Standing ready, supporting disaster recovery efforts
**Cover story**

The USACE Wilmington District stands ready to respond to natural disasters. When disasters occur, USACE teams and other resources are mobilized from across the country to assist local districts and offices. (Photo by Hank Heusinkveld)

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Road to preserving environmental principles

It is good to be back with the U.S. Army Corps of Engineers as the Chief of the Operations and Regulatory Division within USACE Civil Works. I had the privilege of serving in the Corps from 2007-10 as commander of the Memphis District and from 2010-13 as the “G3” for USACE, overseeing our military and civil response to contingencies in the United States and worldwide. Most recently, I had the opportunity to work on national strategy and planning for the Department of Homeland Security.

It is a unique time to be back with the U.S. Army Corps of Engineers. With respect to our regulatory program and environmental review processes, we are in the midst of one of the most significant efforts in recent memory. In partnership with other federal agencies and with non-federal stakeholders, we are focusing on streamlining the environmental review process to boost coordination and collaboration efforts. It also improves the timeliness of federal decisions on infrastructure projects while adhering to the law and preserving our environmental principles. Partnership, collaboration and transparency will guide our efforts to enhance the delivery of our environmental review processes.

Our regulatory program provides decisions on more than 80,000 permit and permit-related actions annually. These permit actions include the environmental review for critical transportation and energy infrastructure projects that also generate jobs. Developing a path forward that upholds our environmental responsibilities while also delivering efficient and effective solutions to the nation requires comprehensive planning, partnership and collaboration. Streamlining our environmental review process is a bipartisan issue and includes the efforts of our federal partners. As we look at our federal processes, we will collectively determine how we can take action faster, while also continuing to provide the necessary protections for our environment. There are two references providing both framework and guidance for the streamlining process. The first is Title 41 of the Fixing America’s Surface Transportation Act, often referred to as FAST-41. This initiative increases transparency and accountability within the federal environmental review and authorization process by improving coordination and synchronization among agencies. FAST-41 codified into law new procedures to standardize interagency consultation and coordination practices in 2015. It established the Federal Permitting Improvement and Steering Council as a new authority to guide these collaborative efforts and to issue over arching regulations and guidance to implement the provisions of FAST-41. It also established the designation of Chief Environmental Review and Permitting Officers at each council agency. I personally serve as the CERPO for the USACE, and the Assistant Secretary of the Army for Civil Works serves as our steering council member. The FPISC provides high-level oversight, supports implementation, enhances interagency coordination and resolves disputes. This council ensures we collectively work together to review and provide permitting decisions within our given authorities. Representatives from the Department of Agriculture, Department of Commerce, Department of the Interior, Department of Transportation, Environmental Protection Agency and others all sit on the council. This council is helping bridge gaps others may have in understanding our processes. It also strengthens our relationships with other federal coordinating agencies.

Executive Order 13807, “Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects,” expands on the need for streamlined and disciplined environmental review. Issued in August, this executive order aims to increase the efficiency of our federal infrastructure decisions through the establishment of a “One Federal Decision” approach. Under this approach, the NEPA lead federal agency works with other cooperating federal agencies to complete the environmental reviews and permitting decisions for major infrastructure projects. This involves signing a single joint Record of Decision and includes the goal of finalizing all federal decisions within two years. As a result, this will make our federal environmental review and decision-making process more coordinated, predictable and transparent to other agencies, applicants and the public. The Council on Environmental Quality, in coordination with USACE and other federal agencies, will be developing the framework for “One Federal Decision.” This will be done in consultation with the Federal Permitting Improvement Steering Council established under FAST-41. Major infrastructure projects are specifically addressed under this executive order, including energy production and generation projects, such as fossil fuel, renewable, nuclear and hydro sources, and electricity transmission.

We are off to a great start. I am optimistic the implementation of the executive order will have the intended effect of streamlined environmental review and permit decision-making while upholding and preserving the law and our environmental principles. My team and I are working alongside our fellow federal agencies to develop the path forward that embraces the concept of a coordinated project plan and front-loaded implementation but we often find ourselves in agreement on what we believe needs to be done and how to do it. Collaboration and partnership is key across all of our activities, not only within Civil Works, but across all mission areas. This collaboration often takes us outside of our program areas to acquire additional perspectives from subject matter experts. It is through this that we leverage scientific, economic and social knowledge to understand the environmental context and effects of Corps actions in a collaborative manner. If this sounds familiar, it should. This is one of our guiding values within our Environmental Operating Principles. The EOPs are engrained in all that we do, across all mission areas.
Corps of Engineers cleans up, recycles hurricane debris

Story & photos by Ed Rivera
USACE Southwestern Division

SAN JUAN, Puerto Rico – To save landfill space, the U.S. Army Corps of Engineers is recycling metal and wood chips in its removal efforts across the Caribbean island. Through cooperation with leaders at local municipalities and the Federal Emergency Management Agency, USACE’s Debris Planning and Response Team makes the collection process possible with teams working in nine separate locations.

In the city of Ponce, for example, more than 48 trucks have hauled 3,700 loads of debris.

USACE estimates more than 3 million cubic yards of vegetative debris will have been generated from Hurricane Maria.

“Todays efforts have been actively removing debris from Ponce since Oct. 23,” said Jasmine Smith, the debris mission manager from the New Orleans District. “We have removed more than 76,000 cubic yards via curb-side pickup and temporary disposal sites.”

The debris in Ponce is estimated to total more than 100,000 cubic yards, enough to fill Yankee Stadium more than 2 feet high.

John Fogarty, debris subject matter expert out of the New Orleans District, said USACE estimates more than 3 million cubic yards of vegetative debris will have been generated from Hurricane Maria. Approximately 630,000 cubic yards will be reduced and used for compost, landfill cover, slope protection and more.

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Collaboration improves Army readiness
Efforts earn workshop organizers bronze medals

By Jenn Miller
USACE Headquarters

The U.S. Army Regional Environmental and Energy Offices have developed strong partnerships throughout the nation for more than 20 years. These partnerships enable the REEOs to work closely with military and regional policymakers to set standards that improve Army readiness, safety and well-being.

The REEOs also facilitate partnerships among other federal agencies to help resolve shared challenges through collaboration and information sharing.

The successful facilitation of which were recognized Oct. 19 in Atlanta, when the REEO-Southern and U.S. Environmental Protection Agency Region 4 team received EPA Bronze Medals for their efforts in organizing and hosting an environmental workshop for the EPA and DOD military installations within the Southeast Region.

The workshop in April brought together more than 120 attendees, including representatives from 45 military installations, into a forum to update them on the EPA’s current environmental regulations and programs.

The workshop also included panel discussions on environmental challenges, success stories and collaborative opportunities. Though the main objective of the joint workshop was to provide regulatory updates and training, it also provided attendees the opportunity to share lessons learned and foster effective communication between EPA regulators and the installation.

“There is tremendous value in bringing our state and military partners together,” said Susan Gibson, REEO-Southern director and co-host of the workshop. “This workshop serves as just one of many examples of how federal and state agencies can work together to develop a common operating picture and identify opportunities to collaborate in order to advance our collective efforts.”

The REEOs represent DOD and Army environmental and energy interests to resolve issues before they become laws and regulations in support of military readiness and mission sustainment.

There are four Army Regional Environmental and Energy Offices, which represent the 10 EPA Regions. The offices are REEO-Northern, REEO-Southern, REEO-Central and REEO-Western. The entire REEO team contributed to the success of this workshop by providing support to its planning and implementation.

Additional information on the REEOs is available at: www.usace.army.mil/Missions/Environmental/Regional-Environmental-and-Energy-Offices-REEOs.aspx

USACE celebrates banner year, advances military cleanup efforts nationwide

By Jenn Miller
USACE Headquarters

It has been a banner year for the Formerly Used Defense Sites Program. The program, which restores environmental conditions at sites formerly used by the Department of Defense to build and defend our nation, successfully obligated 108 percent of its authorized $241.1 million budget and met all major milestones for fiscal year 2017, advancing cleanup efforts across the country.

“T he success in our mission execution extends beyond the financial. It is demonstrated in the on-the-ground benefits our cleanup program is delivering across the nation,” said Christopher Evans, chief of the Department of Defense Environmental Programs Branch for the U.S. Army Corps of Engineers Headquarters. “This past year we have advanced cleanup efforts on over 780 active formerly used defense sites and continue to monitor more than 120 sites across the United States.”

USACE executes the FUDS program on behalf of the Army and DOD. This includes the cleanup of properties formerly owned by, leased to or otherwise possessed by the Unites States and transferred outside DOD control prior to October 1986.

To date, the Corps has identified 5,357 cleanup sites at 2,716 different properties where cleanup actions are required. Of these, 3,513 have either been closed out or are currently in monitoring status.

In fiscal year 2017 alone, the Corps completed cleanup on nearly 70 sites. “A key element of our ongoing remediation efforts is the integration of innovative technologies, such as advanced geophysical classification, into our remediation activities,” said Evans. “This is enabling us to clean up sites faster and at a reduced cost.”

USACE Fort Worth District recently awarded a remedial action contract for use at the Camp Fannin formerly used defense site in Tyler, Texas, which will utilize advanced geophysical classification techniques. The technology enables the project team to identify items buried under the ground to a greater level of specificity, reducing the need to dig up every anomaly detected. It can distinguish if items are munitions, rebar or debris. It’s projected to not only reduce the time of cleanup, but also reduce the total project cost by up to 60 percent, compared to more traditional geophysical approaches.

Evans credits this success to the talented and dedicated team supporting the program.

Through the efforts of more than 380 teammates across the nation who work in coordination with state environmental and health offices as well as the public, the U.S. Army Corps of Engineers continues to advance efforts to set conditions for a sustainable future.

To learn more about USACE’s environmental mission, visit the website: http://www.usace.army.mil/Missions/Environmental/
DOD provides unique, critical support to Puerto Rico

Hurricane Maria struck Puerto Rico on Sept. 20 as a Category 4 storm with maximum sustained winds over 150 mph. The storm dropped over 20 inches of rain and crippled virtually all the island’s infrastructure.

Fearing the collapse of a heavily damaged dam, team members with the U.S. Army Corps of Engineers New England District joined the Jacksonville District, Mobile District and other Department of Defense personnel on the island to help stabilize the dam and to provide clean drinking water to residents.

Consequently, in the 1920s, the Guajataca Dam was designed and owned by the Puerto Rico Electrical and Power Authority and is used to produce drinking water for 750,000 people in three different municipalities. A 1,000-foot-wide earthen structure, the dam forms Lake Guajataca.

After the storm, the lake flooded and started to flow over an emergency spillway. The massive volume of flow spared damage to the earthen dam but exceeded the capacity of the concrete-lined spillway, causing it to erode and crumble.

The dam’s failure was imminent if the erosion continued. The spillway damage also severed water connections to all three water treatment plants, leaving the residents without clean water.

The dam is located in the mountainous jungle region typical of the island’s interior and where approximately 200 homes lie within its downstream floodplain. Complicating matters further, downed trees and power lines crippled cell towers causing landslides and flooding on roads all around the dam.

One landslidel also blocked the dam’s 96-inch outlet pipe and restricted the normal flow of water out of the lake to the Guajataca River. As conditions at the dam deteriorated, local officials issued a flash flood warning and advised residents to evacuate. Without any electrical power or functional communication systems, police and fire personnel had to go door-to-door to warn residents.

Unable to halt the spillway flooding, PREPA reached out to the Puerto Rico Emergency Management Agency and the Federal Emergency Management Agency for help. FEMA tasked the Corps of Engineers to advise PREPA with subject matter expertise and management to help stabilize the Guajataca Dam.

Established in response to Hurricane Maria, the USACE Recovery Field Office and a team from Jacksonville District conceived a plan that would be executed in phases.

Phase 1 included immediate measures to lower Lake Guajataca’s water level below the spillway crest, stabilizing the eroding spillway.

Phase 2 included further stabilizing and anchoring the remaining sections of the damaged spillway to make it functional should the lake’s water level begin to rise and start spilling again. Phase 3 would require the construction of a new and improved emergency spillway and repair of all known damage to the dam.

Phase 1 removed landslide material that was obstructing the discharge from the river channel. Maximizing the discharge was critical in lowering the lake’s water level. Jacksonville District awarded an emergency contract to have 10 large pumps transported and set up at the dam. Each 18-inch pump had a capacity to discharge up to 25 cubic feet per second. To expedite pump installation, the first two of the 18-inch pumps were flown to Puerto Rico on a military aircraft with the rest arriving via barges.

Next, the plan called to place concrete Jersey barriers into the active erosion area to dissipate the water flow over the spillway. Placement of the barriers, however, presented a challenge. The targeted area was out of reach of any excavator or crane that could make it to the dam. DOD quickly stepped up with a solution. Marines from the 26th Marine Expeditionary Unit used CH53 Sea Stallion heavy-lift transport helicopters to lift and deliver the concrete barriers. The barriers were trucked to the crest of the dam, slung-loaded below the helicopters and released into the eroding area of the spillway. In total, the Marines placed 506 barriers over several days from off of the USS Kearsarge, a naval amphibious assault ship.

The concrete barriers in place, the team moved to minimize the active erosion by constructing a check dam across the spillway downstream of the concrete barriers. This check dam would slow the water’s velocity flowing over the spillway. FEMA quickly delivered 1,800 super-sized sand bags, each capable of holding a cubic yard of sand, to construct the check dam. Placement of the sand bags posed yet another challenge. DOD provided CH-47 Chinook tandem-toter, heavy-lift helicopters flown by Army National Guard units from Pennsylvania and Georgia to lift and place 1,338 of the sand bags. USACE personnel on the ground directed the precise placement of the sand bags to ensure the dam would contain the water.

Roads near the dam were narrow with numerous trees, debris and downed power lines. After debris was removed on local roads, PREPA mobilized an excavator to the site and arranged for delivery of rock materials from a local quarry. Traversing the roads, particularly with large trucks, had been a challenge. The main access road to the dam had one section that remained flooded for weeks after the hurricane’s landfall. Getting rock to the dam was critically needed to reinforce and harden the side slopes of the eroding area. PREPA and FEMA again reached out to the DOD for support.

See GUIJATACA, page 32
Collaborative efforts, operational changes increase White River salmon runs

Story & photo by Bill Dowell
USACE Seattle District

SEATTLE, Wash. — The White River’s 2017 Chinook runs numbered the best seen in 71 years. Runs consistently averaged 1,565 in the early 2000s but 2017’s count as of mid-October was 15,565, a 64 percent increase from last year’s 9,347 total.

With historical lows of only a dozen 20 years ago, White River Chinook are seemingly rebounding from the collaborative efforts in managing Endangered Species Act-listed fish and designated critical habitats by officials from the U.S. Army Corps of Engineers, National Oceanic and Atmospheric Administration Fisheries, Muckleshoot and Puyallup Indian Tribes, and Washington Department of Fish and Wildlife.

USACE fish biologist Dr. Fred Goetz said operational changes made by Corps officials at Mud Mountain Dam could be one part of the record-setting runs.

“We’re seeing a larger number of young males, called jack Chinook salmon, returning,” Goetz said.

Jacks are males returning to spawn after spending only one year in the ocean. Although young, jacks are sexually mature and important in the salmon life cycle. During low Chinook returns, when fewer female fish are on the spawning grounds, having more males present increases the female fish and eggs increases fertilization opportunities. It is rare to have early returning females, or jill.

Operational changes USACE made were a result of NOAA Fisheries’ 2014 Biological Opinion, referred to as a BiOp. USACE and NOAA officials worked together hammering out details on how the dam operates before NOAA issued its BiOp in 2014 and its recommendations for some major improvements in the dam’s fish passage operations and related structures on the White River near Enumclaw, Washington.

“These improvements were aimed at protecting Chinook and other ESA-listed fish species and their designated critical habitats,” said Goetz.

“We began implementing the BiOp’s recommended improvements in 2015,” said Goetz. “For the first change, we began restricting openings of the Mud Mountain Dam tunnel between March 1 and June 30.”

Restricted use of the 9-foot tunnel reduced potential injury and mortality of juvenile salmonids passing through the tunnel during their spring downstream migration. With lower mortality rates, this could be a reason more jacks are returning.

“The high returns of jacks is considered a good indicator for higher adult returns in future years,” said Russ Ladley, Puyallup Tribe.

Every year the Puyallup Tribe transfers thousands of the Muckleshoot hatchery’s juvenile spring Chinook, raising them in acclimation ponds in the upper watershed. The acclimation pond network is a real value in the recovery process, according to Ladley.

“In 2016, 64 percent of returning fish were of acclimation pond origin,” he said.

Another key improvement was making interim repairs in 2015 to a deteriorating diversion dam, also called a fish barrier, downstream of MMD. The fish barrier is a key structure of the Corps’ 1941-built trap-and-haul facility for capturing salmon and transporting them upstream.

Muckleshoot officials also collect Chinook at the structure for their hatchery and saw a 10 to 20 percent pre-spawn mortality rate drop to less than 7 percent following repairs, according to an email from a hatchery official.

“The strong returns this year are evidence of the time, effort and resources the Corps has put into the much-needed improvements at Mud Mountain Dam and the deteriorating diversion dam downstream,” said Keith Kirkendall, chief of the Environmental Services Branch for NOAA’s Puget Sound West Coast Region.

“The fish are telling us that if we can work together to continue to provide them safe passage upstream and downstream, they will do the rest.”

The next hurdle is completing the third BiOp recommendation, a long-term project to replace the aging structure and related fish collection facility to allow for safer capture and transport of fish upstream. The present design and facility isn’t adequate for current conditions or salmon numbers, especially with recently increasing numbers, according to agency officials.

ESA-listed Puget Sound Steelhead, Puget Sound Chinook, and Coastal-Puget Sound and Coastal Bull Trout are all species needing to use the trap-and-haul facility.

USACE recognizes Jenna Roberson, Interior Designer of the Year

By Rashida Banks
USACE Savannah District

While other children were playing with trucks or dolls, Virginia “Jenna” Roberson was decorating and rearranging furniture in her bedroom.

Fast forward to today and Roberson’s childhood hobby has blossomed into a successful interior design career, which has earned her national recognition by the U.S. Army Corps of Engineers.

A nine-year employee of the Corps Savannah District, Roberson was recently named the 2017 USACE Interior Designer of the Year. She competed with USACE interior designers throughout the world to receive the honor.

The annual award recognizes a Corps employee for distinguished professional excellence, achievements and superior performance in interior design. Jenna is one of the most talented interior designers that we’ve ever had,” said Terri Dismukes, chief of the Architectural Section, USACE Savannah District.

“Jenna has received numerous compliments from clients all over the United States. Everything she does is top-notch.”

Roberson’s nomination cited her superior accomplishments in managing more than $400 million in interior design projects in various stages of design in 2016. Her effective leadership and management expertise resulted in the successful completion of projects that benefit military service members, civilians and families throughout the Savannah District’s area of responsibility.

Occasionally, Roberson does work for other districts when the need arises.

“It’s pretty exciting,” Roberson said of the honor. “It’s nice to be recognized for my contributions here and to know that someone was paying attention to nominate me for it.”

Roberson’s interior design projects range from Army family housing and large administrative, training and supportive war fighting facilities to flight control towers, renovations and various other facilities.

As the Savannah District’s only interior designer, Roberson says that time management and close collaboration with staff members and customers are key in accomplishing her mission.

“Time management can be very challenging because I’m the only designer, and I’m working on all of our projects,” said Roberson. “My portion of a project doesn’t take as much time as the architect’s portion but it’s still very stressful when all the deadlines are at the same time.

Roberson says she spends the majority of her time meeting with vendors and collaborating with customers to ensure the Corps fully meets its requirements with the final product.

“One of the interesting portions of my job is dealing with the customer and making my vision of what we are doing jive with what they want,” she said.

This requires her to work closely with both in-house design staff members and architectural/engineering firms to establish program and project metrics for success.

SALMON continued from previous page

The Muckleshoot and Puyallup Tribes held treaty reserved fishing rights on the White River and have long sought the improved fish passage. The solution comes with a price, somewhere between $100 million and $250 million.

That’s the cost to build a new fish passage facility that protects passing fish and allows for safe capture and transport of ESA-listed fish upstream past Mud Mountain Dam. What complicates the runs are the pink salmon that also migrate in odd years. Their numbers approach 500,000 each migration season and must be transported along with the ESA-listed species.

Corps officials are nearing design completion of the new facility that could see 60,000 fish a day during pink run years. They are preparing for a contract award in 2018 and have officially hosted an Industry Day in August. Vendors received more information on the project and requirements to construct the new barrier structure, fish passage facility, associated site work and appurtenances. Completion is expected in 2022.

“Ultimately, the Army Corps of Engineers is committed, as we know every one of our partners is, to improving fish passage conditions at Mud Mountain Dam and making the White River a place where fish can flourish again,” Goetz said.
Garden initiative invites visitors to explore, sustain pollinator habitats

Pollinator beds encourage the health and growth of honey bees and butterflies.

Story & photos by Bryanna R. Poulin
USACE Little Rock District

BRANSON, Mo. — For the thousands of guests visiting Table Rock Lake each year, no visit would be complete without stopping by the visitor center featuring a state-of-the-art interactive map of the lake, wall murals and a replica of an Ozark bluffs.

Designed and built in 2012, the Dewey Short Visitor Center includes everything from 3 acres of creative landscaping to an up close look of the lake. Still, a key element was missing.

“We needed pollinator beds and planting areas,” said Leah Deeds, natural resources specialist, Little Rock District, U.S. Army Corps of Engineers. “We started with a trail from the parking lot to the building. It had a bridge and was fun but it wasn’t very interesting, and the trail didn’t get used very often.”

A pollinator bed is a garden that is planted predominantly with flowers that provide nectar or pollen for a wide range of pollinating insects. These pollinator beds, however, were not finished when the visitor center was built.

Cherrie-Lee Phillip, conservation biologist, Little Rock District, spearheaded the project with Deeds. She explained that contractual issues with the beds were never fully resolved.

Subsequently, the beds fell into disrepair and were in urgent need of restoration.

“The establishment of a native plant pollinator garden at the Dewey Short Visitor Center aligns with two of the Corps’ Environmental Operating Principles by fostering sustainability and supporting environmentally sustainable solutions,” explained Phillip.

More importantly, the pollinator beds support two of the Corps principles stemming from the June 2014 memorandum issued by former President Barack Obama creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators.

Since USACE is a federal land management agency, it was directed specifically to incorporate conservation practices for pollinator habitat improvement on the 12 million acres of land and waters at resource development projects across the country.

“The establishment of a native plant pollinator garden at the Dewey Short Visitor Center aligns with two of the Corps’ Environmental Operating Principles by fostering sustainability and supporting environmentally sustainable solutions,” explained Phillip.

Even with outside help it would take a few months for the partnership to award funding.

“Table Rock staff knew they wanted this project done with or without the Handshake Partnership,” said Phillip. So, as they waited, the staff used their own funding to initiate the project immediately, purchasing and planting plants native to the Missouri ecoregion to get three of the flower beds started.

Once the $4,772 is received from the Handshake Partnership program more plants will be purchased, as well as benches, interpretive signs for the flower beds and edge material for the gardens, Phillip said.

“The biggest challenge was the length of time from the announcement of winning the award in December 2016 to actually seeing the funds, which was one month before the close of the fiscal year,” Phillip said. “If we had waited and started the work when we received the handshake funds, I don’t think we would have kept the interest of our volunteers and other organizations who helped.”

See TABLE ROCK, page 16
In the meantime, the partially completed beds already reaped some benefits. “Visitors are already enjoying the trail and beds,” Deeds said. “As we fill in the planting gaps and incorporate the beds into our interpretive programming, the area is only going to get more use. It really expands the visitor experience at Dewey Short.”

Phillip followed up saying, “It’s a teaching opportunity for the Corps and multiple learning opportunities for the visiting public, especially kids, to see and be able to ask questions about the natural environment that they live in. In this case, the project took a few months but in that short time span, the plants grew, bloomed and the habitat was restored and created for insects, birds and other wildlife.”

Deeds hopes that visitors to Table Rock take back what they’ve experienced and advance efforts to protect pollinators. “Visitors are already reaping some benefits. In the meantime, the plants grew, bloomed and the habitat was restored and created for insects, birds and other wildlife.”

Now that the project is almost finished, the future goal is for other field offices throughout the district to build pollinator beds in their area. “All ideas are laid out in the USACE Pollinator Protection Plan,” Phillip said. “We can conduct prairie restoration, establish flowerbeds, make accommodations for beekeepers to keep their hives, open areas that we own, and teach interpretive sessions to increase education and awareness.”

Richard Allen, coastal engineer, USACE Mobile District, heads toward Mobile Bay to service gauges in July 2018. The Corps continues to provide critical infrastructure to compete in the global marketplace. “Ships are getting larger and more numerous vessels to safely use the port.”

Judeh Adams, public relations officer for the Alabama State Port Authority, said these types of improvements will ensure the harbor continues to keep global business flowing. “The Alabama State Port Authority’s mission is to ensure the Port of Mobile continues to provide critical infrastructure necessary to our economy; jobs creation and international competitiveness,” Adams said. “Ships are getting larger and markets are continually expanding. Seaport infrastructure investments, like the deepening and widening of the Mobile Ship Channel, ensure both our national and international trade continues to grow.”
Corps kicks off Boston Harbor Navigation Improvement Project

By Ann Marie R. Harvie
USACE New England District

To kick start the Boston Harbor Navigation Improvement Project, Col. William Conde, commander, New England District, U.S. Army Corps of Engineers, his staff and a few members of Congress, state and local agencies, gathered for the Sept. 15 ceremony in Charlestown, Massachusetts.

Following a vessel tour and first-hand look at dredge operations, the group proceeded to a ceremonial signing of a contract that officially kicked off the $320 million dollar navigation project, funding the expansion of commercial navigation in the New England District, U.S. Army Corps of Engineers to use dredged material, “However, it is the policy of the U.S. Army Corps of Engineers to use dredged material in and out of the harbor.”

“This project has been a long time in the making, and I’m thrilled that we can all be here to celebrate that we’re going to deepen Boston Harbor so it can remain competitive and be a vital hub for ocean freight for all of New England,” he said.

“About 11.6 million cubic yards of silt, sand and clay and 400,000 cubic yards of rock will need to be removed to deepen the channels,” Conde said. “We anticipate the deepening work will start in the spring of 2018 and be completed late in 2022.”

“The recommended plan involves placement of all dredged material and rock at the Massachusetts Bay disposal site,” said Matt Tessier, project manager. “However, it is the policy of the U.S. Army Corps of Engineers to use dredged material, where practicable, for beneficial use.”

According to Tessier, the district will investigate uses of rock for offshore reef creation and shore protection. The dredged material may have beneficial use as well.

“Use of the dredge material to cap the former Industrial Waste Site in Massachusetts Bay also will be investigated in partnership with the Environmental Protection Agency and others,” he said.

Tessier said that none of these beneficial uses should increase the project costs.

“Non-federal sponsors, Massport and MassDOT, will contribute $120 million, while the federal government will pay $210 million to complete the project. The project will deepen the Broad South North Entrance Channel to 51 feet; the President’s Roads, the outer Main Ship and the Lower Reserved channels to 47 feet; the Main Ship Channel between the Reserved Channel and Massport Marine terminal to 45 feet; and the Chelsea River and a small portion of the Mystic River Channel to 40 feet. The project will help the larger vessels navigate in and out of the harbor.”

“This project will help the larger vessels navigate in and out of the harbor.”

“One of the key projects is the deepening of the Mystic River Channel to 40 feet. The project will help the larger vessels navigate in and out of the harbor.”

“This project has been a long time in the making, and I’m thrilled that we can all be here to celebrate that we’re going to deepen Boston Harbor so it can remain competitive and be a vital hub for ocean freight for all of New England,” he said.

“The project would not have been possible without the combined efforts of all the partners involved, especially Massport and the Commonwealth of Massachusetts.”

“This project will go a long way toward supporting the needs of the city of Boston, the region and the state in meeting the growing navigation requirements to remain competitive within the navigation industry, he said.

Disaster Management Exchange fosters U.S., China understanding, trust

By Airman 1st Class Nathan H. Barbour
355th Fighter Wing Public Affairs

The 13th annual U.S.-China Disaster Management Exchange Table Top Exchange and Practical Field Exchange commenced on Nov. 16 with an opening ceremony at Camp Rilea, Oregon. Hosted by U.S. Army Pacific, the DME allows hands-on and side-by-side interaction between U.S. Army and China’s People’s Liberation Army on Humanitarian Assistance and Disaster Relief operations and enables sharing of lessons learned.

The 2017 exchange focused on a notional flooding scenario in which both armies were requested to provide humanitarian assistance and disaster relief to a third affected state as part of a Multinational Coordination Center.

Maj. Gen. Susan A. Davidson, commanding general, 8th Theater Sustainment Command, welcomed attendees and highlighted how the event builds understanding and trust between the two armies.

“Disaster Management Exchanges like this are invaluable because as they expand in depth with each iteration, they allow us to truly recognize the importance of collaboration in addressing non-traditional security threats such as natural disasters,” Davidson said. “Our ability to increase our practical de-confliction, and gain a better understanding of each other’s procedures and techniques required for efficient and effective response, be it at a national, regional or a global level.

Throughout the exchange, personnel simulated real-life scenarios in order to identify procedural gaps and practice techniques required for efficient and collaborative response, such as search and rescue techniques and the construct of the MNC.

“The PLA and U.S. military both have dignified histories and glorious accomplishments. Although we are geographically far from each other, the respect for human life is beyond national boundaries and races,” said Maj. Gen. Huang Taoyi, deputy commander, 75th Group Army, PLA. “We are ready to join our friends from the U.S. to actively implement the consensus reached by our two state leaders and make concerted efforts to make this year’s DME more practical, more in-depth and improve the two militaries’ abilities in disaster relief.”

Starting in 2005, the DME has been held in Hawaii, Washington, D.C., New York, Washington, and multiple areas in China. The DME has also matured from basic visits and briefings into a substantive exchange that uses table top and practical field exchanges to focus and facilitate interaction and development of the capacity to de-conflict humanitarian assistance and Disaster Relief operations between the U.S. Army and the PLA.

In addition to providing a learning opportunity for the U.S. and PLA participants, this year the DME included military and government observers from Bangladesh, Canada, Japan, the Philippines, Singapore and the People’s Republic of China.

U.S. participants included U.S. Army Pacific, the 8th Theater Sustainment Command, the Oregon National Guard, the U.S. Military Academy, the 35th Civil Affairs Command, the 13th Combat Support Battalion, the 57th Sapper Company, the U.S. Coast Guard Sector Columbia River, the Center for Excellence in Disaster Management and Humanitarian Assistance, the U.S. Army Corps of Engineers Northwestern Division, USACE Portland District, the National Oceanic and Atmospheric Administration, the U.S. Geological Survey and the Pacific Disaster Center, an applied research center managed by the University of Hawaii.

Disaster Management Exchange fosters U.S., China understanding, trust
Purple martins (Progne subis) are the largest swallow species in North America and have been a part of the continent’s human culture even before the arrival of European settlers to the East Coast. (Photo by Garrett Dorsey)

By Tom Conning
USACE Portland District

PORTLAND, Ore. – An unladen purple martin swallow can reach the air-speed velocity of about 24 mph, which may be important information if you’re trying to cross the “Bridge of Death” as you search for the Holy Grail.

It’s also probably impossible for that 1.7 ounce bird to carry a 1.2 kg coconut, even if he gripped it by the husk (we are checking with the engineering department though).

Lost? Don’t fret, you just need to watch more movies, or specifically, watch “Monty Python and the Holy Grail.” But the movie isn’t important; it’s just a gimmick to get you to focus on swallows. And more specifically, purple martin swallows.

This particular species of swallow is found in large numbers in eastern North America while in recent years, their number west of the Rocky Mountains has declined.

Even though the population is in decline, according to Garrett Dorsey, Willamette Valley Project wildlife biologist, Fern Ridge Dam and Reservoir as well as other Portland District projects offer good purple martin nesting habitats.

“The Willamette Valley Project has the unique opportunity to provide nesting within large open areas through the use of a nest box program,” explained Dorsey. “We currently have three locations that have purple martin colonies: Cottage Grove, Dorena and Fern Ridge (dams and reservoirs).”

These project lands provide open skies for the birds to fly and see aerial predators; are located over water, which keeps land-based predators away; and provide abundant insect life for food.

Indeed, the Willamette Valley population is one of the largest in Oregon, making the valley a great place to study the birds.

In fact, the Corps has partnered with private citizens, non-profits, federal agencies and Oregon State University to study these birds.

Lorelle Sherman, OSU Department of Forest Ecosystems and Society graduate research assistant, is studying the dispersal of purple martins up and down the West Coast.

“These birds are highly charismatic and fun to watch interact with each other and with other species,” Sherman said. “They put on a great aerial show while feeding, too. I was drawn to this project because there are still major gaps in our knowledge of purple martin natural history.”

The Willamette Valley Project is one of the core members of the Western Purple Martin Working Group, an organization with a goal of measuring how many purple martins are in the west and increasing or maintaining their overall number.

Corps reservoirs benefit purple martins

USACE has partnered with private citizens, non-profits, federal agencies and Oregon State University to study the purple martin. (Photo by Lorelle Sherman)

Graduate research assistant, Lorelle Sherman of Oregon State University said she loves the purple martin song so much that she made it her ringtone. (Photo by Lorelle Sherman)
The Corps
Environment
By Edward Rivera
USACE Southwestern Division
SAN JUAN, Puerto Rico – Running water is still a scarce commodity for many Puerto Ricans in the aftermath of Hurricane Maria. But, in the past weeks residents in Isabella and Quebradillas have been able to wash, bathe, cook and drink from the tap again. In addition to the more than 70,000 residents in the two cities, an estimated 30,000 people living in the vicinity of Guajataca Lake will soon have water as well. These areas were without running water since Sept. 20 when the storm damaged the Guajataca Dam and a nearby water treatment facility.

The U.S. Army Corps of Engineers quickly engaged and moved to aid in the stabilization efforts at the dam in response to a request for technical expertise and assistance from the Puerto Rico Electric Power Authority who own and operate the dam. “The entire Department of Defense was involved in stabilizing the dam following the damages from Maria. The U.S. Navy and U.S. Marine Corps dropped 500 jersey barriers and the Army dropped 1,300 super sacks to quickly halt erosion to the damaged spillway,” said Capt. Kenneth Skillman IV, action officer for the Guajataca Dam. “We continue the stabilization efforts with dump truck deliveries of riprap and gabion stone.”

While simultaneously working on the spillway, 12 dewatering pumps, flown in by the U.S. Air Force, were installed to reduce the water level in the reservoir and re-establish supply to a 17-mile-long water distribution canal. According to Skillman, normally a 54-inch pipe carries water from the reservoir to the water treatment plant, but the pipe was severed during the spillway failure.

“We are using pumps to supply a water flow into the water distribution canal located at the base of the dam,” said Skillman. “When we began about three weeks ago, the flow was about 14 cubic feet per second. Today we are at 65 cfs and with an added sixth pump we will meet the Puerto Rico Aqueduct and Sewer Authority’s request for 75 cfs.”

Recently, PRASA moved a pump, generator and other necessary equipment to the water treatment facility at the dam in the hopes of pulling water from the canal and pumping it to the water treatment plant. Once treated, the water will be distributed to the lake area communities, bringing them one step closer to life before the storm.

“This is another step on the road to recovery,” said Col. James DeLapp, Recovery Field Office commander. “The combined efforts between DOD, the Corps of Engineers, the Federal Emergency Management Agency, PRASA and PREPA has not only restored running water, but created a small spring of hope to more than 100,000 people around Guajataca Lake, Isabela and Quebradillas.”

See RECOVERY, page 30
New life after Hurricane Sandy

By JoAnne Castagna, Ed.D.
USACE New York District

This spring, Harry Strano, a wildlife biologist, was walking on the shore in Deal, New Jersey, when he was pleasantly surprised.

He saw a pair of clownish-looking birds building a nest. Others probably noticed them as well with their long legs, bright yellow eyes and long striking red-orange bills.

These birds are American oystercatchers and they’re a State Special Concern Species—meaning their population is in decline and at risk of becoming threatened.

Jen LaStella, another wildlife biologist, believes the birds are returning to the shore because of a beach nourishment project being performed by the U.S. Army Corps of Engineers, New York District.

“The beaches created by the replenishment provide ample space and opportunities for shorebirds to rest, forage and even nest,” said LaStella who with Strano works for Amy S. Greene Environmental Consultants, Inc., providing construction monitoring services for rare, threatened and endangered species.

The Atlantic Coast of New Jersey Sandy Hook to Barnegat Inlet Beach Erosion Control Project is the largest beach nourishment project ever undertaken by the Corps.

In 2012, 18 miles of the 21-mile project were completed. The work includes pumping offshore sand onto the shore to reinforce the upland and reduce risk to the beach due to direct currents for scouring a channel.

The completed project will widen the shoreline 400 feet and build up the beach 10 feet above sea level.

“This project is the world’s biggest beach-fill project in terms of sand volume,” said Anthony Ciocca, chief, Hurricane Sandy Branch, USACE New York District.

The project also includes notchling or removing rock, known as armour stone, from three existing groins from Elberon to Loch Arbour. Groins are rigid structures that extend out from the shore to prevent beach erosion and direct currents for scouring a channel.

In addition, 10 existing storm water outfall pipe extensions are being lengthened. These pipes carry storm water from the land to the ocean.

In 2012, 18 miles of the 21-mile project were completed.

It was then that Hurricane Sandy devastated the region, removing 5 million cubic yards of sand from the shore. This is enough sand to fill New Jersey’s MetLife Stadium.

In early 2013, the Disaster Relief Appropriations Act of 2013, better known as the Sandy Relief Bill, authorized USACE to not only repair engineered beach projects by replacing the sand lost during Sandy but to restore them to their original design profiles.

Since Sandy, USACE has repaired the 18 miles of shoreline that was damaged and replaced 7.7 million cubic yards of sand to the shore. Work continues on the remaining 3 miles of the project, between Deal and Elberon.

On this project, as with all beach nourishment projects, USACE implements measures to protect and minimize impacts to rare, threatened and endangered species.

In addition to the American oystercatcher, these species of concern in New Jersey include the federally listed threatened and state endangered piping plover and the seabed amaranth plant as well as the state endangered least tern.

Though protective measures focus on the life and habitat requirements of federally listed species, other species benefit as well.

Peter Weppler, chief, Environmental Analysis Branch, USACE New York District, said these measures include performing work on the project only when the species aren’t threatened.

For example, sand was not placed on the shore between March 15 and Aug. 15 because this is when the piping plover nests.

“Another important measure is hiring environmental construction monitors, like LaStella and Strano.”

These monitors design monitoring plans in cooperation with the project team, conducting regular field surveys to identify rare, threatened and endangered wildlife and plant species, recording behaviors, locations and potential threats to these species, and documenting all other wildlife and plant species observations within and adjacent to the project area.

In addition, they make recommendations for avoiding and minimizing potential impacts to wildlife and ecological communities as well as educate the public.

Strano said that public education is very important because hopefully the experiences will raise visitor awareness and understanding, and more tolerance of any inconveniences that are associated with protected beach areas.

While monitoring the project, LaStella spotted several species, but was surprised to see the oystercatcher nesting along the shoreline. She believes the newly replenished beach is the cause.

See WILDLIFE, page 26
A Few Facts about the American Oystercatcher

- American Oystercatchers stand a foot and half tall, have shock-white feathers, bright yellow eyes and a long bright red-orange bill. They make loud calls and exhibit gregarious behavior.
- The shorebirds are listed as a Species of Special Concern in several coastal states, including New York and New Jersey.
- They are threatened by human disturbances, habitat loss from coastal development, a host of predators and flooding events.
- Their primary food sources are oysters, clams and mussels; using their strong beaks and tongues to pry open the shells.
- They breed in March on New Jersey’s coastal beaches, inlet systems and salt marshes.
- Adults typically lay 1-3 eggs and after their chicks are fledged most migrate to the southeast.

For more information, visit: http://www.conservewildlifenj.org/species/field-guide/view/Haematopus%20palliatus/
‘Sustain the Mission - Secure the Future’
Environmental Support Teams seek new members

By Arleen Kreusch
USACE Buffalo District

Providing environmental support during war, contingency operations, disaster relief operations and operations other than war is an important U.S. Army Corps of Engineers area of responsibility. One way USACE meets this mission is through the Environmental Support Team, or EnvST, that is comprised of trained environmental engineers, environmental specialists and employees working in the environmental field.

While deployed, the team implements the Army Strategy for the Environment “Sustain the Mission – Secure the Future” and can act as the inspection and enforcement arm of the military commander.

EnvST training is conducted annually at the Readiness Support Center in Mobile, Alabama.

When asked about the training, Richard Dabal, manager, Certified Hazardous Materials for the New York District and nine-year EnvST member, said, “It gets you in the mindset of what to do and what is expected.”

Although there are no physical requirements for participating on the team, Dabal works out before each assignment because he says he never knows what it will be like when he gets to the mission location.

“A 10-hour workday is standard, but sometimes you work seven days a week,” he said.

Team members usually know two to three months in advance about an assignment and volunteers that best fit the mission are selected.

For his deployment to Liberia, however, Dabal had one week to get ready before going overseas.

“In that case, a lot of loose ends had to be wrapped up very quickly,” he said.

Assignments can be anywhere from three, six, nine or 12 months. The duration depends upon the mission and can change, he said.

Dabal’s EnvST travels have included assignments to Liberia in 2014–15 and Afghanistan in 2010–11 where his chief task was to make sure land used for the troops was clear of environmental issues that would impact the mission.

“You are the subject matter expert while you are there, and they’re looking at you to pull from all of your experience to answer that particular question and move forward,” he said.

Questions need to be answered. Can you build in this area? Is the area clear of past environmental damage, such as oil or garbage dumping and pesticide problems?

His previous assignments have included evaluating areas for base housing, support facilities and hospitals.

The team is usually made up of environmental subject matter experts, and civil or mechanical engineers that work together. They may also be joined by members of a Forward Engineer Support Team.

“You go where the team is needed, assisting and helping each other with the mission,” Dabal said. “You have to think on your feet. Not everything fits in a box, you have to adapt as you go along.”

The team works together to handle the assignment in the timetable given.

“Take a deep breath, focus on one thing that will make it better and make a dent in it,” he said. “It’s rewarding when the assessment is finished, a recommendation is written and accepted.”

Dabal admits deployments can sometimes get monotonous, and he does miss biking and kayaking on weekends.

Teams are usually confined to the base unless escorted or on an assignment, so you can’t explore the area.

He suggests loading up music and to be resourceful.

“We once made a universal weightlifting set up using cinder blocks and plywood,” he said.

Adapting and learning from various interactions with military organizations, government agencies and the challenges sometimes presented by working with local contractors has helped him during follow up assignments.

Dabal said he can usually draw from these lessons learned to handle situations at his New York District office.

He encourages individuals who want to grow professionally and who seek experience working with other people at overseas locations to consider joining an EnvST.

For more information or to join, contact the National Program Manager at 202-761-1762.

The next EnvST training will be conducted February or March 2018 in Mobile, Alabama.

Endangered species’ return reflects power of federal, state partnerships

By Dr. Michael Izard-Carroll
USACE Buffalo District
& Rebecca Sayers
Presque Isle State Park

Having been absent from Presque Isle State Park since the 1950s, the endangered piping plover has made a modest, yet significant return.

“The sighting of two pairs of these sand-colored, sparrow-sized birds have drawn particular interest because up until that time only about 15 pairs nested regularly on its shores.”

“This is a testament to dedication and teamwork not only in Pennsylvania, but throughout the species’ range,” said Dan Breuning, chief, Pennsylvania Game Commission Wildlife Diversity Program.

The species’ return was the culmination of a collaborative effort among organizations such as the Presque Isle Audubon; Audubon Pennsylvania; the Department of Conservation and Natural Resources; the Pennsylvania Game Commission; the U.S. Army Corps of Engineers, Buffalo District; the Regional Science Consortium; the U.S. Fish and Wildlife Services; The Western Pennsylvania Conservancy; and the Cleveland Museum of Natural History.

“The strong partnership these organizations share has paid off,” said Lt. Col. Adam Czekanski, commander, USACE Buffalo District. “From the top down, our leadership reiterates the benefits of working together with local and state partners. To see an endangered species find its home again at Presque Isle is truly inspiring and reminds us of the benefits of collaboration.”

See SHOREBIRDS, page 31

Mary Birdsang, shorebird monitor, and a team of Pennsylvania Game Commission biologists Patti Barker, Stacey Wolber, Tim Hopp, Cathy Hoffner and Jerry McWilliams (center), author and naturalist, hand and collect data, documenting the species’ nesting progress. (Photo by Tracy A. Graziano)
Presque Isle was not the only area to show a decline in the shorebird population. The last recorded pair to nest in the Erie Basin was in 1977 at Long Point in Ontario, Canada. The Great Lakes Piping Plover was granted federal protection in 1986 by the USFWS when they were put on the Endangered Species List. At that time, only 17 breeding pairs remained, and all of them were found along the Michigan shoreline.

In 2001, fewer than 3,000 piping plovers were left globally. By 2009, there were just 71 breeding pairs found in the Great Lakes region, covering three states and Ontario, Canada.

Presque Isle is a sandy peninsula located on the southern shore of Lake Erie, Pennsylvania. It is a natural breakwater that forms and protects Erie Harbor and is home to Presque Isle State Park. The park, which extends the full length of the peninsula, includes 13 miles of roads, 21 miles of recreational trails, 13 beaches for swimming and a marina.

At the end of the peninsula lies Gull Point, a designated natural area and the most ecologically sensitive area within the park that has been carefully monitored by a variety of organizations.

In 1994, the Presque Isle Audubon Society spearheaded a campaign to designate Gull Point as a natural area, thereby closing it to public use during the breeding and nesting season.

To encourage the return of the piping plover, plans involved focusing on particular areas along the beach, stretching about 4 miles from the lighthouse to the southern end of the hiking trail on the southeast side of the Gulf Point Natural Area. After evaluating each site, Gulf Point was identified as having the greatest potential for providing a habitat suitable for nesting piping plovers.

Criteria included which site would have the lowest human disturbance while also having sufficient cobble and woody debris cover. Gull Point met six out of the seven criteria, with its one deficiency being that the site was not more than 50 meters to the shoreline.

Ongoing beach nourishment activities along the peninsula are being performed by USACE and DCNR under an agreement signed in 1989. This agreement established a partnership for the construction of 55 segmented offshore breakwaters and 50 years of annual sand placement to nourish the peninsula shoreline. The project concept was developed to protect the peninsula from severe erosion in a manner that would allow the lake littoral flows to move the sand along the shoreline in a natural manner. So while the primary purpose of this $2 million to $3 million per year nourishment effort was to mitigate shoreline erosion, the project also established increased habitat for the piping plover through wider, consistent beaches.

In 2011, after several attempts failed to rid the area of these invasive species, canary grass and purple loosestrife. Shortly after 1997, two other invasive species started to take root, narrow-leaf cattail. One of the major changes in the Gull Point Natural Area was the encroachment of two invasive species—phragmites and narrow-leaf cattail.

In 2016, portable trail cameras were installed on Gull Point to monitor nest activity. Plans to move the sand along the shoreline in a natural manner to provide a habitat suitable for nesting piping plovers.

In 2011 and 2012, the nesting habitat for piping plovers was restored, and by 2015 enough of the species were sighted at Gulf Point to classify them as an active colony; though no successful nests were yet identified.

In 2016, portable trail cameras were installed on Gulf Point to monitor nest activity. Plans to move the sand along the shoreline in a natural manner to provide a habitat suitable for nesting piping plovers. Two pairs of piping plovers nested on the shores of Gulf Point during the 2017 season. One nest was successful, with two out of three eggs hatching. The second nest was overcome by waves. Fortunately, nests eggs, however, were recovered and transported to the Detroit Zoo, where two of three eggs were hatched and released on the Michigan shoreline.

The piping plover species tends to return to successful nesting grounds, and therefore the federal and state partners will continue to monitor its activities in the coming years. Officials are hopeful that the pair will return to Presque Isle State Park for the 2018 season. With a global population of only 4,000, the success of the species in Presque Isle State Park may dictate its survival worldwide.

An umbrella species, the piping plover indirectly protects other species in the same environment, and so its return reflects the overall health of the ecosystems at Presque Isle State Park.

“This collaborative effort exemplifies that conservation does not happen in a vacuum,” said Catherine D. Haffner with the Pennsylvania Game Commission. “It is through these great partnerships that piping plovers have once again found their way back to the shorelines of Pennsylvania.”
The U.S. Army Corps of Engineers Collaboration and Public Participation Center of Expertise and public involvement specialists have started supporting the Formerly Used Defense Sites Program. This work highlights partnership and collaboration, in support of Environmental Operating Principle 6.

Located at the Institute for Water Resources, the CPCX mission is to ensure that the interests of the public are addressed in the decision-making process and to help USACE staff anticipate, prevent and manage water conflicts. Dwayne Ford, affiliated with the Environmental Munitions Center of Expertise before his retirement, spent the summer of 2016 on detail to the CPCX. During this time, he realized the close similarities between USACE’s risk communication efforts for FUDS and risk communication for levee safety. Staff with CPCX helped forge bridges between the CPCX and the FUDS program, and as a result, CPCX began supporting the program through training and expert review as well as coordinating the flow of staff through developmental details.

After Dr. Stacy Langsdale served on the instructor team for an Environmental Cleanup course for the Army National Guard in August, she was invited to serve as the lead instructor for FUDS 102 – Communication in FUDS, which will be held May 15-17, 2018, in Omaha, Nebraska. Langsdale is also contributing to the after action review of the Interim Risk Management process. In 2014, the CPCX established a cadre of public involvement specialists who represent each division and whose purpose is to serve as subject matter experts and provide services that support collaboration, communication and public engagement.

Currently, the cadre of 23 specialists serve as a resource to their respective districts but also provide regional and national support to all eight divisions. The cadre assists with the development and implementation of communication and public participation plans for a variety of projects and studies across the various agency missions. For example, Eileen Tokata, Los Angeles District public involvement specialist, provides stakeholder engagement, facilitation and collaboration support services to her colleagues at Los Angeles District for a variety of business lines including planning, master planning, construction, real estate/asset management and FUDS.

Tokata was recently tapped by the district FUDS program manager to review community relations plans for informal “District Quality Control.” Each division’s public involvement specialists are able to provide the expertise directly or connect you to others who have the talent to get the job done. They will coordinate with district public affairs to define the levels of support and division of responsibilities appropriate for a specific project. Project managers and teams are encouraged to consult with one of these specialists early about the value of public involvement to help keep projects on schedule and within budget.

For more information or to locate a specialist, please visit: https://cops.usace.army.mil/sites/CPP/Shared%20Documents/Public%20Involvement%20Specialists/Calif%20%26%20Nev%20-%20Value%20to%20Business%20Line%20-%20Fact%20%20Sheet_June%20%202017.pdf

Puerto Rico’s Army National Guard strategically places sandbags at the Guajataca Dam.

CPCX, public involvement specialists support FUDS Program

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from the lake and filtered it through the distribution, the Army’s 3rd Expeditionary To help with short term water of water from the lake to downstream PREPA civilian work crews to clear The engineer battalion with support material per day to the dam.

Soldiers delivered over 100 tons of rock dump trucks and traveling in convoys, the stone from the quarry. Using 10-ton supplies. The 130th Engineer Battalion of in other recovery work to remove debris of public involvement, the CPCX mission is to ensure that the interests of the public are addressed in the decision-making process and to help USACE staff anticipate, prevent and manage water conflicts. Dwayne Ford, affiliated with the Environmental Munitions Center of Expertise before his retirement, spent the summer of 2016 on detail to the CPCX. During this time, he realized the close similarities between USACE’s risk communication efforts for FUDS and risk communication for levee safety. Staff with CPCX helped forge bridges between the CPCX and the FUDS program, and as a result, CPCX began supporting the program through training and expert review as well as coordinating the flow of staff through developmental details. After Dr. Stacy Langsdale served on the instructor team for an Environmental Cleanup course for the Army National Guard in August, she was invited to serve as the lead instructor for FUDS 102 – Communication in FUDS, which will be held May 15-17, 2018, in Omaha, Nebraska. Langsdale is also contributing to the after action review of the Interim Risk Management process. In 2014, the CPCX established a cadre of public involvement specialists who represent each division and whose purpose is to serve as subject matter experts and provide services that support collaboration, communication and public engagement.

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Puerto Rico’s Army National Guard strategically places sandbags at the Guajataca Dam.

New method ensures plentiful oyster harvest

Story & photo by Sara E. Corbett

USACE Charleston District

Oyster season in the South Carolina Lowcountry means only one thing, the roasting and eating of lots of oysters. It’s a long standing tradition eagerly anticipated each year from September to April. However, before oyster lovers can take that first bite, two critical steps are necessary. Oysters have to grow and be harvested.

Traditional methods include letting them grow naturally along tidal and marsh banks and harvesting them when they are mature or growing them in cases that rest on the bottom of waterways, but a new method is quickly becoming popular. OysterGro® is a relatively new concept in shell mariculture where native, single-select oysters can be grown in floating cages that are roped together in rows and anchored to the bottom of waterways. The floats are approximately 60 inches long, 40 inches wide and 20 inches high, and typically several hundred floating cages are roped together, spanning across several acres of open water.

The floating cages are routinely flipped to prevent oyster fouling. Oyster fouling occurs when marine organisms colonize the oysters and reduce their growth which requires costly work to clean and make them marketable. By using this method, single oysters grow faster and bigger, which is ideal for commercial oyster farmers and harvesters to sell to restaurants and individual clients to enjoy.

So just how does the U.S. Army Corps of Engineers Charleston District fit into all this, aside from having several oyster-loving employees?

“Since OysterGro® can impact waterways, a Corps permit is necessary,” said Tracy Sanders, biologist and project manager. “We have issued two permits, are currently reviewing another permit and are working with two potential applicants. It’s evident that this method is becoming more popular with oyster harvesters in South Carolina since it produces such big delicious single select oysters.”

For issued permits and pending permits, the district received comments during the public comment periods for those projects that impact recreation, general navigation, aesthetics and marsh erosion. Other areas of concern are potential effects to endangered sturgeon and sea turtles that often entangle themselves in the ropes, how to secure the equipment during hurricanes and abandonment of the floats and equipment.

“Similar to permits issued for typical construction projects on land, permits issued for OysterGro® projects may include special conditions to address concerns that arise during the permit review process,” Sanders said.

Special conditions include marking the project area with navigation signs, knotting the ropes a certain way to prevent entanglement and following specific hurricane response plans that describe when and how the floats and equipment will be secured during a hurricane. Applicants, the district analysis from three different agencies prior to installing OysterGro® floats and equipment. Permits are required from the Corps, the Department of Health and Environmental Control’s Office of Ocean and Coastal Resource Management and the South Carolina Department of Natural Resources.

While the permitting processes are separate, the Corps, OCRM and SCDNR work closely together during project review. In fact, it is recommended that applicants request a pre-application meeting with the agencies to discuss the permit process as well as any potential issues that they may be concerned with before submitting their application. The intent is to provide potential applicants with project specific information that can be used during the project planning stage and, ultimately, streamline the permit application process. The first issue a potential applicant may face is identifying a project location. Applicants should first contact SCDNR to determine which areas may be available for cultivating oysters. Contacting SCDNR first is strongly recommended as any conflicts of use of project areas may create a mariculture perspective could result in a delay in the Corps permitting process and may result in project relocation and redesign.

Once the permit has been issued, the OysterGro® floats are subject to random compliance checks by the Corps to ensure they are meeting all the special requirements.

For more information, call the district’s Regulatory Division at 843-329-8044.

Puerto Rico’s Army National Guard strategically places sandbags at the Guajataca Dam.

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GUAJATACA

Most local trucks were fully engaged in other recovery work to remove debris or distribute food, water or other essential supplies. The 130th Engineer Battalion of Puerto Rico’s Army National Guard with support from the 44th Infantry Combat Team were tasked with hauling stone from the quarry. Using 10-ton dump trucks and traveling in convoys, the Soldiers delivered over 100 tons of rock material per day to the dam.

The engineer battalion with support from the 44th also worked beside PREPA civilian workers to clear obstructions and landslide material from a canal needed to re-establish the flow of water from the lake to downstream treatment plants.

To help with short term water distribution, the Army’s 3rd Expeditionary Sustainment Command mobilized reserve osmotic water purification units to a location adjacent to Lake Guajataca.

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Mobile District, Brazilian officials meet, discuss waterway development, partnership opportunities

By John Barker
USACE Mobile District

Two representatives from the U.S. Army Corps of Engineers, Mobile District, visited cities in Brazil to discuss waterway development and management as well as the possibility of future partnerships, Aug. 7-11.

Col. James DeLapp, commander, USACE Mobile District, and Lt. Col. Frankie Flowers, deputy district engineer for Latin America, met and offer the Brazilian officials assistance in waterway development and management. (Photo by Raylton Aves)

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In addition to discussing our current projects, we want to identify possible future collaborative efforts appropriate for the district," Flowers said. "The Army and the Corps remain interested in seeking opportunities with the Brazilian military that would be of mutual benefit to our long-standing partnership. The Brazilian military is a leader in regional security within South America and beyond. Brazilian Army engineers are well suited to partner with developing regional armies and to support engineer work to promote regional and international security."

"In the future, we hope to do more work supporting the country's waterways," said Creech. "These range from flood risk management, budgeting and benchmarking for the impacts of floods, river modeling, wastewater treatment, environmental impacts from mining and regulatory management."

Opportunities to enhance the partnership come through invitations to symposiums, conferences, site visits and technical exchanges," Creech explained. "For example, DeLapp has already been invited to attend the World Water Forum, the world's biggest water-related event, which will be held in Brasilia in March 2018."

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Using Endangered Species Act, collaboration for species recovery

By Dr. Richard Fischer
U.S. Army Engineer Research and Development Center

A collaborative effort is underway to develop alternative solutions to address federally listed species on Department of Defense lands and as a result, reduce mission impacts and aid in species recovery.

The U.S. Army Corps of Engineers Threatened and Endangered Species Team is implementing this effort in collaboration with the U.S. Fish and Wildlife Service and National Marine Fisheries Service. The team is focused on threatened and endangered and at-risk species that currently affect, or have a high likelihood in the future to affect, USACE mission sustainability. As part of the Corps’ TEST strategy, the U.S. Army Engineer Research and Development Center, Environmental Laboratory, is conducting riparian restoration demonstration projects in the southwestern United States, including Prado Reservoir near Los Angeles, California, and Cochiti Reservoir, near Santa Fe, New Mexico. The objective of these projects is to demonstrate the feasibility of establishing vegetated riparian areas along reservoir shorelines and tributary rivers that provide habitat improvement for regionally sensitive riparian-dependent species.

The focus is on testing and demonstrating various habitat rehabilitation techniques that ultimately could be used internally, and by partners, for the conservation of listed riparian bird species (southwestern willow flycatcher, Least Bell’s vireo and the western yellow-billed cuckoo). The TEST is beginning to collaboratively work with other federal and non-federal partners to reduce the stressors on listed species, build habitat and minimize, all in the name of working toward recovery of those species where they have collective management capabilities.

A big part of TEST is to develop strategic collaborations both internally and externally as a way to build partnerships and facilitate progress. The TEST is working with the military services to refine and implement a framework for initiating and coordinating species recovery efforts. This framework includes the development of proactive conservation plans within the Corps and with coordination among other federal agencies. This allows greater control over species/management interactions (and possibly, lower costs) than the terms and conditions that typically result from increased Endangered Species Act listings or consultations.

The Endangered Species Act requires all federal agencies to strictly adhere to its requirements of protecting imperiled species. The DOD, including both the Corps of Engineers and the military services, collectively spend about $400 million annually on listed species conservation and compliance and is responsible for protecting approximately 430 threatened and endangered species and over 530 at-risk species. This is more federally listed species per acre than any other federal agency.

Collaboration for species recovery

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Increasing Proactive Conservation Efforts

Under the Endangered Species Act, Section 7 is the mechanism federal agencies follow to consult with either the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to ensure their actions do not jeopardize the continued existence of threatened or endangered species, or adversely modify their critical habitats. Section 7 is split into multiple parts that relate to how action agencies cooperate with the services to protect species. The Defense Department works with these services primarily via formal and informal consultations under Section 7(a)(2) of the Endangered Species Act, and this can lead to the issuance of biological opinions by the services that mandate special measures agencies must follow to protect threatened and endangered species in the course of their actions.

There is significantly less familiarity with, and utilization of, the preceding Section 7(a)(1). Increasing the use of 7(a)(1) is a major objective of the TEST program. Many of the proactive conservation activities that have been implemented during the past several decades on both USACE and military lands pertain directly to this section, which describes voluntary conservation measures by federal agencies for federally listed species. This section specifies that agencies’ duties to conserve threatened and endangered species can apply widely to programs and is not limited to individual actions. Thus, agencies can distribute conservation obligations programwide, as well as achieve conservation opportunities outside of defined action areas to attain compliance with the Endangered Species Act in a way that promotes efficiency, cost effectiveness, ingenuity and improved conservation outcomes through increases in species baselines.

This provides DOD the flexibility to conduct conservation programs and take advantage of conservation opportunities outside of defined action areas. This holistic systems approach to conservation can be used to encourage investment in activities that provide the highest conservation return to threatened and endangered species populations and habitat baselines, in lieu of minimization or mitigation strategies at an individual action area under 7(a)(2) standard operating practices. This approach already has proven successful with the interior population of least tern. A proactive and collaborative effort among the Corps of Engineers, USFWS and American Bird Conservancy, which included development of rangewide 7(a)(1) Conservation Plans, directly contributed to a recent USFWS recommendation to remove the tern from federal protection under the Endangered Species Act.

Improving Operational Efficiency

The military services use Integrated Natural Resources Management Plans to promote conservation actions under the Endangered Species Act.

In the United States, the military manages more than 23 million acres of land across hundreds of military installations – 65 percent of those installations have natural resources significant enough to require an INRMP.

The Defense Department has, in total, 341 INRMPs, and 240 of them contain management actions for at least one listed species.

Through conservation actions guided by information from each installation’s INRMP, and promulgated primarily through broader-scale and formalized conservation plans, it has the potential to benefit both the regulatory process and species involved. This includes: providing an opportunity to reduce regulatory disagreements during consultations, more readily increase species baselines (which will be considered during consultations), making proactive commitments to actions installations would be predisposed to undertake anyway under Section 7(a)(2), and most importantly, allow DOD to improve operational efficiency and flexibility in executing mission requirements.

Interagency Collaboration

The TEST’s riparian restoration demonstration efforts are part of a larger interagency effort to identify opportunities for conservation planning, habitat restoration, and monitoring of multiple threatened and endangered species that are affecting agency missions.

Established in 2016, the Collaborative Wildlife Protection and Recovery Initiative aims to increase the effectiveness, efficiency and predictability of conservation, management and consultation. The interagency team promotes innovative approaches to wildlife protection, mitigation and recovery, and works collaboratively to reduce agency impacts and protect or recover imperiled species. CWPI is comprised of federal agency threatened and endangered species leadership, including the Corps, Office of the Secretary of Defense, military service branches, Natural Resources Conservation Service, Bureau of Land Management, U.S. Forest Service, and U.S. Fish and Wildlife Service, with contributions by the National Fish and Wildlife Foundation.

The CWPI’s has a current focus on riparian-dependent species in the southwest, such as Least Bell’s vireo, southwestern willow flycatcher and Arroyo toad. DOD installation management of riparian habitats, as promulgated through INRMPs, and Corps’ management actions on rivers and around reservoirs, will contribute significantly to regional and rangewide recovery efforts.

By developing strategies to assess threatened, endangered and at-risk species on a national scale and applying the 7(a)(1) approach to reduce adverse impacts on missions, the TEST aims to improve species conservation – including in some cases, recovery. Recovery is not only good for species, but also for the Defense Department, as it reduces restrictions on our important mission areas, which includes navigation, and shore and flood protection for the Army Corps of Engineers, and for the military services, the ability to train and prepare warfighters to protect our great nation.