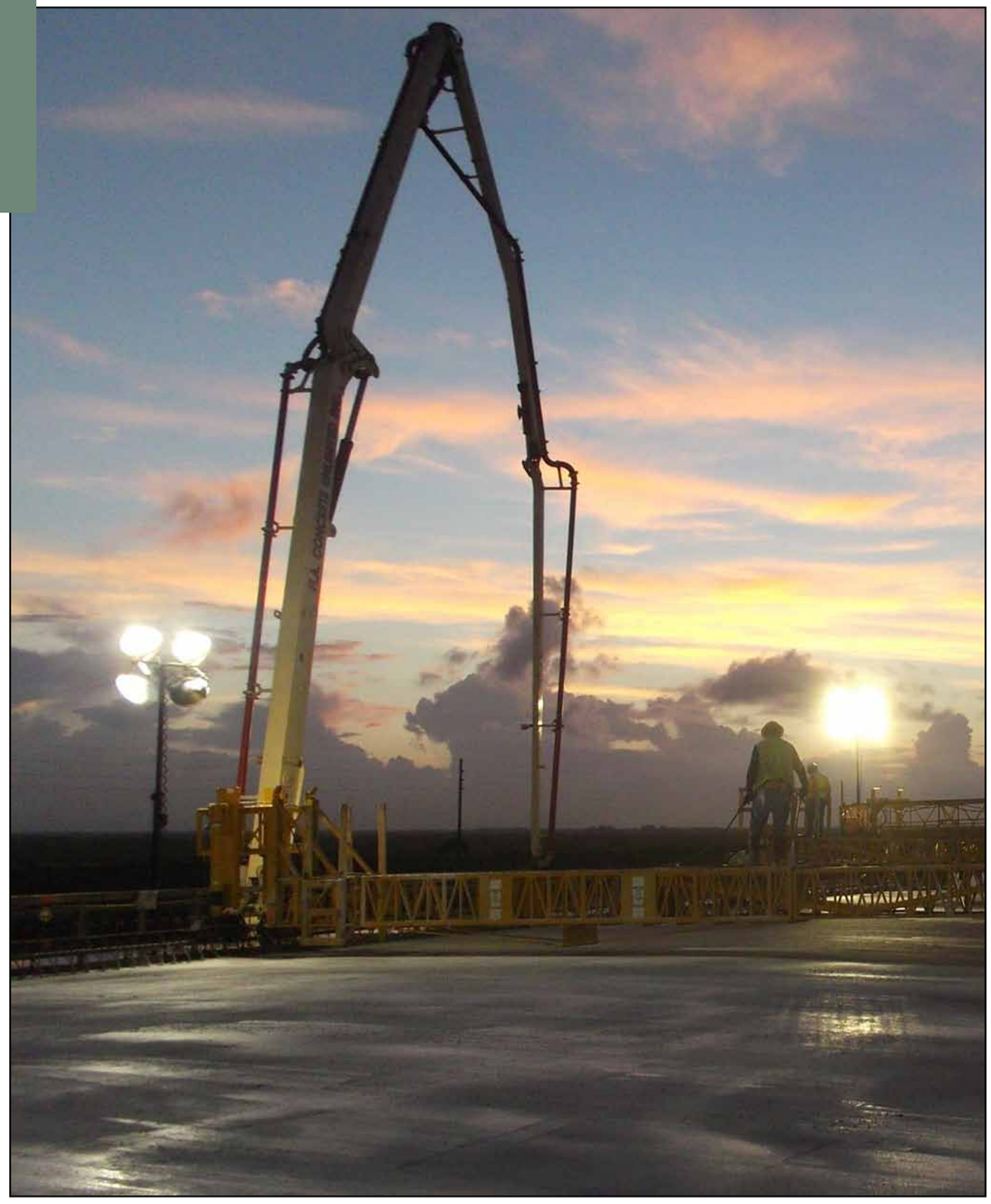

U.S. Army Corps of Engineers Jacksonville district employees and workers from Kiewit Construction, work through the night to complete the first concrete pour on the bridge deck for the Tamiami Trail Modifications project. Construction of the $81 million Tamiami Trail project, a key component of the Modified Water Deliveries to Everglades National Park, began in 2010. The project includes constructing a one-mile bridge and raising and reinforcing an additional 9.7 miles of road, allowing increased water flows that are essential to the health and viability of the Everglades. *(Photo by Rory Highstone, Kiewit Construction)*

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Whenever possible, please enjoy *The Corps Environment* without using paper.

Now is the time

Start thinking about our daily impact on the environment

By Christine Altendorf
Chief, Environmental Division

The U.S. Army Corps of Engineers has one of the largest environmental and sustainability missions within the Federal government.

Nothing new about that statement, we've all heard it before, a big responsibility that our more than 6,000 environmental professionals are well equipped to address efficiently and effectively. We've also heard about the Corps of Engineers Environmental Operating Principles, our green ethics, unveiled a little more than 10 years ago.

Although the word sustainability was just really starting to take hold in our subconsciousness at that time, the principles really didn't break any new ground. We were putting into writing the actions that many of us in Corps of Engineers districts and divisions were already doing – ensuring that we were considering the environment when making decisions about ongoing and future projects.

By formalizing a set of Environmental Operating Principles, we were reaffirming our commitment to the environment by making these principles applicable to all our decision-making and programs, and making them available to the world to see by posting them on our website: http://www.usace.army.mil/Missions/Environmental/EnvironmentalOperatingPrinciples

Through these principles we were fostering unity of purpose on environmental issues, reflecting a new tone and direction for dialogue on environmental matters, and ensuring that our employees considered conservation, environmental preservation and restoration in all Corps of Engineers activities.

And we took it to heart. Let me illustrate one way in which we have been working to achieve sustainability by talking about a project that I was involved in while working in South Pacific Division before coming to Headquarters as chief of the Environmental Division. That would be the California Bay Delta, one of our nation's ecosystems of national significance.

Christine Altendorf

As the hub of California's two largest water distribution systems, the Sacramento-San Joaquin Delta supplies drinking water to more than 22 million people and irrigation water to millions of acres of some of the world's most highly productive agricultural land. It is a haven for 750 plant and animal species and home to hundreds of thousands of people.

The challenges are enormous as South Pacific Division employees strive to balance environmental needs, economic interests and public safety on this unique and complex system … equal to those on Everglades and the Gulf Coast. On this project, the Corps of Engineers is working with the State of California and five other federal agencies (the President's Council on Environmental Quality, Department of the Interior, Department of Agriculture, Department of Commerce and the Environmental Protection Agency) to coordinate our efforts through a comprehensive Bay Delta Conservation Plan.

It's a massive undertaking that has required our SPD team to put several of the principles into action – proactively consider the environmental consequences and act accordingly; create mutually supporting economic and environmental solutions; leverage scientific, economic and social knowledge to understand the environmental context and effects of our actions in a collaborative manner; and employ an open, transparent process that respects the view of individuals and groups, just to hit upon a few of them.

Just before coming to Headquarters, I spent six months in Afghanistan as director of the Joint Programs Integration Office, Headquarters, U.S. Forces, where I was responsible for environmental and operational energy activities in the Combined Joint Operations Area-Afghanistan. Some may not see a correlation between the EOPs and our work in Afghanistan, but I can assure you the EOPs are critical there as well. As contingency bases and forward operating bases were put in place, there was a concerted effort to minimize the impact to the environment by recycling, minimizing burn pits and developing waste management plans that balanced human conveniences with environmental consequences. Even more importantly are the activities taking place as retrograde is occurring. We are pushing to leave the land in better shape once we are gone than before we arrived.

Reducing operational energy was also a focus and has several benefits – saving fuel, saving money and saving lives. First, with the use of technology, we have been able to use renewable energy, install microgrids, and develop centralized power systems that reduce fuel usage. With that reduction of fuel need, our systems run more efficiently and effectively, thereby saving hundreds of thousands of dollars. Finally, less fuel means less trucks on the road, resulting in less targets for the insurgents.

Today, 10 years after the EOPs were first adopted, I'm still focused on them, as is our new Commanding General, Lt. Gen. Thomas Bostick. It's time to step back and take a critical look at the EOPs to see if they still have any value to the Corps of Engineers.

I think they do, don't you? As an organization, the Corps of Engineers, and the Army as a whole, is even more focused on sustainability today than we were 10 years ago. If you listen to Army senior leaders, you will hear the following:

- We are relentless in our conservation of water, electricity, fuel and other precious resources.
- We actively pursue new energy technology to ensure that we are prepared for the future.
- We are good stewards of the resources given to us.

Seem to dovetail with our EOPs, don't they?

Yes, it was time to reinvigorate the EOPs. But it is even more critical that we ensure that each and every person who works for the Corps of Engineers understands that thinking about how daily actions and decisions are going to impact the environment is part of his or her job. That is the best way to demonstrate that the Environmental Operating Principles continue to be a core part of how we operate.

Essayons!

Building Strong!

ENVIROPOINTS

Restored stream open for business, fish business

By Andrea Takash
Baltimore District

As construction came to a close on the Paint Branch fish passage and stream restoration project, people waited in anticipation for this vital stream to make a comeback.

With a 30-mile drainage area into the Anacostia River, restoration of Paint Branch serves an important role to the overall health of the watershed. This ecosystem restoration project, in College Park, Md., eliminated the blockage of fish passage and opened up six miles of Paint Branch to herring and other fish species.

Throughout the past several decades, Paint Branch experienced many changes, causing deterioration and loss of habitat.

The U.S. Army Corps of Engineers Baltimore District designed the project to improve stream flow, and reduce erosion and sediment loads.

"This area has seen a lot of development, which produced an increase in impervious surface," said Andrew Roach, the district's project manager for Paint Branch. "Paint Branch receives an increase in storm water runoff that causes a large sediment load to move into the rest of the Anacostia watershed."

Roach explained that the team designed the system to be self-maintaining.

"We are training the stream to reduce sediment load and erosion," Roach said.

In addition to reducing sediment load, the project focused on helping native fish move upstream to spawn. Historically, herring called Paint Branch home, but throughout many years a sewer pipe formed a small dam, preventing fish from traveling upstream to spawn. Without moving the pipe, the team needed to change the flow of the water.

To address this challenge, crews built a cross vane using rocks and logs removed during project construction. The cross vane, a v-shaped structure, and other natural materials create a defined channel allowing the water level to rise, making the path upstream more navigable for the fish.

Ben Soleimani, district hydraulic engineer, inspects the Paint Branch project. *(Photo by Andrea Takash)*

"The team used green, state-of-the-art techniques, which are compatible for this region," said Robert Pace, chief of Baltimore District's Operations Division. "We have come a long way."

Not only does the project benefit the fish, it also reduces erosion of the stream bank near the University of Maryland, public parks, student housing and businesses. Several aspects of the project design aid in minimizing erosion, including planting native vegetation along the banks of the stream.

"We studied the whole Paint Branch stream system to determine which conditions would provide function and stability along our project reach. My fellow hydraulic engineer, Carey Nagoda, and I developed this in-house design to mimic natural conditions found in a healthy stream," said Ben Soleimani, a Baltimore District hydraulic engineer and member of the Stream Team. "As time goes on, the vegetation that establishes on the banks will not only provide additional protection but also will increase the aesthetic value."

Even after the heavy construction equipment leaves, work still remains for the project, the second phase of this two-phased project. Phase two includes additional stream restoration for reduction of erosion in a highly entrenched portion of Paint Branch.

The project also includes a monitoring plan for the next five years, the team used the Cooperative Ecosystem Studies Units Network. Institutions comprise this nationwide organization, which brings together universities, federal agencies, local and state governments, and tribes to work together on a variety of environmental projects. The Engineer Research and Development Center manages the cooperative agreements with CESU member institutions for the Corps.

"We selected a professor from the University of Mary Washington to monitor the biological condition of the stream," Roach said. "The monitoring work will provide value to the Anacostia community."

Dr. Mow-Soung Cheng, special assistant to the director for Prince George's County (Maryland) Department of Environmental Resources, the non-federal sponsor, also believes in the value of the project.

"This is the most significant Fish Passage and Stream Restoration project that the county has sponsored, in partnership with the U. S. Army Corps of Engineers, in the past few decades," Cheng said. "We hope that the county will have more opportunities to work with the Corps on similar projects in near future."

Banding

Continued from Page 1

and are also licensed banders. Licensed bander Brandi Van Roo and several other volunteers made up the team.

"In order to do this work, someone must be licensed by the government," explained Renzoni. "Banding the birds is open to anyone that has an interest and is willing to get up early for the first net check at 7 a.m."

Once the birds are caught in the nets, the U.S. government-issued numbered bands are placed around their legs and important information such as sex, age and band number are recorded. "The banding is done for scientific reasons," said Renzoni. "The information that is collected from these birds is valuable to scientists. We see a lot of variation year-to-year, some of that having to do with the fact that we don't band every day, some having to do with normal variation in species numbers from one year to the next."

Recapturing previously banded birds also provides crucial information on how long bird species live in the wild. "A percentage of the banded birds are recaptured from 1-5 years later," said Renzoni. "That's a long life span for a bird."

The information collected from the bird banding initiative is shared with the U.S. Bird Banding Laboratory at the Patuxent Wildlife Research Center in Maryland. The center is a part of the U.S. Geological Survey. The information also goes to Massachusetts Division of Fisheries and Wildlife.

West Hill Dam was selected by Wheeler for this annual project because its diverse habitats sheltered a good variety of birds. "Banding at West Hill started in 2001," said Renzoni. "Since then over 6,000 birds of 96 species have been banded here."

Improving wells

Expert recounts Afghan experience

By Len Sinfield, Hydrogeologist
Afghanistan District South

As I walk around Kandahar City, or any of the numerous villages throughout southern Afghanistan, I can't help but notice that wells seem to be everywhere.

All are outfitted with the distinctive India Mark III or IV hand pumps that seem to be ubiquitous throughout developing countries — you can find them in Djibouti, Kenya, and throughout Asia. Scratching my head as I see these hand pumps, I ask why the villagers complain about the lack of water. International charities have been putting in village-level wells for years. There should be plenty of water.

I have my answer with a few up and down cranks on the hand pump. All I hear is dry clanking inside the pump. No water.

The water table is not the problem. There is no question that it has been dropping with the ongoing 15-year drought in Afghanistan, but it has not dropped that much. Water issues are not simple here and are affected by the complexities of Afghanistan — state, culture, hydrogeology, poverty, international donors, poppy farmers drawing down the water table with large diesel pumps, and war all are in the mix.

Hardness of the groundwater is a significant factor. High levels of calcium hardness combined with high sulfate concentrations cause hard water deposits or encrustations on plumbing fixtures and well parts.

Well screens often become clogged with flows steadily dropping off to nothing within two to three years of installation.

See Water, Page 6

An example of a modern Afghan well-drilling rig with a trained crew. The crew just hit good quality water at a depth of 420 meters. *(Photo by Len Sinfield)*

District transforms site into wetlands

By Scott Lawrence
Seattle District

To provide a cleaner waterfowl feeding ground in the midst of an area contaminated from historic mining operations, the U.S. Army Corps of Engineers Seattle District recently finished transforming agricultural lands into wetland habitat at a privately owned farm east of Lake Coeur d'Alene, Idaho.

The pilot project in the Lower Coeur d'Alene Basin, known as the Schlepp Agriculture-to-Wetland Conversion project, was overseen by the Environmental Protection Agency in conjunction with U.S. Fish and Wildlife Service, Ducks Unlimited and the Corps, which was responsible for executing construction.

Located within the Bunker Hill Superfund Site, an area with high levels of contaminated soil from a century of Silver Valley mining operations, the Schlepp project involved converting nearly 400 acres of private farmland into wetland habitat, providing waterfowl a cleaner alternative to feeding sites contaminated with lead and other heavy metals.

Named for the land owner, Michael Schlepp, who allowed the EPA to convert his property for conservation purposes, the project is significant since many wetlands in the lower basin contain lead at concentrations higher than 1,800 parts per million (ppm), a level studies show is fatal to birds that ingest soil during feeding. The FWS estimates that approximately 150 birds die each year in the lower basin from ingesting contaminated soil.

The multi-year project was divided into two segments, the east and west fields, with the goal of lowering average lead concentrations below the EPA's Bunker Hill Record of Decision cleanup level of 530 ppm for protection of waterfowl.

Work on the east field was finished in 2007 and the west field, which was being used to farm wild rice, was completed late last year.

"The west field was more contaminated and more complicated because we were turning an active rice field into a wetland," said Amy Baker, the Schlepp conversion project manager for the Corps. "It was historically a wetland converted for farming, so we had to bring it back to its natural state."

Cleanup techniques at the site varied, dependent upon contamination depth. In areas where contamination was relatively shallow, limited to the upper six inches, soil was removed and deposited in an on-site ditch, capped with clean soil and vegetation.

In places where contamination was deeper than six inches, workers used a selective handling technique, flipping and burying contaminated soil beneath cleaner lower levels. Confirmation soil samples were then taken to ensure that the top six inches held lead concentrations below 530 ppm, before seeding the land with wetland vegetation and grasses meant to attract migrating birds to the area.

"The actual achieved average was 288 parts per million, well beneath the goal, but more importantly we cleaned up a portion of the Bunker Hill site so birds have a cleaner place to feed," Baker said.

The $3 million agriculture-to-wetland project was funded by EPA settlements with Coeur d'Alene Mining and the Asarco bankruptcy settlement.

Although the west field is only recently completed, migrating waterfowl have returned to the east field, dotting the new wetlands on Schlepp Farm and seemingly approving of the new habitat.

Birds dot the surface of the restored wetlands, flocking to the once contaminated land within the Bunker Hill Superfund Site. *(USACE Photo)*

Water

Continued from Page 5

Pump parts will also become encrusted and stop working. Often, no efforts are made to rehabilitate these wells because of cost or lack of technical know-how. International charities sometimes install new wells instead, having lost institutional knowledge or not knowing of the existence of existing, inoperable wells.

To make the problem worse, Afghan drillers also install wells in the shallowest aquifer, which typically has the highest hardness and is contaminated with high bacteriological levels from raw sewage infiltration. The Afghans drillers and villagers don't want deeper wells for some reason. After many arguments, I've discovered that a quote from the Quran seems to help *"Allah said: And it is He who has let free the two seas: one palatable and sweet, and the other salty and bitter; and He has set a barrier and a complete partition between them. He has placed a barrier of land between these two types of waters, so that they do not transgress upon each other, which would spoil the characteristics they were created with."* Those barriers of land separating the salty from the fresh also occur under the ground.

One international donor has been very successful in rehabilitating wells using air-lift redevelopment methods. Air-lift well development uses an air compressor and a drop to clean the interior of a well and the filter pack that surround a well. The tube is lowered to the bottom of the well and connected to an air compressor on the surface. Pushing large air bubbles into the well casing causes surging of water in the well, cleaning the well screen, filter pack, and casing as well as lifting out sediment with rising water. Air-lift development is generally used immediately after a well is built to clean up the well and decrease the turbidity of the water, but is also very useful in well rehabilitation. We have adopted this simple approach as our preferred method for well rehabilitation.

With the support of USACE water well subject matter experts, military Civil Affairs Teams have been successful in helping small, local businesses repair Afghan wells. Our water well experts help train both the CA teams and the local handymen on well repair and how to assess water well problems. A few districts already have successfully "graduated" several handymen from the program and the local villagers are now paying for well repairs.

We are also supplying diagrams of proper well construction in the local language to CA Teams, local handymen and international donors to help convey proper well construction details to the Afghan drillers.

Our emphasis is shifting from villages, where international charities are installing wells, to district center watering points and municipal wells.

Large capacity wells at government district centers help support the local government by giving the local populace a place where they can always obtain potable water and where only one well will require maintenance. As the population within Afghanistan shifts from rural to urban, increasing the ability for city water systems to expand and supply water will be a growing need.

We may not be able to solve complex Afghan water problems, but by focusing on both small fixes with villagers and the larger issues with supporting governance and helping supply water to the larger urban areas, we can help them start helping themselves.

Project recruits aquatic life

By David Warren, Project Manager and Alisha Means, Biologist
Charleston District

As part of the U.S. Army Corps of Engineers Charleston District operation and maintenance responsibilities for the Atlantic Intercoastal Waterway, the Corps must maintain disposal areas for dredge material, but these disposal areas have been experiencing growing impacts from shoreline erosion.

A cost-effective solution, motivated in part by the results from oyster restoration work completed by the South Carolina Chapter of The Nature Conservancy, was to construct an artificial oyster castle.

The oyster castle is designed to be an instant habitat for oyster spat and growth. Oyster castle blocks are made of shell, limestone and concrete.

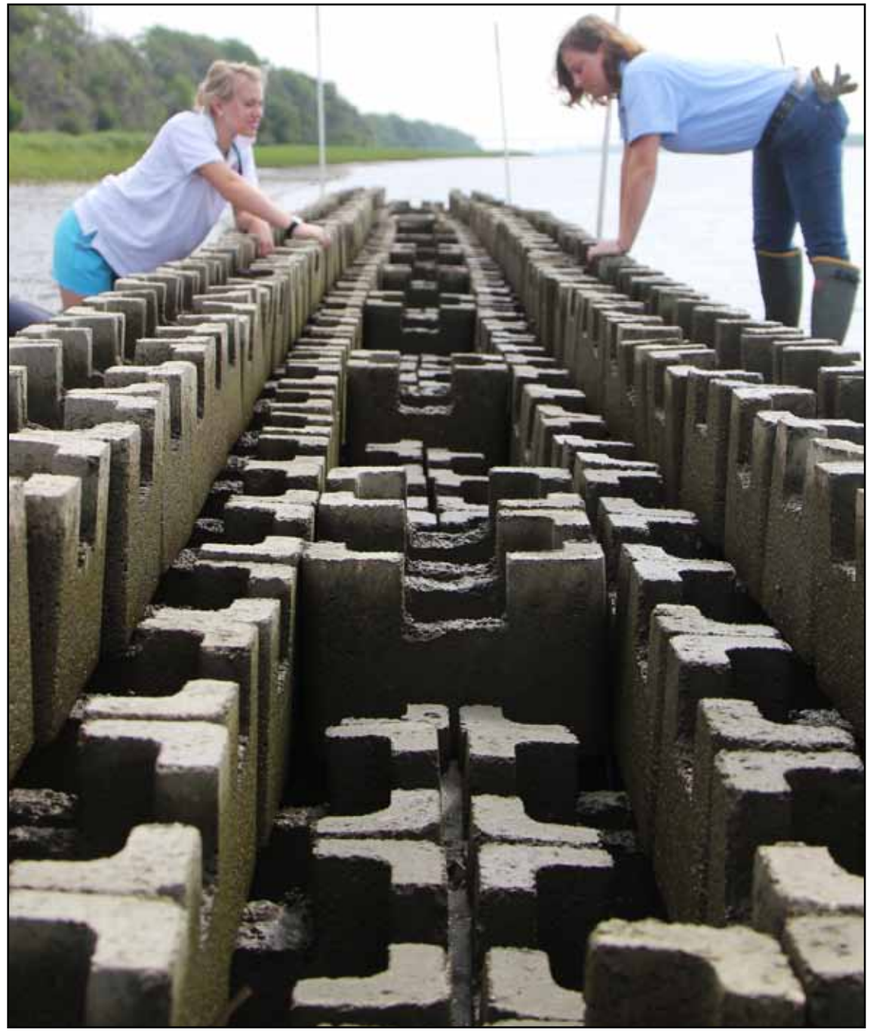
The 12 inch by 8 inch square blocks are shaped in a tiered-structure that can interlock to resist constant wave motion.

The goal is to determine if these types of projects could help protect the disposal areas from shoreline erosions while providing an added environmental benefit.

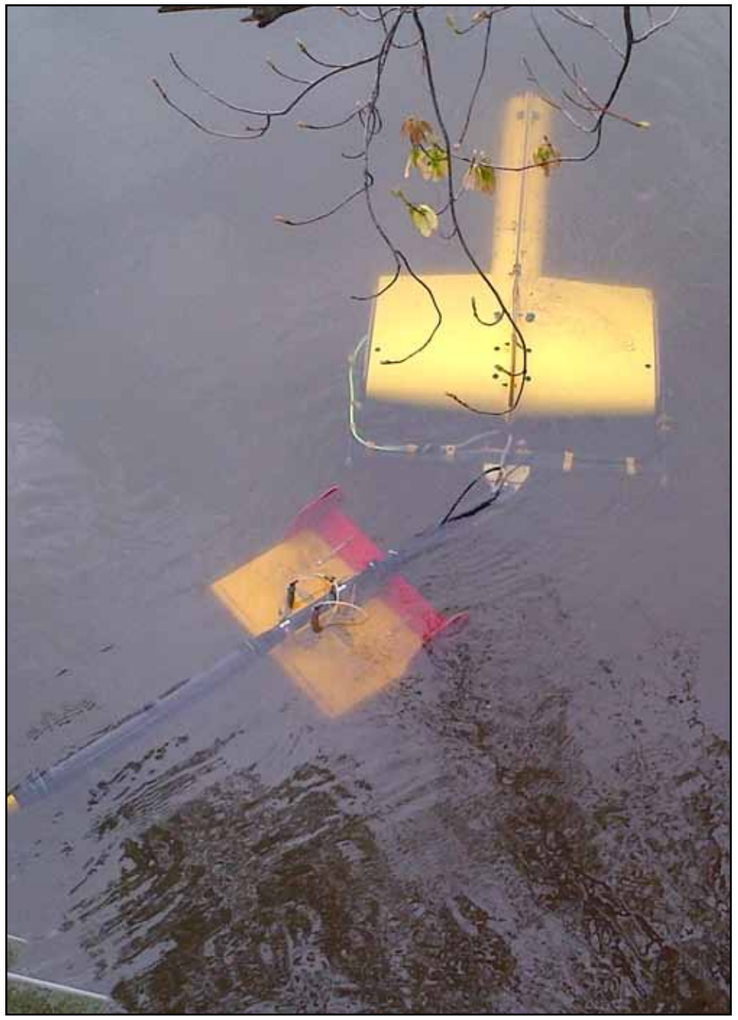
In addition to providing immediate habitat for oyster growth, the placement of the castles fosters sedimentation behind them and encourages the re-growth of natural vegetation, according to previous studies on this type of structure. This provides a shoreline erosion prevention benefit that is a mix of engineering and nature.

The district awarded a contract to Aerostar Environmental Service, Inc., to install oyster castles near the disposal area just south of the Isle of Palms, S.C.

The fully installed structure is 70 feet long by 6 feet wide and is constructed of approximately 800 blocks. The site will now be monitored for oyster recruitment and growth, the amount of sedimentation that occurs behind the castles and the degree to which vegetation is being reestablished behind the castle structure. Based on results of TNC projects, this type of effort should provide a more cost-effective method of erosion control to protect along the waterway while providing environmental benefits for oysters and other aquatic creatures.



Corps employees check for signs of life on a recently completed oyster castle. *(Photo by Sara Corbett)*



New underwater technology is used in the Kishwaukee River at the former Camp Grant near Rockford, Ill., to help detect and characterize anomalies on the riverbed. *(Photo by Katie Newton)*

Submersible takes investigation to new depths

By Katie Newton
Louisville District

The U.S. Army Corps of Engineers Louisville District is now using towed sensor array technology to help identify underwater anomalies in the Kishwaukee River at Camp Grant, Ill. This technology will also be evaluated for use in an upcoming Chesapeake Bay survey at Fort Monroe, Va.

This new underwater technology, the Underwater Simultaneous EMI and Magnetometer, called USEMS, employs a two-sensor array to locate underwater anomalies. The first sensor array, a magnetometer, detects ferrous metals including those that are buried deep below the silt line. The second sensor array, electromagnetic, detects all metals, including aluminum and brass, found on the bottom or just below the silt line. USEMS is the only marine system in the world to simultaneously deploy these two sensors.

"This dual array system allows geophysicists and explosive ordnance disposal specialists to work together in streamlining the number of anomalies that are investigated," said Brooks Evens, the Louisville District technical manager for the two projects. "It can help distinguish between a cannonball that might be in the channel or an old boat motor that doesn't need our attention."

The submersible "fish" containing the two sensors looks much like a miniature submarine and is towed behind a boat attached to a carbon fiber boom. The fish's depth is controlled by an operator on the boat as the fish is towed one to two feet off the bottom of the riverbed. The fish's EMI sensor sends out electromagnetic pulses to detect buried metal. In addition, the fish's magnetometer sensor measures disruptions in the Earth's magnetic field caused by buried ferrous metal. The strength of the signals is plotted and used to determine which anomalies to investigate.

Geophysicists analyze the characteristics and then turn over a "dig sheet" to EOD Specialists who then use an underwater camera for further exploration and resolution of the anomaly.

The benefits of the innovative technology seem endless. "It reduces man-hours — we're able to cover larger zones with fewer man hours, which helps to cut cost," Evens said. "It saves time, money and makes everything safer."

USEMS was developed and built by Science Applications International Corporation and the U.S. Army Engineering and Support Center, Huntsville, with funding from the Environmental Security Technology Certification Program. They have worked to refine the technology during the past few years on two other pilot sites across the country and now at one of the Louisville District sites.

The technology proved successful in the river at Camp Grant in Rockford, Ill. in the spring. Camp Grant is a World War II Formerly Used Defense Site, used from 1915-1947, that required remediation of several rifle ranges and investigation of the Kishwaukee River, which divides the park in two.

In April, USEMS was used to identify and then investigate 35 "flagged" anomalies. Of those 35 anomalies, none were identified as munitions or explosives of concern, or MEC. Only rusted rebar, road signs and farm implements were found in the river.

"Camp Grant worked out really well," Evens said. "It will allow us to consider expanding the current Land Use Controls out into the river or to say we don't need to continue searching the river bottom for MEC. This helps to confirm that the river presents a low probability for encountering MEC."

"This type of technology was a perfect solution for the Camp Grant site," said Valerie Doss, Camp Grant project manager. "We might possibly use it again in Spoon River at Camp Ellis as well."

Since things worked out so well in Illinois, the Corps also plans to use USEMS as one of the potential underwater technologies at Fort Monroe in Virginia in the summer of 2013.

Typically, Fort Monroe wouldn't fall into the Louisville District footprint, but as part of Base Realignment and Closure, the Louisville District was assigned eight project sites outside of its region — one of which was Fort Monroe.

"The working relationship between BRAC and the Louisville District has been ongoing since 2005," Evens said. "The customers have been satisfied and so we want to work hard to complete the work at those sites."

In the summer, the Corps will begin an initial investigation of 55,000 acres of underwater real estate at Fort Monroe to determine if and what should be done in the waters of the Chesapeake Bay surrounding the installation, depending on historical research for water ranges,.

The area includes firing arcs put in place after the War of 1812 to protect the Chesapeake Bay, where munitions such as cannonballs, parrott rounds and modern 90mm projectiles were fired.

Historical research will be conducted to determine the next step, which will likely include underwater investigation. At that point the Baltimore District will provide support to the Louisville District throughout the investigation. "The new technology will save time and money for the government," Evens said. "Additionally, the area we plan to investigate in the Chesapeake Bay could potentially help to protect fisherman, recreational users, utility crossings and dredging operations by determining if any unacceptable hazards are present."

These new underwater sensor arrays will also provide benefits to projects reaching far beyond the Chesapeake Bay.

"It's a good system," Evens said. "It's still in infancy stages, but it will be a helpful tool moving into the future because the Army, Navy, Air Force and Marines have a vast number of water ranges that this type of technology will help with."

Corps, Army Task Force team up for alternatives

Request for proposals seeks to harvest $7B in renewable energy

By Debra Valine
U.S. Army Engineering and Support Center, Huntsville

The U.S. Army and Corps of Engineers achieved a milestone when more than 600 interested attendees took part in the pre-proposal conference for the $7 billion Renewable and Alternative Energy Power Production for DoD Installations Multiple Award Task Order Contract (MATOC).

The Corps of Engineers, through its Engineering and Support Center, Huntsville, issued the MATOC Request for Proposal Aug. 7 for $7 billion in total contract capacity to procure reliable, locally generated, renewable and alternative energy through power purchase agreements. The $7 billion capacity would be expended for the purchase of energy during a period of 30 years or less from renewable energy plants that are constructed and operated by contractors using private sector financing. The solicitation closes Oct. 5.

The conference, hosted by the U.S. Army Energy Initiatives Task Force and the Huntsville Center was held at the Bob Jones Auditorium on Redstone Arsenal, Ala. The conference provided representatives from industry with an overview of the MATOC RFP and USACE's general procurement process and offered an opportunity for a questions and answers session.

The conference places the Army one step closer to putting a contract vehicle in place that will help installations meet mandated energy goals.

Col. John Hamilton, Redstone Garrison commander, opened the conference by telling attendees the importance of renewable energy to energy security on Army installations. He cited the power outages in Huntsville following the April 2011 tornadoes as an example and discussed the challenges of improving energy security and sustainability while remaining cost conscious.

Col. Robert J. Ruch, the Huntsville Center commander, talked about the goals the U.S. Army, the EITF and the Huntsville Center hope to achieve with the RFP.

"This is a huge opportunity for the Army, and we're glad you want to be part of it," Ruch said.

"We are truly excited to be leading this effort that will help installations meet mandated energy reduction goals far into the future. Increasing energy security is a top priority for DoD and Army leadership, and this effort will lead to enhanced energy security and sustainability for our installations."

In April, the White House announced that the Defense Department was making one of the largest commitments to clean energy in history, by setting a goal to deploy three gigawatts of renewable energy — including solar, wind, biomass or geothermal — on Army, Navy and Air Force installations by 2025. That is enough energy to power 750,000 homes. The Army's goal is one gigawatt of that total. These goals support the broader DoD goal to enhance installation energy security and reduce installation energy costs.

"This MATOC is a key contracting vehicle that will be used to procure reliable, locally generated, renewable and alternative energy through establishing a pool of qualified firms and contractors with solar, wind, biomass and geothermal technologies to compete for individual Power Purchase Agreements," Ruch said.

By awarding the contract, the Army will increase its agility by streamlining acquisition processes to develop large-scale renewable energy projects that use private sector financing. This approach will help speed overall project development timelines to ensure the best value to the Army and private sector.

John Lushetsky, the EITF's executive director, spoke about the role of the EITF in helping the Army meet its renewable energy goals.

"To reach the Army's goal of deploying 1 GW of renewable energy by 2025 will require a different way of doing business with the private sector. The issuance of the MATOC is a clear milestone for us and the significant interest we've seen from industry indicates that we are on the right path," Lushetsky said.

"The EITF has worked closely with the Huntsville Center to make the MATOC a streamlined and agile tool for the government to procure power from large scale renewable energy projects. We reviewed and responded to over 900 comments from industry to make this the best product possible. We think we accomplished our goal but ultimately the people in this room will tell us if we've got it right," Lushetsky said.

Attendees at the conference said the information was helpful and the partnering opportunities were important.

Kurt Adams, executive vice president and chief development officer for First Wind, Portland, Maine, said the explanation of how pricing would work was very beneficial since he has projects that range greatly in price per kilowatt hour.

Artis Brazee, vice president for operations, MCC Construction Corporation, Greenwood Village, Colo., said the opportunity to speak with the other conference attendees about possible partnerships was helpful.

John Lushetsky, U.S. Army Energy Initiatives Task Force executive director, speaks about his organization's role in the Renewable and Alternative Energy Power Production for DoD Installations Multiple Award Task Order Contract*. (Photo by William S. Farrow)*

"This is a unique effort and partnership with the EITF, USACE and other DoD agencies. We want to create processes and pipelines that will help ensure Army energy security, and ultimately, to make the Army the preferred partner with industry in developing large-scale renewable energy projects."

John Lushetsky
Executive Director
U.S. Army Energy Initiatives Task Force

Marsh Islands restoration at Jamaica Bay, N.Y. *(Photo by Melissa Alvarez)*

Partnership aims for balance between economy, environment

By Lisa Baron, Project Manager
New York District

The U.S. Army Corps of Engineers, New York District and its regional partners are actively committed to achieving the vision of a world class harbor estuary.

This vision balances the economic revitalization of the Port of New York and New Jersey with ecosystem restoration and critical infrastructure protection.

Throughout the years, the district and The Port Authority of New York and New Jersey have deepened more than 35 miles of shipping channels to accommodate the large container ships that dominate worldwide shipping today. These improvements will keep The Port of New York and New Jersey competitive and viable, particularly with the expansion of the Panama Canal scheduled to be completed by 2014.

The Port of New York and New Jersey is a key regional and national economic engine providing about 280,000 total jobs in New York and New Jersey, nearly $11.6 billion in personal income, more than $37.1 billion in business income and almost $5.2 billion in tax revenues while serving 35 percent of the U.S. population.

To date, the Harbor Deepening Project has beneficially used more than 60 million cubic yards of sediment, which includes constructing more than100 acres of tidal marsh, establishing offshore reefs, nourishing beaches, capping landfills and Brownfields, and capping the Dredged Material Historic Area Remediation Site off the coast of Sandy Hook, N.J.

As the deepening project nears completion in 2014, more than 3.6 million cubic yards of high quality sand are being dredged from Ambrose Channel, which will provide the 50-foot pathway from the ocean to Port Elizabeth and Newark by December.

Maximizing the beneficial use of dredged material has been the policy at the New York District since the inception of the Harbor Deepening Project.

A recent district effort, the New York and New Jersey Harbor/Jamaica Bay Multi-Project Initiative exemplifies this policy in the effort to use the sand dredged to remediate, restore and protect the harbor estuary.

This Initiative represents an innovative business approach consistent with the goals of the USACE Civil Works transformation, using integrated water resource management, collaboration and partnering to meet the challenges of federal and local constrained budgets, critical infrastructure needs and the societal goal of ecosystem restoration.

The goal is to use dredged material from both the Harbor Deepening Project's Ambrose Channel and the operation and maintenance of the Jamaica Bay, N.Y., Federal Navigation Channel to advance marsh island restoration projects in Jamaica Bay, N.Y.; restore more than 75 acres of wetlands; stabilize the shoreline at Plumb Beach, N.Y. to protect the essential transportation infrastructure of the Belt Parkway and sewer infrastructure; cap and close the Newark Bay Confined Disposal Facility in New Jersey; and continue capping the Historic Area Remediation Site.

The integration of these individual programs and projects leverages authorizations and funding sources while reducing costs during construction and saving taxpayer dollars — such as reduced mobilization costs and sharing of sand placement/pipeline infrastructure.

Ecological and regional benefits are maximized from marsh island restoration and the creation of coastal wetlands which help stabilize and protect the shoreline, provide important habitat and improve water and sediment quality.

"The Army Corps has a strong commitment along with our partners and stakeholders to restore critical habitat within Jamaica Bay, maintain the ecological integrity of the New York and New Jersey Harbor Estuary, with the economic benefits of deepening The Port of New York and New Jersey," said Col. John R. Boulé II, New York district commander. "The region continues to work together to achieve our vision of a world class harbor estuary for future generations."

The district continues to work with its dredging contractors and partners to capture additional opportunities to beneficially use sand from Ambrose Channel and the Jamaica Bay Federal Navigation Channel and continue advancing additional restoration opportunities throughout the estuary while saving new mobilization costs for equipment prior to project completion.

The success of this beneficial use initiative is due to strong partnerships and consensus goals within the region. These strong partnerships and the steadfast commitment of many federal, state and local partners resulted in efficient coordination to develop complex plans and specifications, approval of technical reports, execution of funding agreements, secure federal and non-federal funds and issuance of permits which were essential for program execution.

The Port Authority of New York and New Jersey, New York State Department of Environmental Conservation, New York City Department of Environmental Protection and New York City Department of Parks and Recreation provided significant non-federal funds serving as non-federal sponsors. Other important partners include the National Park Service, N.Y./N.J. Harbor Estuary Program, National Resources Conservation Service and several other stakeholders.

Regional partnerships within the estuary are fundamental to advancing restoration at a time when funding is limited. The leveraging of non-federal funds has resulted in the implementation of key priority projects for the region outlined in the Army Corps' Hudson-Raritan Estuary Comprehensive Restoration Plan; the U.S. Department of the Interior and New York City Joint Strategy to restore Jamaica Bay; and the New York City Comprehensive Waterfront Plan, "NYC Vision 2020" and "PlaNYC." The initiative advances restoration targets and goals outlined in the plan, which when implemented, will advance the vision of a world class harbor estuary.

Corps celebrates professionals, sustainability

By Candice Walters
Headquarters USACE

One of the best ways to ensure that sustainability becomes part of the U.S. Army Corps of Engineers way of life is to celebrate the agency's outstanding professionals for their creativity and those projects that promote sustainability initiatives.

This spring, the Corps of Engineers unveiled its 2012 Chief of Engineers Awards of Excellence program, which combines the USACE Sustainability Awards, Energy Hall of Fame and the Design and Environmental Awards Programs into a new all-encompassing program.

The new Awards of Excellence Program recognizes and rewards exceptional performance by individuals and teams demonstrating excellence in overall quality, sustainability or energy performance by supporting Corps of Engineers goals, such as those in the USACE Sustainability Plan and Executive Order 13514: Federal Leadership in Environmental, Energy and Economic Performance. Some of the USACE winners went forward to compete in the federal Green Gov awards program.

"We are making significant progress toward design excellence and implementing energy efficient and sustainable solutions, but we must continue to adopt new strategies and tools to reduce our impacts on the environment and surrounding communities. These award winners are evidence of your efforts to help the nation realize a more efficient, effective and sustainable future," Maj. Gen. Merdith "Bo" Temple, then Acting Chief of Engineers, said this spring in announcing the nomination process.

The 2012 winners received their awards In August at the USACE Strategic Leader Conference.

The sustainability categories in Chief of Engineers Awards of Excellence included Sustainability Hero; Green Innovation; Green Dream Team; Good Neighbor, Lean, Clean and Green, and Building the Future.

USACE Sustainability Heroes:

Dr. Ilker Adiguzel, Director of the U.S. Army Engineer Research and Development Center Construction Engineering Research Laboratory (ERDC CERL), and Sven Lie, supervisor, Electrical/Mechanical Section of Design Branch, Engineering Division, Seattle District.

Dr. Adiguzel, is a strong champion and change agent for energy and sustainability within USACE, Army and Department of Defense and is regarded as an influential technical leader and effective mentor. He championed the establishment of ERDC's Center for the Advancement of Sustainability Innovations; leads support for FedCenter; serves on the Headquarters USACE Energy Governance Council; supports research and development to improve long-term availability of training lands; and supports the development of Installation Sustainability Plans and a net-zero approach to installations.

With an unusual combination of vision and skill, Lie has become a leader in the discovery and implementation of an ongoing myriad of sustainable solutions, in his own district and throughout the industry. Lie and staff recently capitalized on a pump-and-treat operation by using the treated water for a ground water source heat pump application. His team employs simple energy strategies to reduce operations and maintenance and overall cost of ownership by using smaller-sized heating equipment that periodically needs to be replaced.

Green Innovation: *Bioremediation of Solvent-Contaminated Low-Permeability Zone: Dr. David Gent, U.S. Army Engineer Research and Development Center Environmental Laboratory (ERDC EL).*

This technology replaces the disruptive practice of "dig and haul" to clean up chlorinated solvents with a very low energy *in situ* process. Gent entered into a Cooperative Research and Development Agreement between the ERDC EL and Geosyntec Consultants. This unique technology, termed EK-BIO™, is an electrokinetics remediation technology for amending low-permeability soils, using electron donors and bioaugmentation with microorganisms for biological degradation and mineralization of chlorinated solvents. This process has the potential to degrade contaminants in place, especially in low-permeability contaminated soils, sediments and groundwater where other more conventional technologies fail.

Green Dream Team: *High Performance Computing Green Team: Greg Rottman, U.S. Army Engineer Research and Development Center Construction Engineering Research Laboratory (ERDC CERL)*

The five DoD Supercomputing Resource Centers (DSRCs) operated by the Army, Navy and Air Force are federated under the DoD High Performance Computing Modernization Program Office. The centers formed the Facilities Community of Practice. This green team has proposed numerous changes to the supercomputing center infrastructures, consistent with best practices. As these practices have been implemented, each center has seen a marked increase in efficiency and cost savings. One recommendation resulted in saving approximately 30 percent of mechanical power consumption.

Good Neighbor: *Alabama Living Shorelines General Permit: Regulatory Division, Alabama Coastal Branch, Mobile District*

Mobile District developed a Living Shorelines Regional General Permit, the first of its kind within the South Atlantic Division

See Excellence, page 11

The Tres Rios Environmental Restoration Project, Phase II Flow Regulating and Overbank Wetlands, Salt River, Ariz. earned the Chief of Engineers Award of Excellence in the Environmental Category. *(Courtesy photo)*

Project first in renewed effort

By Diana McCoy
Kansas City District

A lake project in eastern Kansas was the first to complete a fiscal 2012 sustainability project throughout the Kansas City District and the entire U.S. Army Corps of Engineers — a project which is on track to save the Corps several hundred dollars annually.

Jim Franz, natural resource manager at Melvern Lake in Melvern, Kan., initiated the project to eliminate an electric meter and subsequent power usage that supplies lighting to the lake's large entrance sign below the project office.

"This was a very simple project," Franz said. "The entrance sign was lit with two lights that were serviced by normal power. All we did was kill the power from the power company and put up a solar panel with two LED lights. The sign runs only off of solar electricity now."

Jim Franz, natural resource manager for Melvern Lake in Melvern, Kan., shows off a solar panel installed to provide energy for LED lights that light the large entrance sign to the lake. *(Photo by Diana McCoy)*

The project took maintenance crews about one day to complete and cost just under $900.

"This is not a grandiose new idea," said Franz. "But it's one that is easily done for us. Solar lighting is not a new concept, but one that we could do quickly and affordably with the price of solar units coming down."

Sustainability has been a part of the culture of the U.S. Army Corps of Engineers since March 2002, but at the present time the Corps is not meeting its progress goals, having started late on all aspects of the Federal Energy Management Program Execution.

Because fiscal year 2012 is the first year the Corps has had funding in the budget for investments in facility energy/water efficiency, and with the late distribution of those funds, execution of the FY12 sustainability/energy requirements is just getting under way.

The Corps of Engineers' sustainability program focuses on two lines of operations — looking at internal operations to improve efficiencies in facilities it owns and operates, and improving the agency's ability to support its customers with services and project within the context of their sustainability goals and targets.

"We'll gain probably $500 to $600 per year in electrical savings," said Franz.

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Excellence

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and possibly the Corps of Engineers. Living shorelines address erosion and degradation of shorelines by providing for the long-term protection, restoration and enhancement of both stable and degraded shorelines by using plants, stone and other natural materials. Mobile District's Coastal Alabama Team expanded the concept to make it more viable for a larger number of projects and to allow applicants to avoid a lengthy and costly permit process.

Lean, Clean and Green, and Building the Future: *Community Emergency Services Station, Fort. Bragg, N.C.; Charles Grainger*

The Fort Bragg, N.C., Community Emergency Services Station was one of the Army's first attempts to identify the feasibility for Leadership in Energy and Environment Design Platinum Certification as the standard for all Army buildings. Knowledge from this project is being incorporated into standard design guidance for military construction. Numerous technical notes to help others duplicate the process and technologies used at the station are being published. Features include reduced potable water use by 52.1 percent, energy cost savings of 34.1 percent, diversion of 90.43 percent of all on-site generated construction waste from the landfill, and 28.45 percent of the total building materials used was recycled materials.

The Chief of Engineers Design and Environmental Awards Program is in its 47th year of recognizing and promoting excellence in design achievements by the Corps of Engineers and its professional partners.

Two types of awards are given in each of the two primary categories of Design/Military Design and Environmental/Civil Design.

The Chief of Engineers Award of Excellence is the highest award for an entry that truly exhibits excellence in all professional design disciplines. Honor Awards are given in both primary categories to entries that demonstrate or stimulate excellence in each of the design disciplines. Merit Awards for given for projects that may be related to individual disciplines (landscape architecture, interior design, planning histories preservation, adaptive reuse, sustainable design, discipline specific engineering, etc.).

The Community Emergency Services Station, Fort Bragg, N.C., earned awards in two categories and called a model for future projects to emulate by the awards jury. *(Courtesy photo)*

The USACE Design Team of the Year Award is given to the design team of the in-house designed project that achieves the highest level award in the Chief of Engineers Design and Environmental Awards Program.

Design Awards

Chief of Engineers Award of Excellence
- Tyndall Fitness Center, Panama City, Fla.

Building the Future Award
- Community Emergency Services Center, Fort Bragg, N.C.

Honor Award
- National Geospatial-Intelligence Agency Campus East, Fort Belvoir, Va.

Honor Award
- Conceptual Design, Weed Army Community Hospital, Fort Irwin, Calif.

Merit Award
- Restoration – Building 465 Renovation, Fort Leavenworth, Kan.

Merit Award
- Engineering – Lower Snake and Columbia Rivers Extended Navigation Outage for Major Repairs, Portland, Ore.

Environmental Awards

Chief of Engineers Award of Excellence
- St. Louis Harbor River Training Structures, Upper Mississippi River, St. Louis

Merit Award
- Sandbar and Chute Complex, Missouri River Mile 777.7, Vermillion, S.D.

Merit Award
- Little Goose Spillway Weir, Snake River, Starbuck, Wash.

U.S. Army Corps of Engineers Design Team of the Year Award
- St. Louis Harbor River Training Structures, Upper Mississippi River, St. Louis District – Dawn M. Lamm, Robert D. Davinroy, David C. Gordon, Edward H. Riiff, Edward J. Brauer, Jason L. Brown, Leonard L. Hopkins, David R. Busse, Shawn Kempshall, Kenneth M. Cook, Teri C. Allen, Brandon M. Schneider, Donovan B. Henry, William R. Trout, Jared R. Caldwell, Todd M. Stoeckel, Michael T. Rodgers, Claude N. Strauser, Stephen Redington, Mark S. Alvey, Maryilyn Kwentus, Lance Engle, Timothy Lauth

AWARDS

District earns recognition

By Sandra Arnold
Galveston District

The U.S. Army Corps of Engineers Galveston District was recognized July 31 with the Galveston Island Nature Tourism Council's Nature Service Award for its ecosystem restoration initiatives at the Corps Woods and the East End Lagoon Project in Galveston, Texas.

"This is a tremendous honor for our district to be recognized with this award," said Col. Christopher Sallese, Galveston District commander. "The state of our environment is always at the forefront as we plan projects within our local communities, and our Galveston projects are two great examples of what we can accomplish when we collaborate with our partners."

The GINTC President Diane Olsen applauded the district for protecting the heavily wooded strip of land located on the island's East End and for efforts made toward keeping wild spaces protected for both animals and people alike to enjoy.

"Working together we cannot only preserve precious natural landscapes but also find ways to make them accessible for people to enjoy and learn from and we look forward to working together for this common goal," Olsen said.

The Corps Woods and the East End Lagoon Project are part of the beneficial use plan for material dredged from the Houston Ship Channel, and the area quickly became pristine habitats for wildlife and a favorite destination for migratory birds. Ted Eubanks, co-creator of the Great Texas Coastal Birding Trail, said the area provides birders with exceptional opportunities to sight many species in one visit.

"The Corps Woods and the East End Lagoon represent district projects that support an array of nationally important environmental goals, including restoring ecosystem health; conserving and improving habitats for plants, fish and wildlife; protecting and restoring rare, threatened and endangered species; providing conservation and education; keeping the nation's waters clean; and achieving no overall net-loss of wetlands," Sallese said.

Galveston District dredges about 30 to 40 million cubic yards of material from Texas channels for navigation and commerce each year. The material collected is often used for ecosystem restoration projects.

"It's imperative that we continue to work in partnership with organizations such as the Galveston Island Nature Tourism Council to ensure that the district's environmental efforts meet the needs of the community and that we seek to find solutions to challenges," said Sallese.

Employee honored by EPA

Development of online tool helps communities

Press Release
U.S. Environmental Protection Agency

The Environmental Protection Agency Office of Research and Development recognized Nancy M. Porter, U.S. Army Corps of Engineers Headquarters Environmental Support Team, as a member of the Sustainable Management Approaches and Revitalization Tools-electronic (SMARTe) Development Team with an ORD Impact Award. The award recognized the team for developing and disseminating SMARTe to help people restore their environment and revitalize their communities.

Porter was the USACE project manager forward to EPA's Office of Brownfields and Land Revitalization, serving as a liaison to ORD while SMARTe was being developed. As liaison she worked with the ORD staff to develop tools to assist communities in their revitalization efforts.

SMARTe is a unique, open-source, web-based, decision support system for developing and evaluating future reuse scenarios of potentially contaminated land.

EPA's Office of Research and Development, EPA's Regional Offices, the German Federal Ministry of Education and Research, and the Interstate Technology and Regulatory Council all collaborated in developing SMARTe.

Representatives from a number of U.S., German and Italian organizations (universities, local and state governments, lawyers, developers and private consultants) also helped develop SMARTe.

SMARTe helps communities, in partnership with developers and other stakeholders, restore their environment and revitalize their towns by providing them with information, resources and tools to solve revitalization challenges. SMARTe provides a user-friendly, accessible website for any community faced with revitalizing a contaminated site and contains guidance and analysis tools for all aspects of the revitalization process including planning, environmental issues, economic analysis and social concerns. SMARTe contains an integrated decision analysis system called "My Project" where stakeholders can work together to evaluate different site reuse options.

A "one-stop shop" resource, SMARTe assists communities with a myriad of issues, such as developing a revitalization plan including visioning, assessing/communicating/managing risk, finding sources of funding, etc.

SMARTe has applicability to communities impacted by the Base Realignment and Closure Act program. Base closures and realignments can have a large impact on the communities within which they are located.

Often, these installations support the economy of the surrounding community through jobs at the installation and from military personnel supporting local industries that contribute to the local tax base.

Upon closing or realignment of a military installation, the loss in jobs and population can create a substantial void in the local economy.

Additionally, Department of Defense activities on the installation may have affected the property's environmental condition resulting in the need to perform environmental assessments and cleanup.

Conducting an environmental assessment of the installation helps DoD, the regulators and the communities evaluate remediation alternatives and provide information communities need to determine the best future use of the site.

The public's perception of the installation's environmental condition also may impact planning and reuse efforts.

Effort

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Eliminating the power meter will save the project more than $400 and an estimated 1,100 kilowatt-hours per year. The LED lights use 70 percent less electricity than incandescent or fluorescent bulbs

"Headquarters set aside $10 million to help project offices throughout the Corps meet their sustainability goals," said Charles Hall, the environmental/sustainability compliance coordinator for the Kansas City District. "The main goal is to have a 23 percent energy reduction from the FY08 baseline that we have to achieve by 2020."

Hall said they are also trying to reduce building energy usage by 3 percent annually and increase investment in renewable energy. Renewable energy could include the use of heat pumps, wind power and solar power. The solar lighting project at Melvern Lake Project Office contributes to both goals.

"We're trying to utilize less energy so we're being good stewards of tax-payer dollars," Hall said . "We want to make sure we provide sustainable solutions that address short- and long-term environmental considerations."

Hall said that Melvern Lake was an easy project that was completed quickly. Lake projects across the Kansas City District are working on more sustainability projects with bigger impacts, but Melvern Lake was the first to step up and complete one for fiscal 2012 that meets the sustainability matrix.

Franz said Melvern Lake has another lighting project in the works which will contribute to the reduction of building energy usage.