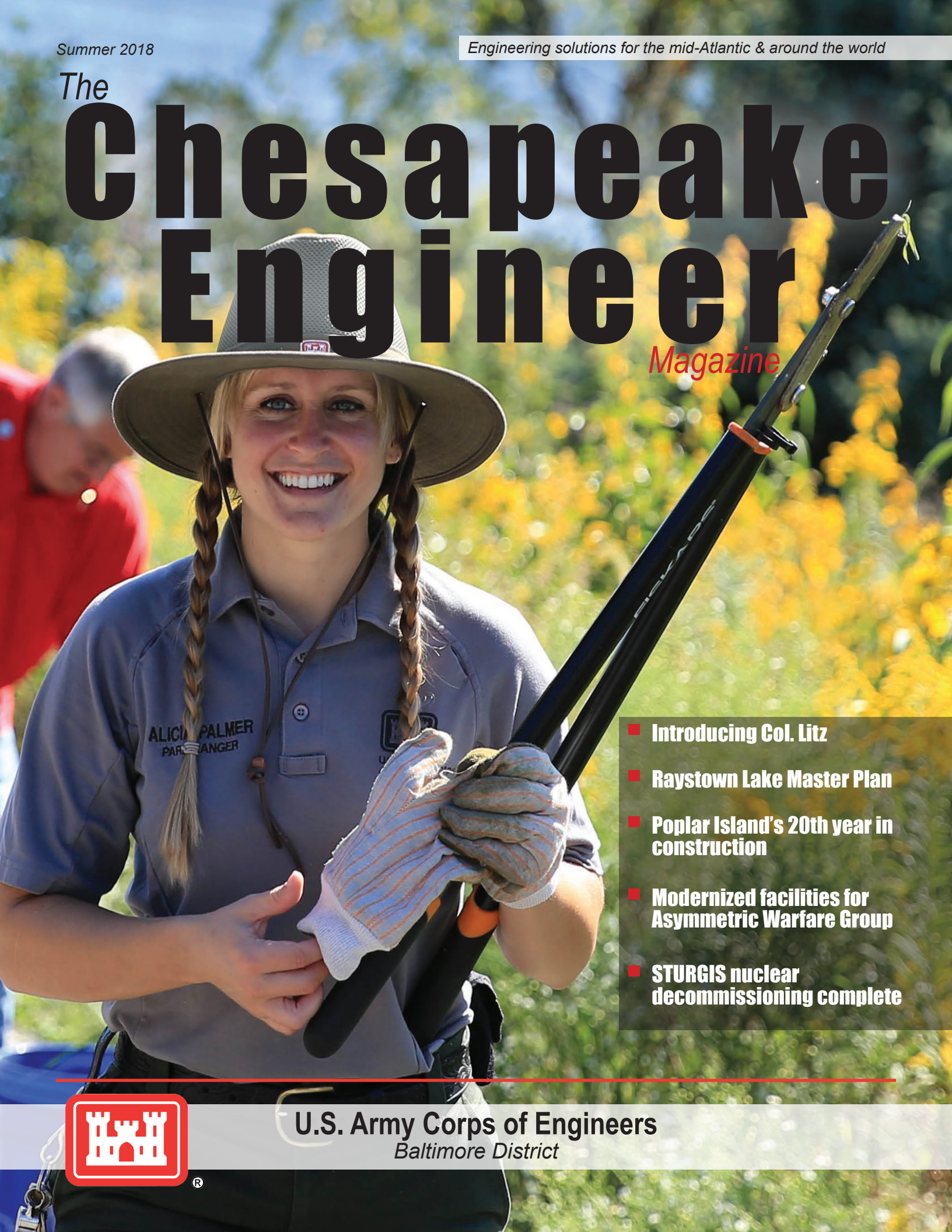
Summer 2018

Engineering solutions for the mid-Atlantic & around the world

The Chesapeake Engineer Magazine



- Introducing Col. Litz
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- Modernized facilities for Asymmetric Warfare Group
- STURGIS nuclear decommissioning complete

U.S. Army Corps of Engineers
Baltimore District

The Chesapeake Engineer Magazine
Summer 2018

On the Cover: Alicia Palmer, Baltimore District, Raystown Lake park ranger, assists volunteers during National Public Lands Day event at Raystown Lake, Sept. 23, 2017. (U.S. Army photo by David Gray)

Features

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The mission of the U.S. Army Corps of Engineers, Baltimore District, is to deliver vital public and military engineering services; partnering in peace and war to strengthen our nation's security, energize the economy and reduce risks from disasters.

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Earth Day 2018

By Cynthia Mitchell

Baltimore District joined the global community April 22 in celebrating Earth Day, the largest civic-focused day of action in the world. The Earth Day 2018 theme was End Plastic Pollution, a call to action toward eliminating primarily single-use plastics along with promoting 100 percent recycling of plastics. While environmental cleanup and ecosystem restoration are everyday focuses for the Corps, the District's recreation sites amplified their focus on environmental stewardship during the annual celebration with the help of local volunteers.

Jennings Randolph Lake

The Boy Scouts of America, Potomac Highlands Council, hosted their annual Spring Camporee April 28-29 at the Robert W. Craig Campground. Approximately 75 scouts cleaned local roadways, learned about improving local forestry habitat and helped maintain the trail system. They also planted 20 dwarf Alberta spruce trees along the entrance to the campground and earned their forestry merit badge along the way.

Raystown Lake

The lake hosted an Earth Day Sustainability Symposium April 20 with local students. Rangers discussed environmental stewardship efforts at the lake and organized mountain biking demonstrations for participants. Volunteers participated in a shoreline cleanup May 5 at the Tatman Run Recreation Area, removing approximately 2,000 pounds of trash from the shoreline.

Tioga-Hammond and Cowanesque Lakes

The Williamson High School Sportsman Club joined Corps park rangers and local volunteers April 24. Participants collected and disposed of trash, spread playground wood chips and staged red rock decorative stone. The Ives Run Visitor Information Center received a fresh new look, decreasing the need for annual herbicide/pesticide usage and new mulching.

Did You Know?

- *Earth Day was founded by Sen. Gaylord Nelson, April 22, 1970*
- *20 million people participated in the first Earth Day*
- *In the past 50 years, humans have consumed more resources than in all previous history*
- *Half of the world's tropical and temperate forests are now gone*

Sources: ecocycle.org, dosomething.org

Col. John Litz, commander, holds his first town hall with Baltimore District, Aug. 16, 2018. (U.S. Army photo by John Sokolowski)

Looking forward with Colonel John Litz

Baltimore District's new commander

"I look forward to applying my previous experience and helping the District continue to provide great service to our partners each and every day."

BUILDING STRONG!

COL John Litz

EDUCATION

B.S. in Mechanical Engineering, University of Tennessee (1995)

M.S. in Civil Engineering, Clemson University (2004)

M.A. in Strategic Studies, Army War College (2017)

CAREER

23 years in military - Mix of combat, Special Operations and U.S. Army Corps of Engineers

Corps Districts: Louisville, Iraq, Afghanistan, Charleston, Headquarters

Most recent job at the Pentagon as division chief for the Office of the Assistant Chief of Staff for Installation Management

Greetings from Baltimore! I'm honored to serve as the commander and 68th district engineer of the Baltimore District, U.S. Army Corps of Engineers.

My wife Becky and I are extremely excited to join this incredible family of nearly 1,100 professionals dedicated to finding solutions to the toughest engineering challenges throughout the mid-Atlantic region and, in some cases, around the globe.

I look forward to applying my previous experience and helping the District continue to provide great service to our partners each and every day. Previously, I had the honor of commanding the Charleston District, where one of our primary missions is maintaining the navigation channel for the Port of Charleston, to include a significant harbor deepening study. I also spent time with Louisville District, Army Corps Headquarters in Washington D.C., and the Afghanistan and Iraq districts. It has been a privilege to work on so many important projects across the globe and to get to continue to do so with the Baltimore District.

As the commander, I want to ensure we focus on successfully delivering our services and projects to our stakeholders and partners. The District has an incredibly talented workforce dedicated and qualified to perform their roles. The employees of Baltimore District have developed a culture in which their successes are directly linked to the successes of those they support.

As I look ahead toward a productive fiscal 2019, delivery of our programs will be as important as ever before.

We will start the year with a critical $16-million project to improve the levee system along Codorus Creek in Pennsylvania, which is a flood risk management project vitally important to thousands who live behind it.

We will pay tribute to the 50th anniversary of Foster J. Sayers Dam, which operates as a system with other dams along the West Branch of the Susquehanna River in Pennsylvania to reduce flood risk to communities.

Our Civil Works planners are poised to advance several studies throughout the watersheds of the Susquehanna and Potomac rivers that will provide recommendations and the basis for potential vital water resources projects.

Our radiological center of expertise will begin the important first steps needed to begin decommissioning and dismantling two former Army nuclear reactors, one on Fort Belvoir, Virginia, and the other on Fort Greely, Alaska.

I'm also looking forward to continuing the expansion of Poplar Island and starting the restoration design of Mid-Bay Island — two critical components associated with the beneficial placement of material dredged from navigation projects at the Port of Baltimore.

The Washington Aqueduct team will continue to provide safe, high-quality drinking water to Washington D.C. and parts of northern Virginia, while maintaining and improving their incredible array of infrastructure.

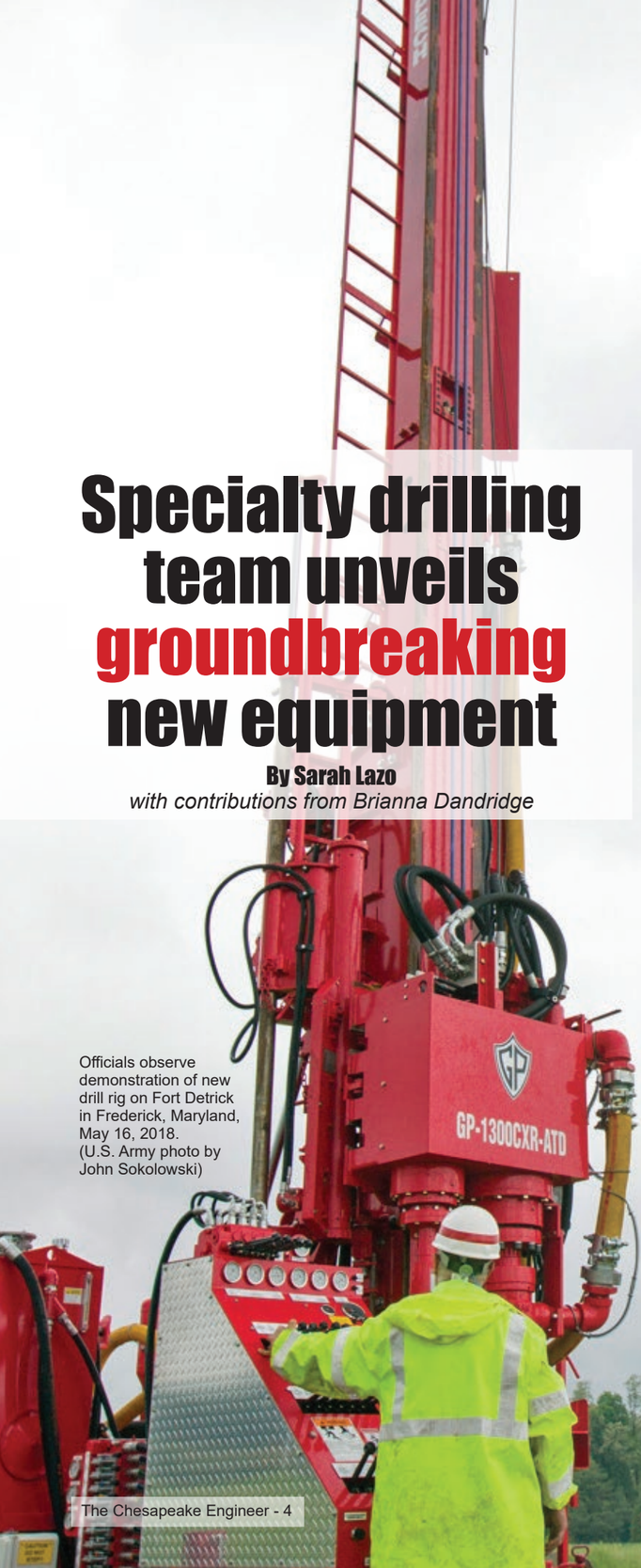
The District has many critical construction projects including several on Fort Meade, Maryland, aimed at strengthening our nation's cybersecurity. As always, we remain ready to support our nation's efforts overseas, along with emergency response across the U.S.

I couldn't be more thrilled to be back with the Corps in the Baltimore District and to be a part of this community to do our part to secure the nation and protect our water resources now, and for years to come. ■

Specialty drilling team unveils groundbreaking new equipment

By Sarah Lazo

with contributions from Brianna Dandridge



Officials observe demonstration of new drill rig on Fort Detrick in Frederick, Maryland, May 16, 2018. (U.S. Army photo by John Sokolowski)

At the touch of a button, it moves readily across a diversity of terrain, but this isn't your typical remote-controlled Fisher Price car or train, this is a $1.2-million, 35-foot-tall, 80,000-pound drill rig that performs some of the most unique missions in the nation.

The U.S. Army Corps of Engineers, Baltimore District, unveiled its new toy in May 2018 during its first mission to drill for monitoring wells in the vicinity of a landfill on Fort Detrick, Maryland.

This is the largest track-mounted tilt-bed rig across the Corps and the biggest the contractor, Gus Pech Manufacturing Co., out of Le Mars, Iowa, has ever assembled in its nearly 140 years of business.

"We've operated other drill rigs, but nothing compares to the amount of power and force behind this one," said Maria Orosz, Baltimore District Geology and Investigations Section chief, who has four additional, smaller active rigs available at the District.

Meeting the weight capacity to be hauled on an 18-wheeler tractor trailer, the rig is not speedy — clocking in at top speeds of 2 miles per hour — but it's certainly agile.

This impressive 565-horse-power engine machine can drill a 4-inch diameter hole down to 300 feet at 600 revolutions per minute with the ability to tilt at 45 degrees to navigate steep slopes, including dam embankments.

"It contains an automatic leveling device to adjust, so that the base is perpendicular to the ground," said Orosz.

In addition to well installation and abandonment projects, drill rigs support life-safety flood risk management and environmental remediation missions. They are primarily used on the sides of levees and dams during inspections in order to survey the condition of the land composition and install equipment like piezometers. They are also used as part of site-condition analyses for hazardous, toxic and radioactive waste (HTRW) projects.

In working with the contractor to design the new rig, Orosz and her team members incorporated lessons learned from its predecessor and other rigs.

"We assessed the capabilities we did not have with our previous rig, and laid out the best parts of every rig we have ever used," said Orosz.

With these details in mind, the team was able to streamline the process with the new rig.

This one-stop shop includes all of the necessary pumps and its own air compressor unit, which previously had to be rented.

"It's more efficient and features a self-contained, compressed work site, as well as an automatic shut-off function, which makes it much safer to operate," said Chuck Frey, Baltimore District Geotechnical Branch chief. "It also helps us to maximize our capabilities."

One of the most unexpected facets during the design phase? Agreeing on its color.

"You'd be surprised," said Orosz, referencing this tenuous decision.

In the end, the selection was red, but not just any red — Corps of Engineers red. The contractor was able to take inspiration from the Corps logo on the hardhat.

This flashy red rig lives in a warehouse on Aberdeen Proving Ground in Edgewood, Maryland, until it's ready to deploy to its next destination.

The Field Exploration Unit

The team who operates this rig is just as extraordinary as the machinery.

Baltimore District's 10-member Field Exploration Unit, consisting of specially trained rig operators and geologists, is one of nine drilling teams across the Corps. The District is also home to the regional center of expertise for subsurface investigations, and soil mechanics laboratory testing within the North Atlantic Division.

Baltimore District's FEU has multiple two to three-member operational crews simultaneously deployed year round, primarily along the east coast, with the mission of studying material below the surface in order to help guide a wide-range of engineering decisions for a diversity of projects. There are between 30 – 40 missions annually with each lasting approximately two weeks.

This team spends a lot of time supporting New England District and the 35 dams within its jurisdiction; however, the crew has also worked on high-profile projects like the Everglades, Staten Island, Poplar Island Ecosystem Restoration Project, Arlington National Cemetery, Quantico National Cemetery, Korean War Memorial and the Pentagon.

"We've operated other drill rigs, but nothing compares to the amount of power and force behind this one."

"To complete our work, we need flexible equipment, crews and customers," said Frey.

And this flexibility starts even before the mission.

Due to the size of the District's newest tilt-bed rig, the team has to plot routes capable of handling the load in order to get to their destination.

The team also has to troubleshoot and problem solve once on the job.

"We have to match our equipment with the site conditions," said Clint Kneten, FEU chief. "We may be working in the swamp, woods, inside a dam, or on a barge. We don't really know the geology of what we're working with until we arrive."

Steve Simmons, drill rig operator, recalled an assignment assisting with the Missouri River flood recovery in 2011 in which ingenuity had to be employed.

"Each day, we had to wait for the ground to freeze to safely move the rig and drill," said Simmons. "If the temperatures rose, the ground would become too soft to work. We often get asked to do things that we've never done before, so we get to develop new methods on a variety of terrains."

Simmons, who first learned to operate heavy equipment at a young age, stems from a family of heavy equipment operators.

"I worked for my dad and grandfather at Simmons and Son well drilling in Michigan all through my school years in the summer, working both nights and weekends," said Simmons, who joined the Corps team in 2006.

There's no prior job or training that can prepare one for work on the FEU, however. This work requires special on the job training, though it helps to have a heavy equipment operation background like Simmons.

"This is not easy work," said Frey. "We've had to deal with heat, alligators, and sometimes our nearest lodging is 40 miles away."

The team also sacrifices a lot of personal time, traveling more than 75 percent of the time for the job.

Though challenging, there are rewards.

"We're the first ones in," said Kneten. "We get to see where a future project will go, and help it on its path." ■

Delivering worldwide engineering solutions

By Becca Nappi

Team members deploy throughout the world, bringing engineering expertise and solutions to our military and countries in need.

At top: *Arlene Weiner and James Green provide cartography and engineering expertise as part of a FEST-A mission in Afghanistan in 2013. (Courtesy photo)*
(1) *Robert Nagy, FEST-A member, at bottom, inspects tracks of a Mobile Armored Target in support of* U.S. Army Europe's annual exercise, Resolute Castle, *in Żagań, Poland. (U.S. Army photo by Ian Swisher)*
(2) *Maj. Andrew Petrie takes command of the 71st Engineer Detachment, FEST-A during a change of command ceremony in Baltimore, April 6, 2018. (U.S. Army photo by David Gray)*
(3) *FEST-A during its most recent deployment in Europe. (Courtesy photo)*
(4) *James Green performs a communication vault inspection in the Drawsko Pomorskie Training Area in Poland in support of Resolute Castle. (U.S. Army photo by Rodlin Dorvil)*

Baltimore District has a small, specialized team that sometimes goes under the radar.

Team members deploy throughout the world, bringing engineering expertise and solutions to our military and countries in need.

The 71st Engineer Detachment, Forward Engineer Support Team – Advance (FEST-A) is one of eight rapidly deploying, advance-engineering teams throughout the Corps.

The 71st Detachment consists of Baltimore District active duty soldiers and civilian employees who primarily specialize in mechanical, civil, environmental and electrical engineering, as well as cartography — providing a diversity of expertise to support global operations.

Tasks include critical infrastructure surveys; engineer operations; base camp planning and drawdown; geospatial operations; and construction planning, design and management.

The team's latest deployment in 2018 consisted of the completion of 35 design projects that aided U.S. Army Europe in preparation for their large annual field training exercise, Resolute Castle. The construction designs were for projects throughout Eastern Europe to help bring troop training facilities up to U.S. standards.

Each FEST-A detachment throughout the Corps typically deploys overseas every three years, rotating support where and when needed. The 71st Detachment trains when not deployed to prepare for future missions.

Command of the 71st Detachment changes every three years on average. The team recently changed command during a ceremony at Baltimore District's Headquarters.

While the timing and location of the team's next deployment isn't set, they stand ready to solve tough engineering challenges across the world. ■

Ecologist helps agencies strike balance between missions and environment

By Sarah Lazo

Baltimore District and Adelphi Lab employees measure worm snakes as part of a Department of Defense study on snake fungal disease at U.S. Army Garrison Adelphi Laboratory Center, June 5, 2018. (U.S. Army photo by Sarah Lazo)

Dan Cockerham doesn't bring much with him when he ventures out into the field; often it's just a notepad, GPS and bug spray.

His real tools are intangible — his impressive species recall and bird-calling abilities, which he has continued to sharpen since childhood.

It is through these instruments that Cockerham, a Baltimore District ecologist, helps determine essential strategies to manage plants and animals at military installations and other unique locations across the Chesapeake Bay region.

"I support our partners in defining multi-disciplined approaches that balance both military and natural resources missions," said Cockerham.

Department of Defense agencies are required to have some form of an integrated natural resources management plan. Through Baltimore District's Installation Support Branch, Cockerham performs tailored fieldwork surveys to assist with plan development in Maryland at Aberdeen Proving Ground, Adelphi Laboratory Center, Fort Meade, and Blossom Point Research Facility, as well as at U.S. Army Reserve sites.

"I canvass the area to determine what resources or species are using or living on the installations," said Cockerham. "I provide a map of where certain species are located and make management recommendations, so installations can work with the native species and not harm them, while still reaching mission goals."

Fieldwork entails separating the installation into plots, and then standing in one plot for a set amount of time and observing and documenting its sights and sounds before moving onto the next plot. Species like birds or frogs can be identified at a stationary point out of view just by their call and regional dialect, while animals and plants with a smaller radius of movement — or none at all — must be met on foot.

Based on the installation's needs, Cockerham may help determine wetland boundary lines; and conduct vegetation, avian, bat, herp (reptiles and amphibians) and rare, threatened and endangered species surveys. This information feeds into the project's wetland buffer designations and management plans for natural resources, invasive species, pests, forests and wildland fires.

"I would be unable to accomplish my tasks without the help of the Army Corps," said Bridget Butcher, Adelphi conservation specialist. "Since our installations are small, we are only allotted one natural resources position; larger installations have a team of people working on natural resources management. Having the Corps as a key partner allows me to bring in a variety of expertise to help implement our integrated plan that drives our natural resources projects over the course of five years."

In addition to serving military counterparts, Cockerham has supported other agencies at some pretty exceptional locations.

He spent roughly 20 weeks along the Appalachian Trail System gathering data on hawks, raptors and bats as part of an environmental impact statement to expand the easement for transmission lines at the U.S. National Park Service's Delaware Water Gap National Recreation Area. This mini Grand Canyon-esque site sits on the Delaware River along the border of northeastern Pennsylvania and northwestern New Jersey.

Cockerham and a team also completed survey work on James Island in preparation for an authorized Army Corps ecosystem restoration project that would use dredged material to restore eroding habitat on both James and Barren islands.

"We stayed on the island for a week, counting spawning horseshoe crabs in the early morning at high tide under a full moon, and counting nesting diamondback terrapins in the afternoon. To be able to camp in the middle of the Bay and do this work…it was amazing."

This line of work, while seemingly idyllic, is not without its challenges.

"You have to deal with the elements," said Cockerham. "There are ticks, mosquitos, security concerns, and, in some cases, we have to sweep the area for unexploded ordnance prior to conducting the fieldwork. It also seems to be either extremely hot or bitterly cold."

For Cockerham, however, it's all worth it.

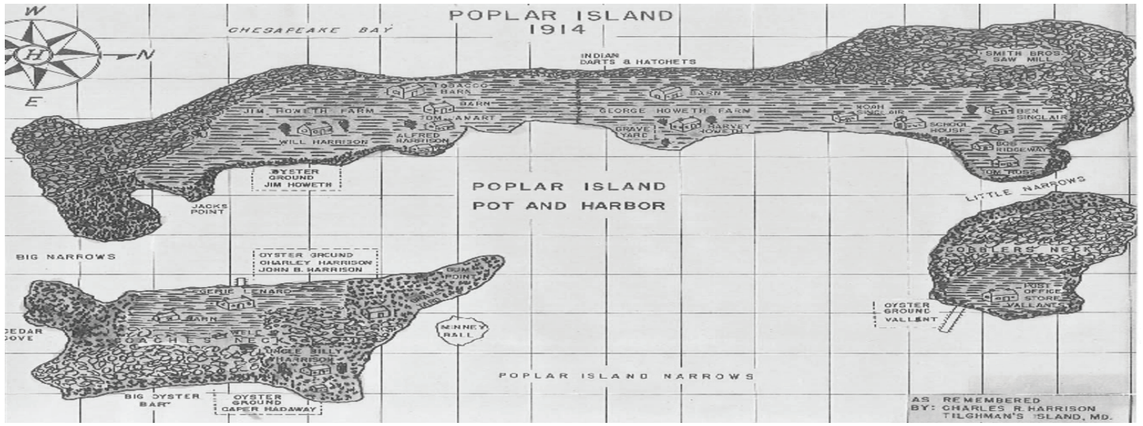
"I'm helping to ensure these resources can continue to thrive in their natural habitats and not be negatively impacted by development or change. As a little kid, I would run in the woods and fearlessly pick up snakes and go birding with my grandmother. Now, I'm making a difference, and I get paid for it."

Photos at left: Dan Cockerham, U.S. Army Corps of Engineers, Baltimore District ecologist, performs avian and herp surveys at U.S. Army Garrison Adelphi Laboratory Center in Adelphi, Maryland, June 5, 2018. (U.S. Army photos by Sarah Lazo)
Cockerham searched under logs for snakes; held two worm snakes; weighed the worm snakes as part of a Department of Defense study on snake fungal disease on installations; and found a tulip tree silk moth.

Twenty years of construction on Poplar Island

Marking continued growth, improved habitat

By Becca Nappi



This year marks a significant anniversary for the Paul S. Sarbanes Ecosystem Restoration Project on Poplar Island in the Chesapeake Bay.

The U.S. Army Corps of Engineers, Baltimore District, and its partners are celebrating the project's 20th year of active construction — a milestone marked by the beginning of phase two of the expansion work.

While the island's earliest recorded map from 1846 depicts an expansive island, Baltimore District Biologist Mark Mendelsohn saw a much different reality when he first worked on the project in 1994.

By this year, Poplar Island had eroded to just four acres from an estimated 1,140 acres in 1846.

"My grandmother used to talk about how sore her arms were from catching rock fish and blue fish around Poplar Island," said Mendelsohn. "It always had this allure to me."

Rather than let the island continue to disappear, the Corps, Maryland Port Administration, and many other federal and state agencies decided to restore the island.

"I don't think any of us thought it would become this big of a deal; we were just preoccupied with getting the project going," said Mendelsohn.

According to Baltimore District's Poplar Island project manager, Justin Callahan, Poplar Island's 1996 feasibility report suggested building a 1,140-acre island using dredged material from the Chesapeake Bay approach channels.

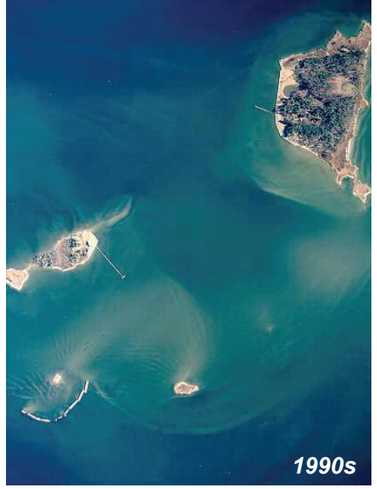
The channels need to be routinely dredged to keep the waterways safe for navigation and to keep the Baltimore Port economically viable for large cargo ships. Finding suitable placement sites for this dredged material had always been difficult but with the addition of Poplar Island, millions of cubic yards of material would have a place to go.

While Poplar Island could provide dredged material placement, it also had the potential to provide invaluable island habitat in the Chesapeake Bay since more than 10,000 acres of similar island habitat have been lost in the past 150 years.

"Those islands that were lost would have been used for migratory paths, but they're no longer there," said Mendelsohn. "Isolated island habitat is very scarce and to have Poplar there as a stopover for birds is really important as well as a stopover for monarch butterflies."

After the necessary environmental studies and interested agencies determined Poplar Island to be a sustainable dredged material placement and ecosystem restoration site, work began to recreate an island filled with diverse habitat.

"We needed a place for the dredged material, and U.S. Fish and Wildlife Service wanted islands for bird habitat," Mendelsohn said.



The first construction on Poplar Island began in January 1998 with containment dikes in the northern part of the island, said Callahan. In 2000, a second construction effort began to build the southern part of the island. More than 35,000 feet of containment dikes were built using sand and rock from the last remnants of Poplar Island.

Once the containment dikes were complete, dredged material was pumped into the cells. In 2001, the island already began to attract various bird species and reptiles, including osprey, eagles, terns and terrapins.

"Poplar Island provides valuable ecosystem services to the Chesapeake Bay, as well as provides a place for dredged material to keep the approach channels open and a source of jobs for the local community," said Callahan.

Significant, innovative engineering work has gone into the development of wetlands and dikes on Poplar Island that have significantly contributed to the overall restoration goals for the Chesapeake Bay. These efforts have become a model for ecosystem restoration throughout the world.

"Poplar Island is now an international model for habitat restoration and the beneficial use of dredged material," said Callahan.

The first construction contract kicked off what was initially thought to be a 1,140-acre project. Then, in 2007, Congress authorized Poplar Island to expand its 1846 footprint to 1,715 acres to allow for more dredged material placement capacity and to grow its ecosystem restoration benefits.

Phase one of the expansion construction is complete, and, now, 20 years after the first containment dikes were built, phase two has begun on Poplar Island to continue to construct expansion containment dikes. The expansion will add 575 acres to the north side of the project and will raise the existing upland dikes to 25 feet.

Once Poplar Island is complete, 68 million cubic yards of dredged material will have been placed at the project, creating 776 aces of tidal wetlands, 829 acres of upland habitat and a 110-acre open water embayment area.

While the island now provides sanctuary to thousands of species of plants, fish and animals, water quality and habitat will continue to improve as the wetlands grow and mature.

"In the middle of nowhere there's just this project with all these wetlands and birds," said Mendelsohn. "It's just amazing."

With optimum funding, Poplar Island will be fully restored by 2044. ■

"I don't think any of us thought it would become this big of a deal; we were just preoccupied with getting the project going."

Poplar Island in 1934

Military Reserve members and their families often face challenges when preparing to return to active duty military service.

There are numerous logistical and legal responsibilities, such as changes in employee benefits packages, short-fused moves and providing adequate family support. Employer support is vital to making the transition to active duty a success.

Because of this critical support, the Real Property Services Field Office (RSFO) out of the U.S. Army Corps of Engineers, Baltimore District, was recognized with the Employer Support of the Guard and Reserve (ESGR) Patriot Award for excellence and patriotic service during an awards ceremony at the RSFO Headquarters located just outside of Fort Meade, Maryland, July 16.

Through RSFO, Baltimore District is the national program manager for real estate, design and construction services for the intelligence community.

This award is granted for employer distinguished support of Reservists and Guardsmen that goes above and beyond the protections in place by federal law.

“The recognition of supportive supervisors by their National Guard and Reserve employees is vital to our mission,” said Army Col. (ret.) Jean Hulet, ESGR Maryland chair. “This recognition visually certifies service members’ appreciation for their supervisors’ support.”

ESGR grants approximately 250 awards across the United States each year.

According to Hulet, this acknowledgement is part of ESGR’s two-pronged program.

“We work with service members and employers to resolve issues, and we like to recognize employers and organizations exceptionally supportive of these service members.”

Maj. Jonathan Harvey, RSFO project manager, deployed to Kandahar, Afghanistan, wanted to recognize the exceptional qualities his RSFO leaders have shown through actions and support. He nominated Jeanne Judd, RSFO chief of staff; Dale Daniel, RSFO supervisory general engineer; and Jared Olson, RSFO program manager, for ESGR awards to honor their continuous guidance and support to him while serving in the U.S. Army Reserve.

According to the nomination written by Harvey, the RSFO team, especially Judd, made his deployment from citizen to soldier a smooth transition.

“We see deployment as good for careers, and we want to make sure that the entire process of converting to military orders and then back to civilian duties goes as smoothly as possible, so focus can remain on military duties and training,” said Judd. “Deploying into a war zone is a very brave thing to do. I believe that by supporting our employees who choose to deploy, I am honoring their commitment to our country and selfless service.” ■

District office earns patriot award for support to citizen soldiers

By Brianna Dandridge

Did you Know?

The Uniformed Services Employment and Reemployment Rights Act guarantees Reservists and Guardsmen are not deterred in their civilian careers by their military service. ESGR is a free Department of Defense Program that educates civilian employers regarding their rights and responsibilities.

Jean Hulet, Employer Support of the Guard and Reserve (ESGR) Maryland chair, at right, presents Jeanne Judd, Baltimore District, Real Property Services Field Office, chief of staff, with the ESGR Patriot Award, July 16, 2018. (U.S. Army photo by John Sokolowski)

A warrior on, off the ice.

By Sarah Lazo

With an assist in the third period of the Warrior Division championship game, Michael Vaccaro, defenseman and U.S. Army Corps of Engineers, Baltimore District safety engineer, helped the Capital Beltway Warriors beat the Duluth Warriors 5 to 3 at the 14th Annual USA Hockey Disabled Hockey Festival. The event, and only the second tournament for Vaccaro’s team, was held at the Leaf’s Ice Center near Chicago in Dundee, Illinois, April 8.

Capital Beltway Warriors after winning the 14th Annual USA Hockey Disabled Hockey Festival at Leaf’s Ice Center in Dundee, Illinois, April 8, 2018. (Courtesy photo)

The Warrior Division is comprised of 12 teams from across the country and consists of ice hockey players who are veterans with disabilities. The festival — the largest of its kind — also includes an event for 130 teams with players who have vision and hearing impairments, and/or other special needs.

In 2017, Vaccaro formed the Capital Beltway Warriors, which now consists of 20 players from across the Washington metropolitan region.

“I have been playing hockey my whole life,” said Vaccaro, who is also the national warrior representative for USA Hockey’s “Disabled Section.” “I came back from Iraq in 2006 and got with a local veterans hockey program. I met some fellow hockey coaches who are also veterans with disabilities, and we started our own team.”

Vaccaro served in the United States Marine Corps for a decade starting in the late 1970s, deploying to Lebanon during his tenure. He joined the U.S. Army Reserve in 2001 following 9/11, and continues to serve the nation as sergeant first class, even after a deployment led to shrapnel wounds and a Traumatic Brain Injury diagnosis.

“I was hit with an RPG round that blew up the wall we were fighting behind in a firefight in Ramadi, Iraq, in 2006,” said Vaccaro.

The recent championship game was less about the victory and more about healing for Vaccaro.

“Hockey means a lot to me; it has helped me get through what happened in Iraq, and I want to pass it along to help other veterans,” he said. “It was great to win but it was more about getting together and helping other veterans and using hockey as an ice therapy.”

Vaccaro is also an accomplished coach, having instructed three players who won gold medals in the Paralympics sled hockey event in the 2018 Winter Olympics in PyeongChang, South Korea.

Vaccaro and his wife Amanda are both Level 5 USA Hockey coaches — the highest attainable level. He has coached both sled and standing hockey, and, for the past six years, has been invited to the USA Hockey Development Sled Camps in Buffalo, New York, where the USA National Sled Team is selected.

“Six players on the U.S. National Paralympic Team are service members with amputations, and that is what inspires me — to see these young individuals fight through their challenges and then compete at the highest level,” said Vaccaro.

If that wasn’t enough, he also coaches his three children: twins Antonio and Nico, and daughter Cassandra, who plays on an all-girls team.

Vaccaro has certainly found his passion, and he encourages other veterans with disabilities to find theirs.

“I would tell other veterans to find something they like and work on it to keep their minds free and clear; hockey might not be their thing but something else is.”

Based out of Joint Base Andrews in Prince George’s County, Maryland, Vaccaro performs quality assurance for several military construction projects on base. He also volunteers to drive Corps emergency management rapid response vehicles that deploy during disasters. Vaccaro began his career with the Corps in 2008 at the National Geospatial-Intelligence Agency on Fort Belvoir. ■

Raystown Lake looking to shape its future

By Becca Nappi

An exciting process is underway at Raystown Lake that allows the surrounding community to help shape its future. The Raystown Lake Master Plan Revision process will lead to a renewed land-use document that guides the overall management and development of all recreational, natural and cultural resources at the lake. The current master plan dates back to 1994, making it necessary to revise based on public feedback and up-to-date cultural and environmental research.

Now is the time for stakeholders and members of the public to suggest updates and improvements to the project, future conservation efforts, and increases or decreases in recreation activities or development. Raystown Lake's vested community members know the intricacies of Raystown, from boating habits to hunting areas and to its future needs.

Winter Storm Niko drops six inches of snow on Raystown Lake, Hesston, Pennsylvania, Feb. 9, 2017. (U.S. Army photo by Allen Gwinn)

About Raystown Lake

Authorized by the Flood Control Act of 1962, Raystown Lake Dam has served as a vital flood risk management project for downstream communities along the Juniata River. Approximately $285 million in flood damages have been prevented by the dam since its completion. Other project purposes include mitigation and augmentation of water quality; hydropower; recreation; and fish and wildlife preservation. The lake boasts more than 1.5 million annual recreation visitors.

What is a Master Plan?

A master plan is the guiding document that describes how project resources will be managed into the future. The master plan is the vision for recreation and natural and cultural resources management. A master plan does not address changes to flood risk management, hydropower, navigation or water supply functions.

Why now?

Master plans are designed to provide guidance for 15-25 years. Raystown Lake's current master plan dates back to 1994. While legislation in the 2016 Water Infrastructure Improvement for the Nation Act (WIIN), Section 1309, requires the master plan for Raystown Lake to be updated, this revision is part of a larger, Corps-wide effort to bring master plans up to date across the country.

What's been accomplished?

Baltimore District hosted four public meetings to collect feedback and speak with members of the community. This information will be used to help shape the master plan revision. Feedback is being collected daily from the public and stakeholders through email, mail and online submission forms. A boating study is also underway for the duration of the summer to investigate carrying capacity at Raystown Lake.

How can the public get involved?

Public participation in this process is vital to the plan's success and will help shape the future of Raystown for at least the next 15 years. While the Corps will have an official public comment period when a draft plan is complete by fall 2019, comments will continue to be collected throughout the revision process.

Complex modernization leads to increased warfare readiness

for Asymmetric Warfare Group on Fort Meade

By Brianna Dandridge

The U.S. Army Corps of Engineers, Baltimore District, has entered the final phase of construction on the $30-million Asymmetric Warfare Group (AWG) Complex on Fort George G. Meade, Maryland.

The state-of-the-art complex includes a 75,000-square-foot headquarters building, 2,700-square-foot visitor control center (VCC), 7,000-square-foot vehicle maintenance/fabrication facility (VMF), and a 1,000-square-foot indoor shooting range.

Construction on the AWG complex began in 2013 and is anticipated to wrap up this year.

“This new modernized construction gives us increased independent capabilities to support solution development for the Army,” said Maj. Vincent Gothard, AWG public affairs officer. “We have the improved capabilities and flexibility at a near real-time rate to enhance our training and deal with any emerging threats.”

AWG provides practical, tactical solutions for the Army and joint force units through training, observation of best practices and solution delivery.

“Maintaining combat readiness is essential for AWG soldiers,” said Gothard. “The new complex allows for the ability to maintain a higher overall readiness level.”

The headquarters building includes office space for operational support, smart-technology conference rooms, information processing center, video teleconference center, classrooms and administrative spaces.

“The Corps suggested a modern yet functional design for our new headquarters building,” said Art Baily, AWG facility planner. “It was a very integrated process between AWG and Baltimore District to design the new complex to meet our needs.”

The VCC grants AWG the ability to control access to the facility and monitor access to meet security requirements.

The VMF will provide an up-to-date facility to repair and modify vehicles and the space to work on a wide assortment of vehicle types and sizes simultaneously.

The indoor shooting range is the only one of its kind on Fort Meade and facilitates increased mission readiness, as AWG soldiers have a requirement to qualify on their assigned weapons every six months.

“The indoor range allows for more environmental control of weather, temperature and humidity, which allows for more accurate results,” said David Rosendale, range facilities manager.

The 14-person range was specially designed with environmental features to mitigate for noise, smoke fumes and residue, increasing health and noise safety for AWG personnel.

“Weapons qualification now takes one day instead of four; the Corps provided exactly what we needed,” said Rosendale.

The partnerships between Baltimore District and its military customers are critical to maintaining military infrastructure.

“There is no greater feeling than turning over a facility to an anxious and excited customer ready to put the facility in full operation,” said Oris Clary, Baltimore District, Bay Area Office resident engineer. “The team will take the lessons learned from this project to continue to improve procedures for delivering high-quality projects.”

Several other major construction projects are also underway on Fort Meade, including construction of the cybersecurity east campus, Department of Public Works, child development center, and continued barracks renovations under the Training Barracks Upgrade Program.

Baltimore District is building, renovating and modernizing military defense infrastructure to ensure continuity of missions and readiness as part of a significant $1.15-billion annual military construction program that supports 14 military installations across Maryland, West Virginia, Pennsylvania, northern Virginia and the District of Columbia. ■

7,000-square-foot vehicle facility

75,000-square-foot HQ building

$30-million modernized complex

14-person indoor shooting range

Asymmetric Warfare Group

Navigation wins

Quote

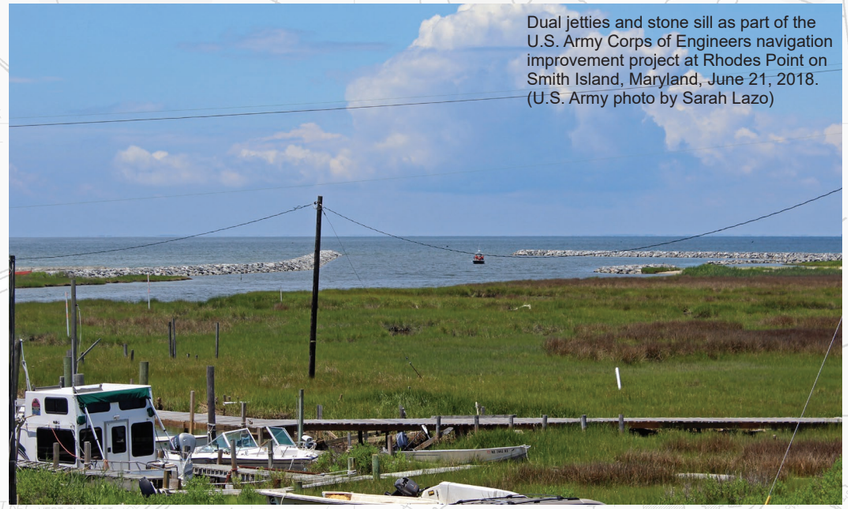
Jim White
Executive Director
Maryland Port Administration

"Your team did a great job removing debris that had accumulated near the cruise terminal from the Memorial Day weekend flooding. Special shoutout to the captain and crew of the Debris Vessel REYNOLDS for getting so much debris removed in such a short period of time. Thanks for the excellent service!"

Debris Vessel Reynolds picks up debris around Baltimore following heavy storms over Memorial Day weekend 2018. (U.S. Army photo by Jeff Peacock)

"On behalf of the people of Smith Island and Smith Island United, I would like to thank all of our federal, state and local officials who helped make this project become a reality. While this ceremony today celebrates past events, I can't help but see this project representing the future, not only for Smith Islanders, but for every individual who visits Smith Island. This project assures that Smith Island will be here for future generations to live, to visit and to enjoy."

Eddie Somers, *Smith Island United President*



Dual jetties and stone sill as part of the U.S. Army Corps of Engineers navigation improvement project at Rhodes Point on Smith Island, Maryland, June 21, 2018. (U.S. Army photo by Sarah Lazo)

Clearing Post-Storm Debris from Baltimore Harbor

Memorial Day weekend 2018 was marked by heavy rains and flash flooding in and around Baltimore. This meant a significant influx of large trees and other debris making its way down the Patapsco River into heavily used channels of the Baltimore Harbor. Baltimore District's debris crews took to the harbor and picked up substantial amounts of floating debris to carry out their mission of clearing drift that could potentially be hazardous to navigation in the region's channels, particularly those associated with the Port of Baltimore.

Big Wins in Funding

- Baltimore District received $750,000 in fiscal 2018 for maintenance dredging of the Ocean City Inlet navigation channel.

- The final contract for expansion work on Poplar Island will be awarded during the 2018 fiscal year with receipt of approximately $30.98 million in funding. Around 90 percent of material dredged from the Baltimore Harbor and Channels project is placed on Poplar to ensure safe navigation in the harbor.

- Baltimore District also received $644,000 for pre-construction, engineering and design efforts for restoration of James and Barren islands (Mid-Bay) through the placement of dredged material. Design efforts could wrap up in less than four years with continued, optimal funding.

Once constructed, these islands would replace Poplar Island as the site for dredged material placement from the Baltimore Harbor and Channels with the capacity to contain up to 95 million cubic yards of material over the course of 40 plus years.

Jetties Completed at Rhodes Point

In June 2018, through a $6.88-million Army Corps contract, Coastal Design & Construction Inc., a small business out of Gloucester, Virginia, completed the construction of two jetties at Rhodes Point on Smith Island to prevent shoaling in the channel and to reduce the continual need for dredging. The construction of a stone sill was also completed along 850 feet of eroding shoreline south of the mouth of Sheep Pen Gut to prevent further erosion and contain material dredged as part of the project. This project is funded through the Corps, Maryland Department of Natural Resources, and the Maryland Department of Housing and Community Development (through a U.S. Department of Housing and Urban Development grant).

Knapps Narrows Maintenance Dredging

Approximately 100,000 cubic yards of material were dredged in spring 2018 from the Knapps Narrows Federal Navigation Channel near Tilghman Island to restore its authorized depth to ensure continued safe navigation. This channel is important to the local economy and used heavily by watermen and for recreational purposes. It is also the main access to Poplar Island. This $1.4-million contract was worked in close coordination with Maryland Department of Environment and Talbot County.

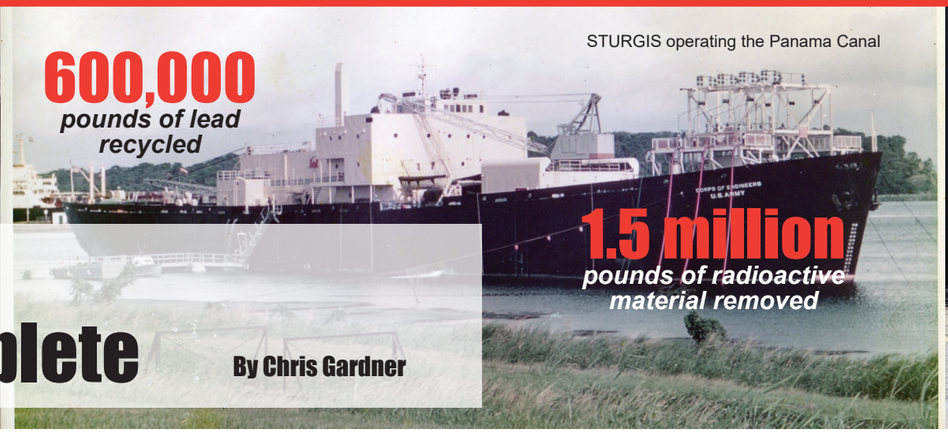
A dredge under contract with Southwind Construction of Evansville, Indiana, works in the Knapps Narrows Channel, March 28, 2018. (U.S. Army photo by Chris Gardner)

STURGIS enters the Panama Canal in 1968. (Photo courtesy Records of the Army Signal Corps, NARA)

460 x 65 Feet

STURGIS nuclear decommissioning complete

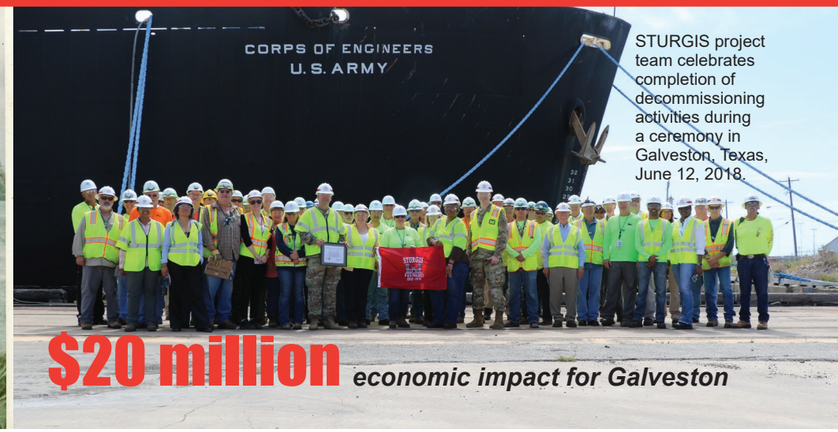
By Chris Gardner



600,000 *pounds of lead recycled*

STURGIS operating the Panama Canal

1.5 million *pounds of radioactive material removed*



STURGIS project team celebrates completion of decommissioning activities during a ceremony in Galveston, Texas, June 12, 2018.

$20 million *economic impact for Galveston*

No challenge is too complex for this team of experts.

The U.S. Army Corps of Engineers recently completed the decommissioning of the Army's first and only floating nuclear reactor prototype – the MH-1A aboard STURGIS, a former war ship.

Led by the Radiological Center of Expertise in Baltimore District, and carried out in close coordination with Galveston District personnel, crews have worked tirelessly for the last three years to access the radioactive components of the nuclear reactor and safely remove, transport and dispose of them.

In all, the team has extracted more than 1.5 million pounds of radioactive material and recycled more than 600,000 pounds of lead.

"The U.S. Army Corps of Engineers mission is engineering solutions for the nation's toughest challenges, and this team really delivered on a solution to this unique challenge," said Army Corps Headquarters Chief of the Environmental Division Karen Baker.

STURGIS's unique story began when she was a Liberty Ship in World War II. After the war, the vessel was converted into the world's first floating nuclear power plant in the 1960s. STURGIS's nuclear reactor, MH-1A, was used to generate electricity for military and civilian use in the Panama Canal for several years before being shut down in 1976. The reactor was then de-fueled, decontaminated and sealed before being towed to the James River Reserve Fleet on Joint Base Langley Eustis, Virginia, for long-term storage and monitoring.

Detailed planning for the decommissioning effort formally began in 2012. In 2014, after years of preparation, coordination with multiple agencies, and an Environmental Assessment, a site was selected for the project. Following the contract award, STURGIS was towed 1,750 nautical miles from Virginia to Galveston, Texas, in April 2015.

"At first, there was a bit of anxiety among some members of the Galveston community when they heard that a nuclear reactor on a ship was being towed to their area," said Brenda Barber, Baltimore District project manager. "That being said, though, once we had the opportunity to provide additional information about STURGIS and explain our processes and safety protocols, we've found the members of the Galveston community, local leadership and the workforce to be wonderful partners in this process. I'd say the local support has been a big contributor to the success of this project."

The entire project was executed with safety always in the forefront.

"Safety has always been our number one priority in carrying this project out," said Barber. "We were committed to ensuring the safety of the public and our crews, and I'm proud to say we completed our decommissioning work with no evidence of radioactive material, lead or increased radiation exposure outside of the reactor containment area at any point during the project."

After her arrival in Galveston, crews began the painstaking work of systematically taking apart portions of the vessel around the reactor. First, the team constructed two secure access hatches on STURGIS's top deck to allow all of the waste to be removed safely. Then, the team began to remove waste from the reactor containment area deck by deck.

"When the Liberty Ship was converted into a floating nuclear reactor, they never intended for it to be taken apart," Barber said. "It was built to house a nuclear reactor with thick elements of steel, lead and concrete barriers, which provided protection for the workers and the public during her operations."

Despite these challenges, the first low-level radiological waste shipment occurred in October 2015 and shipments continued steadily as the project progressed.

Executing the project on water provided its own challenges.

The team coordinated with the Corps' Marine Design Center to make sure the creation of hatches for lifting reactor components off the vessel via dockside crane didn't create structural issues for the floating vessel.

The team also had to ensure the pier was able to withstand critical lifts of packaged reactor components weighing up to 80 tons.

One of the more arduous tasks throughout the project was working in the vessel's hull bottom tanks to conduct radiological surveys. The team had to work in and navigate through many extremely confined spaces.

"You're crawling in them with your tools, it's hot, you're wearing a respirator, and our crews have been living that effort for the past year or two," said Radiological Health Physicist Hans Honerlah, program manager for Baltimore District's Radiological Center of Expertise. "That's a hard job, but it speaks to the dedication our crews have when it comes to this project."

In early 2017, the team finished efforts to section and remove pieces of the top of the Reactor Containment Vessel. This allowed for access to the main reactor components. Crews worked to steadily remove components including the steam generator, pressurizer, coolant pumps, refueling shield tank, ductwork and the reactor head dolly to provide adequate access for the removal of the vessel's Reactor Pressure Vessel (RPV), which is essentially the reactor core. This major milestone was completed in May 2017 just prior to hurricane season.

"The RPV is where the nuclear fuel was held when the MH-1A was active and was the primary source of remaining radioactivity on STURGIS," Barber said. "Its removal was a significant milestone for the decommissioning effort and meant we had successfully and safely removed the vast majority of the radioactivity."

The removal of the RPV was a complex operation, which involved securing it into a custom-made shielded shipping container while it was still within the containment area, then lifting the roughly 80 tons onto a vehicle for transport to the Waste Control Specialists disposal facility, in Andrews County, Texas.

With this completion, the team had successfully removed approximately 98 percent of STURGIS's radioactivity.

The remaining 2 percent of low-level radioactivity was the next test for the team. The majority of this radioactivity was in the activated metals of the thick steel components of the large Primary Shield Tank that provided shielding for the RPV when the reactor was operational, as well as a portion of the bottom of the Reactor Containment Vessel. The team finished the removal of these items in March 2018, and all necessary surveys show no residual radioactivity on the vessel.

After being towed to Brownsville, Texas, all that is left for STURGIS is the final traditional shipbreaking. Any lasting parts will be recycled.

Corps personnel executing the Army's Deactivated Nuclear Power Plant Program are hoping to build upon the success of the STURGIS project, as they work through the decommissioning planning phase for the Army's two last remaining reactors in the program – the SM-1 on Fort Belvoir, Virginia, and the SM-1A on Fort Greely, Alaska.

"We're proud of what we've accomplished with the STURGIS and how we were able to complete a complex and unique job and do it safely," Barber said. "Successfully completing the decommissioning of the STURGIS is something the entire team is really proud of, but we can't rest on our laurels. Now, we're shifting our focus to the next two reactors."

U.S. Army Corps of Engineers,
Baltimore District

2 Hopkins Plaza
Baltimore, MD 21201

Looking Forward...

Baltimore District completed construction of a new $500-million Integrated Cyber Center (ICC) on Fort Meade, Maryland. The ICC is one of the first buildings to be completed as part of the Department of Defense's new East Campus currently under construction on Fort Meade. Scheduled for completion in 2028, the campus will include six buildings and house more than 20,000 personnel. (U.S. Army illustration by John Sokolowski)