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USACE

WILMINGTON DISTRICT NEWS

DECEMBER 2018

District's Ft. Bragg Office Wins Commander's Award for Technology & Innovation

INSIDE THIS ISSUE:

Members of the Wilmington District's U.S. Army Special Operations Command (USASOC) Resident Engineer Office stuck to an energetic and demanding operations tempo and listened intently to their customers to construct and deliver on budget and on time the state-of-the-art Language and Culture Center located on the developing U.S. Army John F. Kennedy Special Warfare Center and School (SWCS) campus.

Resident Engineer Office members stand with their award outside of the Language and Culture Center. From l-r: Wilmarie Pagan-Sanchez, Ron Cannady, William Rodriguez, Juan Ramos, Doug Wood, Brian Whitley and Paul Blue.

Their efforts earned them the Merit Award for Technology and Innovation from U.S. Army Corps of Engineers (USACE) Headquarters in Washington, D.C. for construction management and design.

The Chief of Engineers Awards of Excellence recognizes design and construction excellence by USACE districts, centers, laboratories, and field operating activities in tandem with customers and private sector professional partners. These projects reflect a wide range of skills, innovation and commitment to deliver

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Happy Holidays, Team, and All the Best for the New Year

Team Wilmington,

We're nearly to the end of 2018 and I'm still thinking back to January when I looked at our schedule for the year and all that we had on our plate for the next several months. Throw in the disruption of our normal routines from Hurricane Florence and it looked as though all of our progress would stall or come to a halt. It looked overwhelming, but we actually pulled it off. Everyone pitched in to keep our operations going with enough commitment and dedication to last us through the end of the year. (I'm sure that Santa will be especially nice to you!)

I truly appreciate all that you have accomplished this year, and I want you to enjoy some well-earned downtime during this holiday season. I enjoy this time of year because I can sit back, relax, and really think about what matters most in life. For me, it's my family. I've been a commander for almost 24 years now, but I still find that my greatest strength comes from my wife and two kids. I hope that all of you can do the same with your family and friends.

The holidays mean lots of parties to celebrate which may include alcohol. If hosting a party, be responsible and attentive to the alcohol consumption of your guests. Ensure designated drivers are available or provide other arrangements. If you choose to drink, remember that passing the keys to a friend is the most important decision you will make. So, please stay safe and celebrate responsibly.

I wish you all the best during this holiday season, a time of great joy and celebration. I look forward to seeing all of you safely return from the holidays and know we will continue to accomplish great things together in the New Year. Thank you for all you do each day for the Wilmington District.

District Commander Col. Robert Clark.

Very respectfully,

Col. Robert Clark

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U.S. Army Corps of Engineers
Wilmington District

Fort Bragg Con't

quality projects for our nation and the Armed Forces.

"The facility was designed for the specific needs of the Special Operations Community," said Sam Colella, Chief of Wilmington District Military Project Management. "A Project Delivery Team (PDT) comprised of USACE, USASOC and Fort Bragg Directorate of Public Works officials designed and built this facility with flexibility in mind to meet current and future needs."

Artist rendition of a building on the SWCS Fort Bragg campus.

Adjacent to the Language and Culture Center, construction is speeding along on a facility for the Special Warfare Training Group command and staff. It will also serve as the primary training classroom location for Special Forces Officers and Warrant Officer courses to include administrative space for instructors.

"The project includes quite a few interior and exterior amenities tailored for these particular customers and their operations," said Project Manager Brian Whitley. "One special and very important amenity being incorporated is the relocation of an existing statue of Col. Arthur D. "Bull" Simons, which was originally located near the John F. Kennedy Special Warfare Museum. It will be relocated near the main entrance to the Training Group building towards the end of the project."

The statue of Simons honors the legendary Special Forces commander who was best known for leading the Son Tay raid that was an attempted rescue of U.S. prisoners of war from a North Vietnamese prison at Son Tay during the Vietnam War.

Whitley said the campus was designed to have a professional academic setting for those training within SWCS. This facility's location and classroom training features will provide new and improved spaces for conducting their operations within a pedestrian -friendly and centrally-located campus. In addition, Whitley said the project is utilizing Fort Bragg's Hot Water/Chilled Water plant system that will allow the facility to take advantage of water that has

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already been heated or cooled by the installation. This has and will save the customer significant upfront and long term utility costs on heating and cooling for the facility. He said the project is currently on schedule for completion by late October of 2019.

During the development of the campus, one priceless facility relocated to an existing building. The original Special Warfare Museum was demolished in 2017 to make room for the Training Group facility, but visitors can still access it.

"The museum is located at a temporary location while the customer is designing its new location, features and layout," Whitley said. "We are told it will be several years before they are able to build the new facility depending on available funds."

This future building will provide rooms for training Special Warfare Training Group command and staff.

The iconic statue of Col. Arthur D. "Bull" Simons will be relocated at the end of the project.

The Special Warfare Museum received external modifications by the Resident Engineer Office. It will remain in its temporary location near the campus until a new museum is built.

District studies plan to keep or transfer Cape Fear River Locks and Dams River

The Cape Fear River Locks and Dams were constructed under the Rivers and Harbors Act of June 13, 1902, to ensure a navigable channel for commercial barges from Wilmington to Fayetteville. In recent years, commercial barge traffic has ceased operations due to modernized transportation systems such as rail or trucking.

Earlier this year, the Wilmington District began a two-year disposition study to determine how best to keep or transfer the locks and dams to a non-federal entity with no project modification.

"The study's focus is on whether federal interest exists to retain the project for its authorized purpose, based on an evaluation and comparison of the benefits, costs, and impacts, both positive and negative, of continued operation and maintenance," said Project Manager Brennan Dooley. "Upkeep costs were traditionally averaging approximately $800,000 a year, but now it's down to about $400,000 to $500,000 and will further decline."

According to Dooley, the study will evaluate three alternatives:

1. No-Action Plan: Existing and future without-project (i.e., continued project operations with no changed federal action).

2. Deauthorize the project and dispose of real property and improvements, including removal of improvements and including consideration of future uses.

3. Deauthorize the project and dispose of real property and improvements to willing stakeholders at no additional cost to the federal government.

Lock and Dam 1 is located near Riegelwood on the Cape Fear River.

There have been discussions over the years from state officials about what to do with the outdated transportation system. In August of 2008, the North Carolina General Assembly enacted legislation to accept the transfer of the three locks and dams once they have been "properly refurbished and rock arch rapids fish ladders have been successfully constructed". The construction of rock arch rapids was completed in Fiscal Year 2012 at Lock and Dam No. 1 using the federal American Recovery and Reinvestment Act (ARRA), and state of North Carolina funds as a mitigation requirement for the Wilmington Harbor 96 Act navigation deepening project. Also, local communities and industry withdraw water from pools behind all three dams, although this is not an authorized project purpose.

"The second and third lock and dam structures are each more than 80 years old and will require considerable federal investment to restore the structures to a refurbished state," said Dooley. A Dam Safety Action Classification (DSAC) II rated structure is defined as urgent meaning that it's unsafe or potentially unsafe." Specifically at "Lock and Dam No. 1 was rated as a (DSAC) II structure in 2009 under the Dam Safety Action Code before the 2012 improvements. Lock and Dam No. 2 was rated a DSAC II in 2010, and William O. Huske is rated as DSAC IV.

Dooley stated that the dams pose no risk to the public. The dams, he said, are low-head, and are in minimally acceptable condition, and do not pose significant risk to those downstream. There are public access areas designated as recreation areas, but are not staffed 24 hours a day or staffed with a ranger on site daily.

DISTRICT TEAM GIVES PHILPOTT DAM PASSING MARKS DURING ANNUAL INSPECTION

At Philpott Dam in Bassett, Virginia, USACE's inspectors stated that overall, Philpott Dam is in good condition and continues to generate electricity and provide flood protection. Every year, teams of highly trained structural, mechanical and civil engineers along with geologists thoroughly inspect all five dams that are operated and maintained by the Wilmington District under the U.S. Army Corps of Engineers Dam Safety Program. Dams are part of the nation's landscape, and are integral to many communities and critical to watershed management. Dam safety professionals carry out a dam safety program specific to the Wilmington District to make sure these projects deliver their intended benefits while reducing risks to people, property and the environment through continuous assessment, communication and management.

Civil engineer Ed Dunlop checks for discrepancies along the training wall of Philpott Dam.

"During the inspection process, each team member focuses on those areas related to his or her expertise," said dam inspection team leader Walt Haven. "As a result, our team looks for various aging and safety factors related to the dam, such as cracking within the dam concrete, the functioning of lift gates for water flow and electrical turbine operation, the condition of electrical equipment, and the potential for landslides and other erosion issues along the hill slopes adjoining the dam."

Additionally, Haven said team members work closely with the on-site, permanent dam "caretaker" staff during these inspections. These technicians work inside the dam and powerhouse every day and accompany them during inspections to point out any concerns that they might have.

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PHILPOTT DAM CON'T

"Any dam management project is a long-term commitment," Haven said. "Overall, Philpott Dam was well-constructed using the best building technology available at the time. A regular regimen of inspections and communication between our office and the on-site technicians is key to identifying, monitoring, and resolving any discrepancies. Some discrepancies can be easily fixed, such as adding construction shoring to stabilize a doorway. Other matters require greater time, cost, and labor, such as installing through-dam anchoring devices to mitigate aging and resultant cement fracturing. Finally, some discrepancies might simply involve future monitoring, such as a small soil slide along a stream valley slope, which is near the dam."

Civil engineers Edward Woodley, left, and Austin Balser do a visual inspection of Philpott Dam's spillway as part of the overall annual inspection.

Philpott Dam requires a thorough inspection on the inside and on the outside every year.

For the team members, inspecting a dam like Philpott is a chance to get back to their engineering or geology roots. They take pride in their work and believe that building, managing, and protecting the nation's infrastructure is one of the many things that USACE does best.

"As a result, each team member enjoys this sort of fieldwork and recognizes that performing inspections provides an important service to nation and its citizens," said Haven.

District awards Carolina Beach and Vicinity Periodic Nourishment contract

The U.S. Army Corps of Engineers (USACE) Wilmington District awarded a periodic nourishment contract on November 30 at a cost of approximately $17.4-million to Weeks Marine, Inc. This coastal storm risk management project contract includes funding from multiple sources including federal, New Hanover County and the state of North Carolina. The non-federal sponsors for this project are the towns of Carolina Beach and Kure Beach.

A bulldozer moves dredged material on the north end of Carolina Beach.

Periodic nourishment, or placement of additional sand along the shoreline, helps ensure that the project continues to provide authorized storm risk reduction benefits to homes, businesses, and critical infrastructure as well as providing an outstanding recreational resource to the public until the next scheduled nourishment event, normally every three years. This year's contract is unique because it also includes additional repairs to the shoreline for sand lost due to the passage of Hurricane Matthew in 2016 and Hurricane Florence in 2018.

"The Corps was fortunate to receive additional emergency funding to cover these repairs at 100 percent federal cost," said Project Manager Jim Medlock said. "This allows us to place more sand on the shoreline

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Carolina Beach Con't

while reducing the amount of non-federal funding required to accomplish the overall contract scope."

Medlock estimates that the Corps will be able to issue a notice to proceed to the contractor within 30 days of contract award. Actual start of construction has not been determined. This project must be completed no later than April 30, 2019, before the beginning of the turtle nesting season.

Periodic nourishment helps ensure that the project continues to provide authorized storm risk reduction benefits to homes, businesses, and critical infrastructure.

This year's contract is unique because it also includes additional repairs to the shoreline for sand lost due to the passage of Hurricane Matthew in 2016 and Hurricane Florence in 2018.

USACE civil engineer supports FEMA direct temporary housing

Hurricane Florence displaced thousands of people from their homes throughout North Carolina. Victims needed immediate housing assistance, and the Federal Emergency Management Agency (FEMA) responded with its Sheltering and Housing Solutions for North Carolina survivors of Hurricane Florence. The program was designed for rental assistance, transitional sheltering assistance, home repairs, and direct temporary housing. In the latter, travel trailers were provided for a timely, effective interim solution for most households with assurance that repairs to their home could be completed in less than a year. Manufactured Housing Units or MHUs provided longer-term solutions for survivors whose repairs would take longer to complete due to greater damage.

Huntington District civil engineer Tara Linville, front second from right, stands with fellow USACE employees in front of a FEMA temporary home.

The U.S. Army Corps of Engineers (USACE) supported FEMA's direct temporary housing with technical and project management expertise. In addition, USACE also supplied mission specialists who worked various tasks such as technical monitoring of installed units and units at the staging yard, Quality Assurance (QA) inspections of units in progress, and electrical QA inspections on units in progress. Additionally, USACE staff members assisted in project management and technical oversight as requested by FEMA.

Civil engineer Tara Linville deployed from the Huntington (WV) District to work for FEMA as a Project Manager/ Project Engineer. She said that

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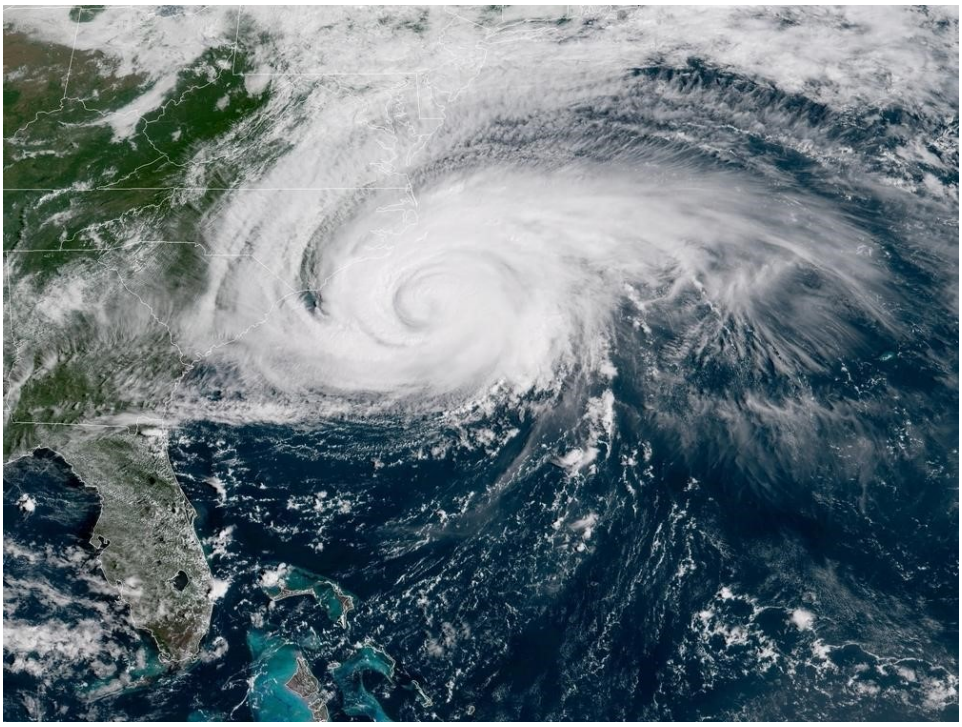
FEMA Housing Con't

by mid-Nov., the agency conducted 3,294 pre-placement interviews for direct temporary housing. Of those, 930 households were eligible for inspection, and 694 site inspections had been issued to date.

Linville is no stranger to deployments. Her first was in 2016 to Baton Rouge in response to severe storms and flooding, followed by a 2017 deployment to Texas in response to Hurricane Harvey recovery efforts, and to the Florida Keys after Hurricane Irma.

"The resiliency of survivors throughout the missions I've been part of is always astounding," she said. "The survivors I've met have been thankful and optimistic despite their loss."

Linville said that she has never personally been affected by a natural disaster. When she went to college, she didn't know exactly what career path she wanted to take, but she knew that whatever she did, she wanted to help other people.



Hurricane Florence made landfall in southeastern North Carolina on Sept. 14 and left thousands of people homeless.

"I decided to major in engineering, but I wasn't sure how I was going to use my degree to help others," Linville said. "After a year of working for USACE, I heard about the opportunity to join the housing team and respond to disasters, and I knew my path had led me where I needed to be. Being in a position to help others during a very vulnerable time in their lives is an opportunity and a privilege. It's humbling to meet survivors who have lost everything they own, but they still smile and thank you for being there. And when our job is done and a survivor gets the keys to their unit, that smile is priceless."

Critical Incident Stress Management gaining momentum in USACE

Critical Incident Stress Management (CISM) is an intervention protocol developed specifically for dealing with traumatic events. It is a formal, highly structured and profession-ally recognized process for helping those involved in a critical incident to share their experiences, vent emotions, learn about stress reactions and symptoms and given referral to the Employee Assistance Program (EAP) for further help if required.

Jordan Dam and Reservoir Supervisory Natural Resource Specialist Ranger Shannon Maness is trained in CISM. It has been established for a long time, but the formal program is just getting started in the South Atlantic Division (SAD). He used CISM, although not through the formal training, when he was a teenager working in a local Fire/Rescue unit in North Carolina.

"We had a vehicle fatality that killed three members of a family and that the first responders knew personally, and it began to effect all of us in dealing with the emotions that we were going through," he recalled. "We sat down as a unit and discussed what each other was feeling in a group discussion and the process helped us to know that others were experiencing grief, anger, blaming themselves for not doing enough, etc. This process of understanding that it is a normal reaction helps

Mass destruction caused by such events as hurricanes can cause feelings of hopelessness and despair. Critical Incident Stress Management (CISM) helps people share their experiences, vent emotions and handle stress better.

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CISM Con't

begin the healing process and converting the constant flashes into memories and being able to cope with the experience."

Maness said CISM is a process of starting the healing and dealing appropriately with the emotions soon after an event, so that it does not progress to something worse, such as Post-traumatic stress disorder (PTSD). The important thing to remember, he said, is that each person is different, so the process can be different for each one.

"We all have ways that we tend to deal with stress in our life," Maness said. "Some people choose to not deal with it; they push it down and continue with the mission. Some choose to talk with family members or friends or do an activity that gets their heart rate up such as running, boxing or sports. Some choose to do nothing, or do not know what to do to help with stress so they tend to shut down and not do anything. We all have our stressors and sometimes events can overwhelm us so that we do not even know what to do. That is when CISM can help work through the process of dealing with traumatic events and allowing us to process them effectively for the individual. Just knowing there is help, and it is OK to ask for help, it is half the battle."

Maness said the CISM team for USACE is a Headquarters program that is shared through the local projects. Headquarters pays for travel, and the local project office covers labor for their peer supporter to a response associated with CISM incidents. The USACE CISM Team conducted the initial training for new team members in Norman, Okla., from October 22-26, 2018.

"We were trained specifically for USACE protocols and how our team works, but our basic training was conducted under the certification of the International Critical Incident Stress Foundation, Inc. (ICISF) standards," he said. "This is the Gold Standard so to speak for training in CISM. The two courses are Group Crisis Intervention and Assisting Individuals in Crisis. Both are taught in a classroom setting with hands-on training being observed by already trained CISM supporters and the instructor. In USACE, it is not just about having some training, it is also about the people who are on the team. One of the requirements to join the team are caring and supportive people who like to help others, and are good at it."

HIGH RIVER FLOWS ON CAPE FEAR RIVER ARE STALLING WORK AT THE SCOUR HOLE REPAIR AT LOCK AND DAM 2

While the Wilmington District is deciding whether to transfer or keep the Cape Fear River Locks and Dams during the Cape Fear River Disposition Study, maintenance repairs to all three are still required to ensure public safety and keep them in good operating condition. But flood waters from Hurricanes Florence and Michael, as well as high-precipitation weather patterns have inundated the Cape Fear River basin over the past several months, hampering efforts to repair damage to at least one of the facilities.

At Lock and Dam 2, turbulence from water flowing over the dam created a scour hole downstream of the dam. Without repairs, the scour hole could continue to encroach on the toe of the dam and could ultimately threaten its structural integrity. However, repairs have been indefinitely delayed because of inconsistent river flows. The contractor was at least 75 percent completed with the scour hole repair

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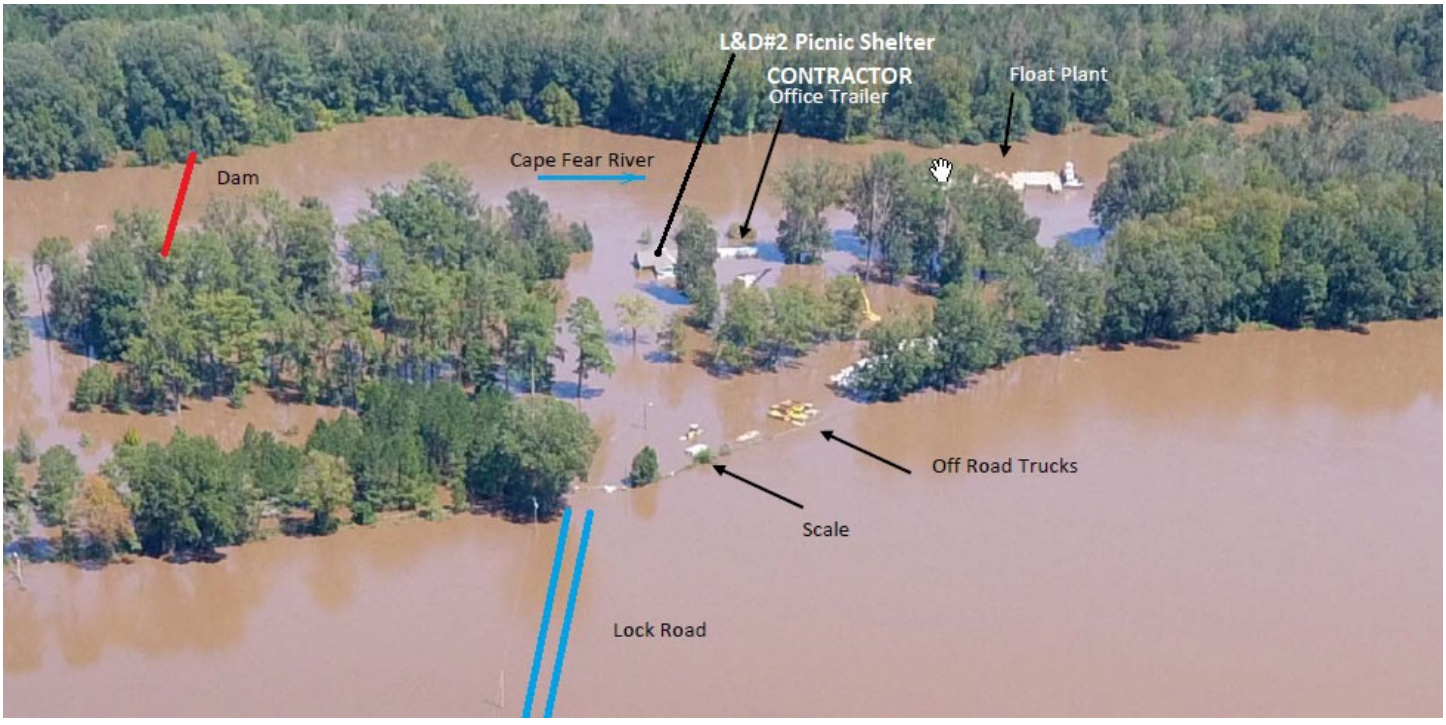

This aerial view of Lock and Dam 2 shows the severity of flooding.

SCOUR HOLE CON'T

before Hurricane Florence.

"The scour hole is a dam safety-related repair that must be completed to ensure the integrity of the dam," explained Wilmington District Shallow Draft Navigation Program Project Manager Jim Medlock. "The repairs involve using heavy equipment plus on-site storage and placement of quarry rock into the scour hole."

Before the flooding, the contractor designed and built a temporary ramp that he used to drive large off-road dump trucks, loaded with rock, onto a series of barges which were then pushed by a tug to the scour hole location. Once the barge reached the scour hole, the truck deposited the rock in the scour hole and returned to get loaded again.

"While the truck mounted barge travels to and from the shore rock stockpile, a long-reach excavator, mounted on another barge, repositions the rock in the scour hole to the final design grade," said Project Engineer Rolando Serrano. "The long reach excavator is equipped with GPS that assists the operator in placing the rock at the correct location and proper depth. Hydrographic surveys are used to confirm the rock is correctly placed."

Project Engineer Patrick Gorman points to where a water level reached on this heavy equipment vehicle.

To date, the work site is still experiencing flood conditions resulting from other multiple upstream rainfall events which continue to hamper the contractor from effectively restarting and completing the project. Once flooding subsides, the Corps will work with the contractor to establish a new completion schedule and completion date.

Anchorage Basin dredging helps maintain safe passage for Port of Wilmington commercial vessels

According to N.C. Ports, the Port of Wilmington, plus inland terminals in Charlotte and Greensboro, link the state's consumers, businesses and industry to world markets to attract new business and industry while receiving no direct taxpayer subsidy. Port activities contribute statewide to 76,000 jobs and $700 million each year in state and local tax revenues.

Dredged material from the Cherokee is pumped over to the Wilmington District's Eagle Island Confined Disposal Facility (CDF). (USACE photos by Hank Heusinkveld)

In order to keep commercial shipping vessels navigating safely and efficiently to and from the Port of Wilmington, the Wilmington District conducts daily surveys of the federal channel and periodically dredges it to remove debris. The Cape Fear River carries tons of sediment that gradually settles along the way of its 202-mile path to the Atlantic Ocean. When its flows reach Wilmington, some of that material ends up in the federal channel that stretches from just north of the Isabelle Holmes Bridge to the Atlantic Ocean.

"The U.S. Army Corps of Engineers annually dredges the Anchorage Basin to ensure safe passage for cargo along the federal navigation channel," said Project Manager Timothy Jones. "The stretch of Anchorage Basin is about six and three-quarters of a mile long and it will take another month to complete the dredging."

Jones said the work includes maintenance dredging of the upper Wilmington Harbor federal navigation channel reaches including the Anchorage Basin, Between Channel, and the North Carolina State Ports Authority (NCSPA) berth areas and Turning Basin Extension. Shoaled material is removed and disposed of at the District's Eagle Island Confined

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Dredging Con't

Disposal Facility (CDF) cell three upland diked disposal area.

"The work requires a hydraulic cutter suction dredge such as the Cherokee," Jones said. The dredging depths are 42 feet plus two feet of allowable over depth for the Anchorage Basin and for Between Channel. Dredging depths are 39 feet plus one foot of allowable over depth for the NCSPA berth areas one and two and 43 feet plus one foot of allowable over depth for the NCSPA berth areas and Turning Basin Extension. The estimated quantity of material to be dredged is 1.4 million cubic yards."

Wilmington District Project Engineer Patrick Gorman observes the dredging operations atop the Dredge Cherokee.

Jones said the environmental window for dredging the NCSPA berth areas is Oct. 1, 2018 through Jan. 31, 2019, and the environmental window for dredging the Wilmington Harbor federal navigation channel reaches is Aug. 1, 2018 through Jan. 31, 2019.

Contractor Southern Dredging's vessel Cherokee, a hydraulic cutter suction dredge, removes sediment near the Port of Wilmington.

Contracting officers recognized for outstanding performance

The U.S. Army Director of Contracting, Brig. Gen. Michael Hoskins, was so impressed with two members of the Wilmington District's contracting branch that he personally recognized them for their efforts during the U.S. Virgin Islands and Hurricane Florence missions.

Contracting Officer Ros Shoemaker loves a challenge, especially during emergency operations. She deployed to the U.S. Virgin Islands (USVI) twice, and remained as the contracting officer when she returned to Wilmington. Working on hurricane missions can be a very fast-paced and a stressful environment, and during that time she had a full workload with the hurricane relief in the USVI, in addition to her normal workload.. She was humbled by receiving the award, but her work ethic and commitment to the contracting mission is something she takes very seriously.

"I think to get recognized for going above and beyond, you have to be more than an employee who comes to work to punch a clock and get a paycheck," she said. "I care about the mission and getting the work done, and I think that shows in the output of my work. I think that organization and my ability to prioritize work is also really important. I have gotten some great opportunities since coming to the Wilmington

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U.S. Army Director of Contracting, Brig. Gen. Michael Hoskins stands with members of the Wilmington District Contracting Branch. Contracting Officers Jere West, fourth from left, and Ros Shoemaker, back row third from right, received awards from Hoskins.

Contracting Con't

District, and I'm very grateful that I've become a more diverse contracting officer."

Brig Gen. Hoskins also recognized Shoemaker's colleague Jere West for his outstanding performance. West likes the challenge of living in the moment when he has to turn around mounds of paperwork in a short period of time. When Hurricane Florence hit southeastern North Carolina, he left Wilmington for West Virginia with his laptop and worked through the Virtual Private Network (VPN) connection every day as if he were in the office. And since it was nearing the end of the fiscal year, he worked extra hours and on weekends to accomplish the mission.

"'Beating the clock' mostly counts around end-of-year, but the work needs to be completed accurately in a reasonable amount of time," West explained. "Mostly, I just like contracting. I get to work with a varied group of people, and while every contract or task order requires pretty much the same steps to be taken and the same documents written and filed, each project has enough difference to require thought, and in many cases, ingenuity, in order to get through the solicitation phase and awarded to a contractor. It's sometimes tedious, but never boring."

Ros Shoemaker: "I think to get recognized for going above and beyond, you have to be more than an employee who comes to work to punch a clock and get a paycheck."

Shoemaker echoes West when it comes to the variety of work in their jobs. She loves that she is always doing something different, and that there is always something new to learn since contracting rules and regulations change frequently.

"I enjoy when I get a contract awarded ahead of schedule. We have standard procurement acquisition lead times, and there isn't a better feeling than getting a project done early. This is important to our customers and stakeholders, and it also saves taxpayer dollars," she said.

WILMINGTON DISTRICT RESPONDERS HELP BATTERED FLORIDA DURING HURRICANE MICHAEL RECOVERY

Less than a month after Hurricane Florence devastated southeastern North Carolina and beyond, Hurricane Michael became the strongest storm on record in the Florida Panhandle with wind speeds of 155 mph when it made landfall near Mexico Beach, Florida on October 10. It was the fourth-strongest hurricane to make landfall in terms of wind speed in the contiguous United States.

W. Kerr Scott ranger Johnny Jones took this picture of a destroyed beachfront apartment building during a quality assurance mission.

Several Wilmington District employees answered the call to deploy to help during recovery operations. W. Kerr Scott Dam and Reservoir Ranger Johnny Jones deployed to Panama City Beach, Florida as a quality assurance representative for the U.S. Army Corps of Engineers (USACE) Temporary Roofing mission. He volunteered because he wanted to assist those in need by providing a way for them to live in their houses until they could get permanent repairs to their roofs. When he deployed to the U.S. Virgin Islands (USVI) in October of 2017 he saw that many of those who were impacted by Hurricane Maria did not have insurance, funds, materials, or labor for roof repairs.

"The Blue Roof mission in the USVI for many was their only solution and permanent fix," Jones said. "That was not the situation with many of those impacted by Hurricane Michael in Florida. Most of the individuals I talked to had insurance or funds to make repairs to their roofs. Also, many had relatives, neighbors, and friends who came to their assistance and provided the materials and labor to fix their roofs."

Michelle Conway deployed as an administrative assistant to the Recovery Field Office (RFO) in Destin, Florida. She saw the direct effects of Hurricane Florence after returning to Wilmington from her deployment to Charlotte with the

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RESPONDER CON'T

District's Crisis Action Team (CAT). However, she was ready to head to Florida after Hurricane Michael struck weeks later.

"My husband and I were very lucky. Our subdivision sustained a lot of flood damage," she said. "It's a little eerie when you're watching the Weather Channel in Charlotte, and Jim Cantore pops up on the TV screen standing on your street. My heart sank. We had a tree come down, but luckily missed our house. It's just me and my husband at home, so it wasn't hard to leave. I missed him, but he knew I was working to help people in need and he's good with that. I have to say he's very supportive."

Conway, a veteran of numerous deployments to include the USVI, is part of a small group of USACE employees who regularly step up to the plate to volunteer for hurricane duty.

"I deployed to Florida because I enjoy helping people and I like to meet new people. It was great to see new faces and faces that I have deployed with before," she said.

Emergency Management Specialist Lisa Landis deployed to support the Jacksonville District's Emergency Management team that was forward deployed to establish the RFO in Destin. While she's used to being outdoors during hurricane recovery performing more hands-on type duties, this deployment was different because she worked at the District headquarters.

"It was not as fast-paced, but afforded me the opportunity to meet many Jacksonville employees who also support from the District level," Landis explained. "Seeing how our sister Districts operate and collaborating is beneficial to us all. I shared my previous knowledge with Jacksonville and brought back useful ideas and processes for the Wilmington District."

Landis, too, dealt with the aftermath of Hurricane Florence in Wilmington. As the District's Family Readiness Coordinator, she helped launch a gift card drive and collect furniture and house ware items for Wilmington District employees who were impacted by the hurricane. She was spurred on to help even more in Florida by family members and close friends who were victims of Hurricane Florence.

Lisa Landis, left, and Michelle Conway managed to take a picture together in Wilmington before deploying to Florida.

"A member of my own family and several close friends endured the wrath of Florence, losing their homes, like many of our District employees, and I just couldn't sit idle," she said. "The work is far from over. So many people have suffered from the relentless barrage of disasters this year. My faith in the goodness of humanity is restored when I can be not only a part of the important response mission work, but when I can pour my heart into the recovery part of these destructive disasters."

District plans to correct flood control measures on the Neuse River

What was once a flood control measure built by the U.S. Army Corps of Engineers (USACE) and authorized by the Flood Control Act of 1941, is now choking an area of the Neuse River that continues to threaten the migration of anadromous species of fish near Goldsboro, North Carolina. But there is a solution.

The Neuse River-Goldsboro Section 1135 Continuing Authorities Program (CAP) authorizes the USACE to initiate investigations and modify structures and operations of water resources projects constructed by the Corps to improve the quality of the environment, as long as the modifications are feasible, consistent with authorized project purposes, and will improve the quality of the environment in the public interest.

"If it's determined that a USACE project contributed to the degradation of the quality of the environment, restoration measures may be implemented either at the project site or in other locations that have been affected by the project, subject to a determination that the restoration measures are not in conflict with authorized project purposes," said USACE Wilmington District Community Planner Jason Glazener.

In 2007, the city of Goldsboro repaired the weir structure with rock stabilization.

The main purpose of the Neuse River cutoff was to reduce agricultural flooding along a portion of the Neuse River main stem. Construction of the cutoff channel was completed in 1948, and included a low flow sheet pile weir near the upstream end of the channel. The weir has often been in a state of disrepair due to inadequate USACE

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NEUSE RIVER CON'T

funds to maintain it. The weir section was rebuilt in 1968 and 1983 due to deterioration and corrosion. In 2007, prompted by concerns that the degraded cutoff channel weir would breach and further reduce water depths and increase sedimentation in the main stem of the Neuse River where their primary water intake is located, the city of Goldsboro obtained the required approvals to repair the weir structure by placing rock stabilization along the upstream and downstream faces of the weir. However, the majority of the repair work conducted by the city washed out within a fairly short period of time after completion due to high-flow events.

"There's a reduction in natural riverine function in the main stem of the Neuse River due to this federal project," said Glazener. "Resource agencies and the non-federal sponsor city of Goldsboro are concerned that the current cutoff channel configuration creates a reduction in fish passage for anadromous fish species such as striped bass, American shad, blueback herring, American eel, and Atlantic sturgeon, the latter being a federally listed endangered species. These fish migrate upstream in search of suitable spawning habitat."

The cutoff channel weir is located approximately 4,100 feet upstream of the confluence of the cutoff channel and the main stem of the Neuse River, Glazener explained. It is at this confluence that migrating fish decide which river reach to ascend. Under many flow conditions, both channels currently provide adequate depth and flow velocity to attract fish. Through personal communication with the city of Goldsboro, local fisherman have reported that the best fishing for striped bass and American shad, amongst others, is in the cutoff channel just below the weir. For fish enticed to ascend the cutoff channel, the weir acts as a barrier which obstructs passage upstream under all, but very high flow conditions. Common fish behavioral preference is to swim into the flow stream instead of back-tracking to search for alternative passage routes. Anadromous fish swimming up the cutoff channel would not reach upstream spawning and nursery habitats located at various spots up to 92 miles upstream. On April 17, biologists with the North Carolina Wildlife Resources Commission observed an eight-foot Atlantic sturgeon in the cutoff channel. The projects objective is to improve riverine functionality, to increase in flow volume, velocity and river level toward a more natural state. It also refers to improving fish migration access to upstream spawning habitats.

"The recommended plan consists of rebuilding the USACE weir to an elevation two-feet higher than the City of Goldsboro's temporary weir, and three-feet higher than the original federal project weir. This would restore a portion of natural flow to the main stem of the river," Glazener said. "The proposed steel sheet pile weir structure will be constructed approximately 25-feet downstream of the city's existing temporary weir within the cutoff channel.

National Engineers Week set for Feb. 17-23

National Engineers Week or "E-Week" is a time to celebrate how engineers make a difference in our world, increase public dialogue about the need for engineers, and to bring engineering to life for kids, educators, and parents. In addition, students and pupils throughout the nation are also given hands-on learning activities through Science, Technology, Engineering and Math (STEM) activities.

Wilmington District Chief of Engineering Branch Dr. Greg Williams is helping to spearhead E-Week. In past years, he's coordinated District volunteers who've helped promote STEM activities in elementary, middle and high schools in the area. He also plans to reach out to Cape Fear Community College, UNCW, North Carolina A&T and N.C. State about speaking engagements.

With talk of the nation's crumbling infrastructure on the radar of U.S. Army Corps of Engineers (USACE) leadership, there could be an impending demand for engineers, especially civil engineers, to overhaul roadways, fix or replace aging bridges and a host of other needs. Williams said that students and pupils who are interested in STEM and who consider a career in engineering when they're ready for college could be employed for several years after they graduate with infrastructure jobs across the country.

"There is always a push for more engineers to help our infrastructure," Williams said. "As our nation's infrastructure continues to age, greater numbers of engineers will be needed. Women and minorities continue to be under-represented in engineering, and more must be done to encourage the pursuit of engineering as a profession in all under-represented groups."

Wilmington District civil engineer Tamara Murphy also helps promote E-Week. She has appeared on WWAY TV's program "Good Morning Carolina" to explain the role of USACE engineers and what they do, and she usually visits a middle or high school in New Hanover County to speak with students about engineering. She's a proponent of getting kids interested in STEM early and letting them know that a career in engineering is attainable. For her, it starts at home.

"My kids are showing an aptitude for math and science," Murphy said. "My daughter likes putting things together and rigging up her own pulley systems on our swing set. She has recently started using an App called 'Codeable' that introduces computer programming to elementary students. My son likes constructing and demolishing 'buildings' using blocks and other building systems. I probably push puzzles and anything construction or science related harder than most, but the kids enjoy it."

For more information about National Engineers Week go to www.discovere.org .

Safety Chief assesses District's safety 2018 record

Overall, how well safety-wise did the Wilmington District do this year?

Unfortunately, most tend to define safety as good or bad in terms of injuries. If in terms of Class A and B mishaps, we had a good year, as we did not have any. If in terms of all mishaps, we had a good year, as we only had two or three mishaps. If we look at the entire safety program, which we should, we had a fair year. How many near-misses were reported? None. Were all site inspections conducted? No. Did we get written responses for inspection reports for sites that were inspected? No.

What USACE headquarters safety measures have been passed on to your office and other District safety offices? Which areas need improvement in safety?

The best measure that USACE has taken is the implementation of the Corps of Engineer Safety and Occupational Health Management System (CE-SOHMS). CE-SOHMS is a business process that is supposed to transition the USACE safety program from good to great (world-class). One goal of CE-SOHMS is more involvement in safety by the workforces including management. We had our Stage 1 assessment in July of 18. We were 29 percent compliant, 65 percent ongoing (needs improvement), and six percent non-compliant. The number one area that needs improvement is the six percent non-compliant area, which is in the industrial hygiene (IH) arena. This includes regular IH surveys at our hydropower plants, vessels, and Repair Yard. Second, we need more involvement by the workforce, including management. Some examples include updating Position Hazard Analyses (PHA) for employees, which includes annual review and documenting the review; we need to update Activity Hazard Analyses (AHA) and understand that PHA and AHA are similar, but they are not the same. In addition, we need to resume Safety and Health Council meetings.

What were your safety messages before Hurricane Florence struck and after?

Before Florence: A hurricane survival checklist was provided to the District.

Bill Harris is chief of the Wilmington District Safety Office.

Recommended that employees evacuate if they lived in an area prone to storm surge. Reminded all that hurricanes spawn tornadoes and they should know the safe areas in their homes. Cautioned all about the hazards of electrocution and carbon monoxide poisoning when using a portable generator. Reminded all that candles and oil fired lanterns are fire hazards and should be utilized with extreme care.

After Florence: Assume that all

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CERIO GAINS RESEARCH PROJECT PROGRESS AT ERDC-U

"I would definitely recommend the ERDC University program to district personnel because of the fantastic opportunity to learn from ERDC experts across multiple scientific disciplines," said Chemical Engineer Frank Cerio with the Corps' Wilmington District.

Cerio was describing his involvement in the US Army Engineer Research and Development Center's six-month program where Corps division and district selectees partner with ERDC subject matter experts to apply and implement technical solutions relevant to their division or district.

Now in its third year, ERDC-U is sponsored by the ERDC Office of Research and Technology Transfer and Directorate of Human Capital, which fund either labor or travel expenses for the program's duration.

Wilmington District chemical engineer Frank Cerio, second from left, stands with his certificate from the Engineer Research and Development Center-University.

Chosen as one of ten participants for the FY18 program, Cerio worked with his mentor, Dr. Victor Medina, a research engineer at ERDC's Environmental Laboratory in Vicksburg, Miss., one of seven ERDC laboratories in the Corps of Engineers.

Cerio's ERDC-U goals were to research and develop new remediation technologies and apply them at the project level.

Working closely with Medina, Cerio's water treatment research included antimicrobial studies using graphene oxide-polymer membranes and research on the removal of perfluorinated compounds using technologies associated with the Decontamination Effluent Treatment System.

This included adsorptive removal studies with different materials and membrane treatment. To conduct the studies, Cerio created a novel analytical

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ERDC-U CON'T

method for perfluorooctane sulfonate (PFOS) compound detection using a colorimetric approach coupled with spectrometry. PFOS is included in the chemical category of poly-fluoroalkyl substances (PFAS). PFAS contamination is a widespread problem affecting military installations and facilities throughout the U.S. and the world.

For the last two years, Cerio has been working for the Wilmington District in the areas of environmental remediation and resiliency actions related to hazardous, toxic and radioactive waste for civil and military projects.

However, his prior twelve years' experience in the private and public sectors, dealing with waste management of non-hazardous, hazardous and biomedical contaminants, makes Cerio a valuable asset to the USACE mission.

During his tenure in the private sector, Cerio learned about ERDC's reputation in quality environmental research.

"When I saw the ERDC-U announcement, I wanted the incredible opportunity to work with the best and brightest minds in the scientific community," Cerio said.

With master's degrees in chemical engineering and environmental engineering, Cerio acquired the needed technical tools for abiotic/biotic remediation, water treatment, chemical use, and decomposition pathways, along with efficacy testing of remediation methods and environmental restoration and resiliency.

The Environmental Laboratory has broad experience in treating water associated with military activities, including military industrial wastewater, contaminated groundwater, and treatment of water and wastewater associated with deployed operations, disaster response and decontamination.

Developing cost-effective treatments for water affected by these contaminants would offer tremendous solutions for the Army and Department of Defense.

Cerio's efforts in his time at ERDC-U resulted in development of a field sampling method using UV-VIS instrumentation that significantly reduces the time to determine approximate contamination levels, and reduces costs in comparison to more expensive laboratory methods.

At the end of the ERDC-U program, Cerio realized the "importance of networking with ERDC and South Atlantic Division personnel." He also understands the benefits of shared expertise and knowledge ERDC has to offer regarding numerous district projects.

For more information on ERDC-U, contact Cynthia.L.Brown@usace.army.mil

Recreation Committee brings trendy lunch trucks to District

You see them on city streets in mostly downtown areas, but they've been established as a quick way to get a lunch with lots of variety. Rec Committee president Heather Edwards said there's more to come in 2019.

"The food truck has been a huge success and we hope to continue it into 2019! January already has one scheduled and we hope to quickly add more to that list. The Rec Committee doesn't receive any funds or kickbacks from the food trucks at all. This is simply a morale boosting event for the district!

The purpose of the Recreation Committee is to improve and maintain the morale of the employees of the Wilmington District. We do this by planning monthly events and fundraisers that encourage our Wilmington District employees to come together, meet new people and build stronger relationships with their co-workers. We fundraise for not only for our annual events such as Corps Day and the Holiday Party, but also to support Family Readiness.

The Family Readiness supports deployees and their families! They are even doing some hurricane relief efforts to help support Wilmington District families who have suffered the effects from our most recent storm.

The Rec Committee always needs more volunteers as it's a very small team now. Luckily, we have a supportive supervisor and Division Chief who support us and the Rec Committee and who see the importance of these events. In January 2019, we will hold elections for new officers. The commitment needed to be an officer will be for a full year. We hope to have several volunteers, and turn over the committee to capable hands."

DISTRICT EMPLOYEES SHARE NEW YEAR'S RESOLUTIONS

New Year's resolutions. People make them, but do they really stick with them? We asked a few of our colleagues what they envision for 2019 and received these answers:

Alyson Parker, John H. Kerr Dam and Reservoir
Wake up and be amazing, chase adventure and do what I love!

Gloria Price, Operations
My New Year's resolution is to become more involved in "helping" others in need. There is so much needed in the communities that is overlooked, and I want to look outside of my area of comfort and be a blessing to someone.

Debora Rowell, ECP
I don't like making New Year's resolutions because they don't last. I did decide to get moving, though, starting with walking daily. I've already started with my colleague, Regina, because I like having a buddy. It keeps me focused. Eventually I'll getting back to the gym. In the upcoming year, I'd like to get back into the boot camp-type of exercises that I enjoyed while I was deployed to Kuwait in 2015. We'll see how it all progresses in 2019.

Brian W. Stewart, Philpott Lake
My resolution is to get out of the office into the field for the majority of at least one day a week.

Safety Con't

downed power lines are energized. Wet ground and a downed, energized power line can be deadly, so keep your distance. Also, be aware of stray, possibly injured animals. Advised all that chainsaw injuries tend to increase after a storm and users should follow instructions and wear appropriate PPE. If house is flooded, be aware of possible electrocution hazards upon your return to your home. Wet carpet/flooring and lamps and other electrically powered household items can result in electrocution (it happened at Wrightsville Beach in 96).

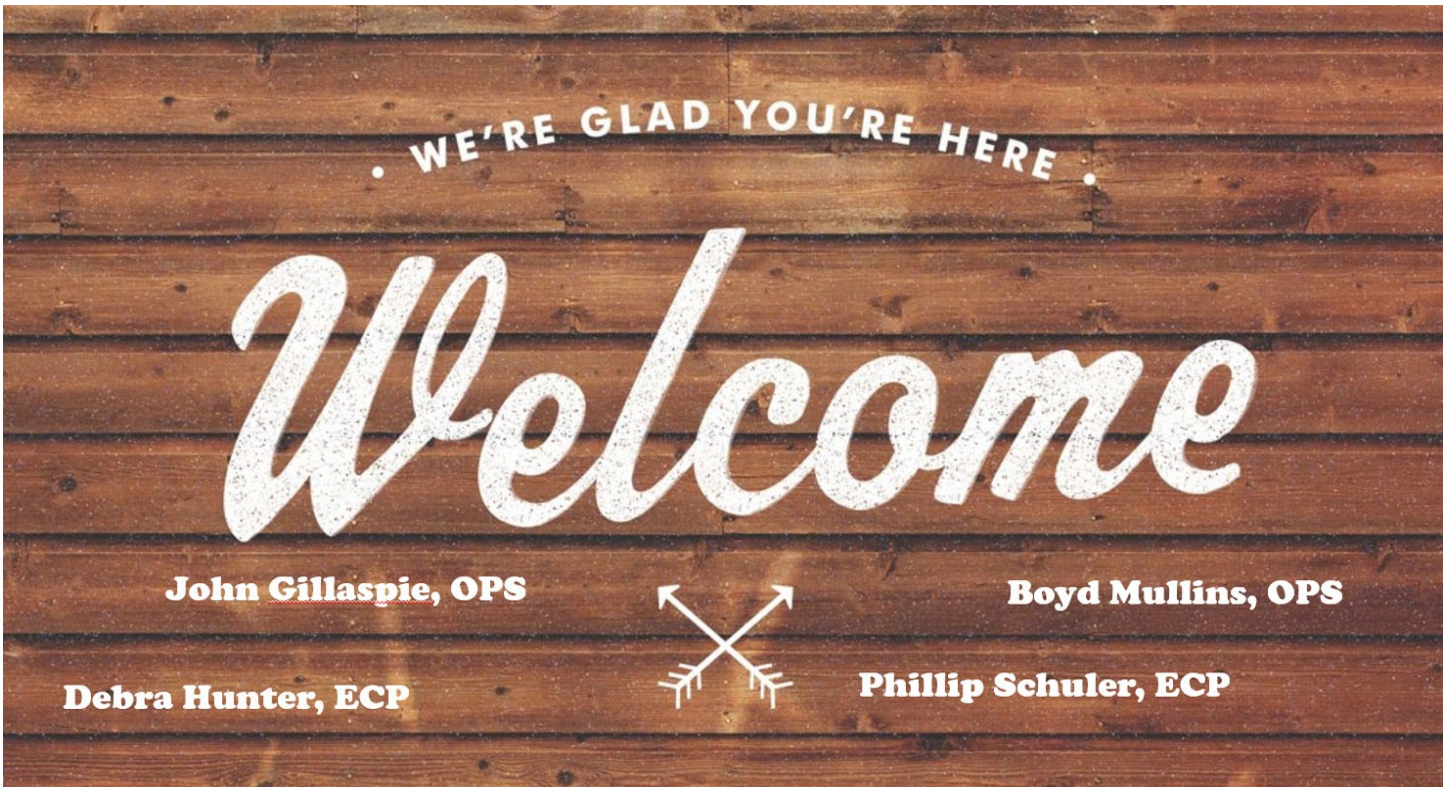
What safety measures did you take during Hurricane Florence?
Safety measures that I took during Hurricane Florence included turning off the power to my water heater, heat pump, and irrigation pump. I also emptied my ice bin and shut-off the ice maker. When power goes off and is off for an extended amount of time, ice in the ice bin will melt and it will drain out of the refrigerator to the floor. I took photos of all four sides of the house and of all furniture and appliances inside the house. All important documents were gathered and carried with me.

What are your safety goals for next year?
My safety goals for 2019: No on-the-job injuries by any government or contractor employees; full implementation of CE-SOHMS, and buy-in and involvement by all District employees.

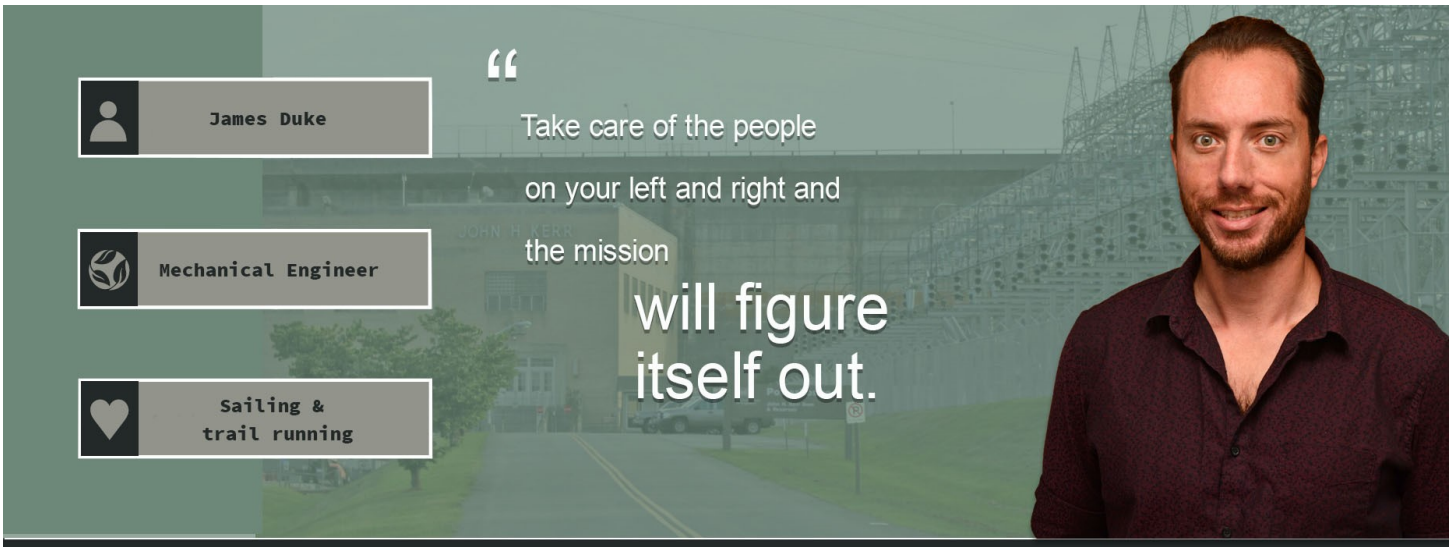
Christmas/Holiday Party Highlights

Congratulations to Eve Robinson, lower left corner, for winning the Ugly Sweater Contest at the Christmas/Holiday Party Dec. 7 at the Arboretum. Displaying their ugly sweaters at left are (l-r) Joe Tyron, Janice Johnson, Christy Folta, Elizabeth Peedin, Austin Balser, Richelle Hardman and Eve Robinson.

HAIL AND FAREWELL TO COLLEAGUES

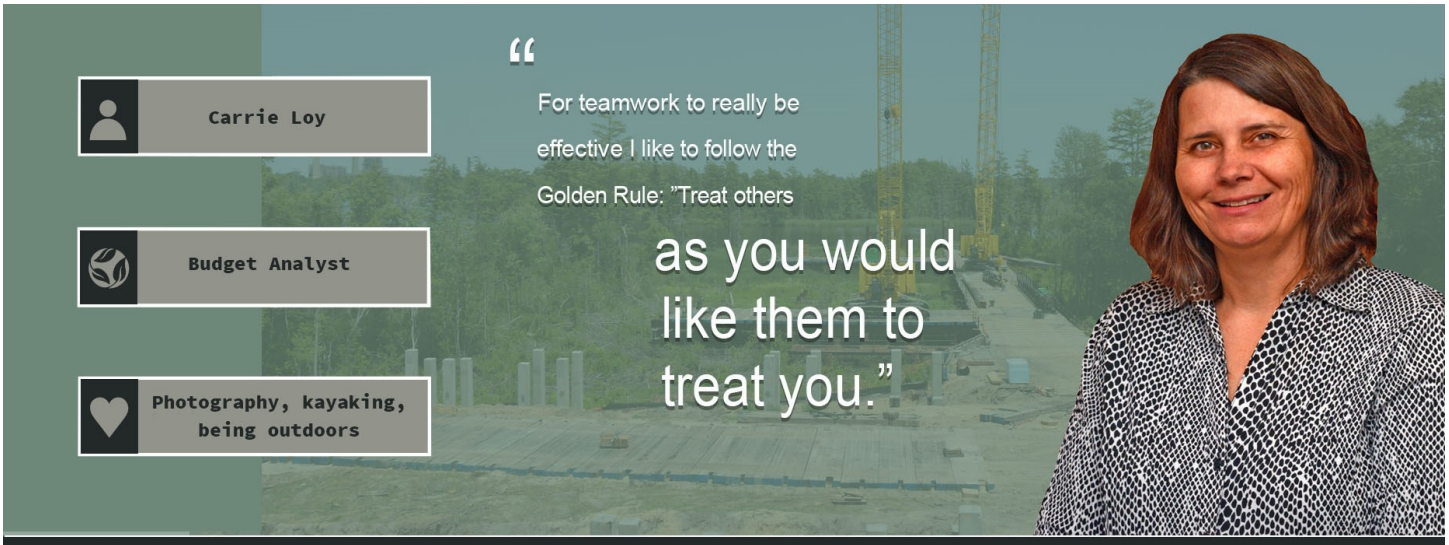


NEW EMPLOYEE HIGHLIGHTS



Mechanical EFFICIANCY

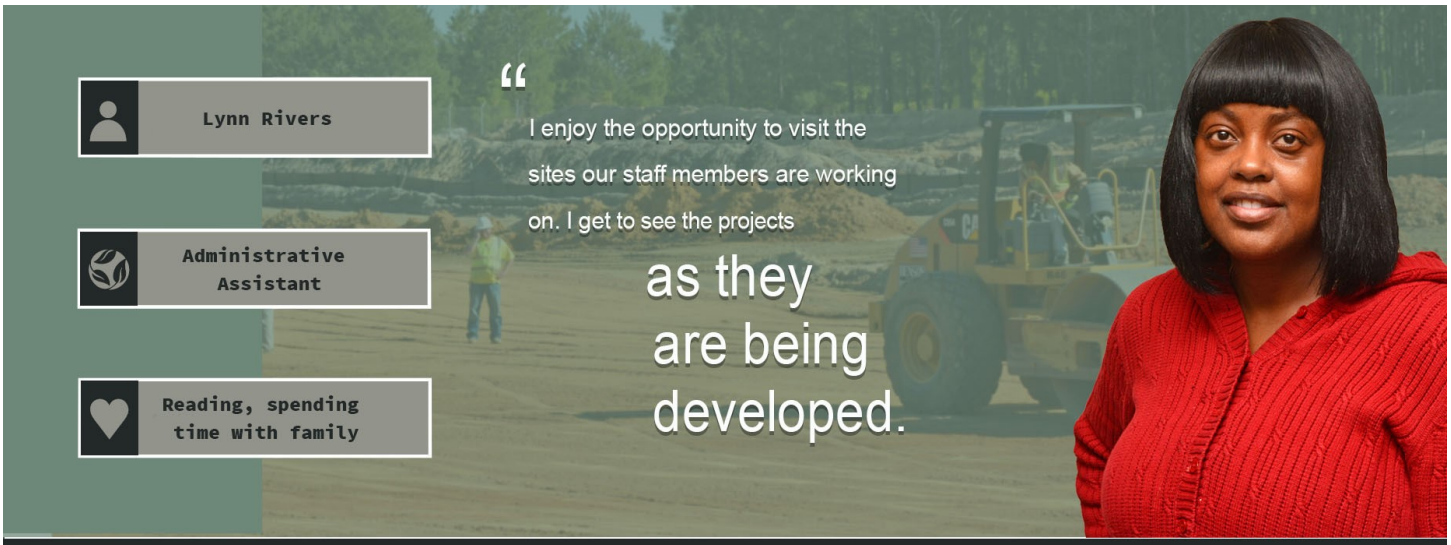
As a mechanical engineer in the Design Section I help define the necessary requirements in the commissioning of mechanical systems for both our MILCON and dam maintenance projects. Whether HVAC, plumbing, fire protection, or machine design a mechanical engineer ensures the eventual project owner's desires are met with the safest, simplest and most cost effective product possible.



Loyal Teammate

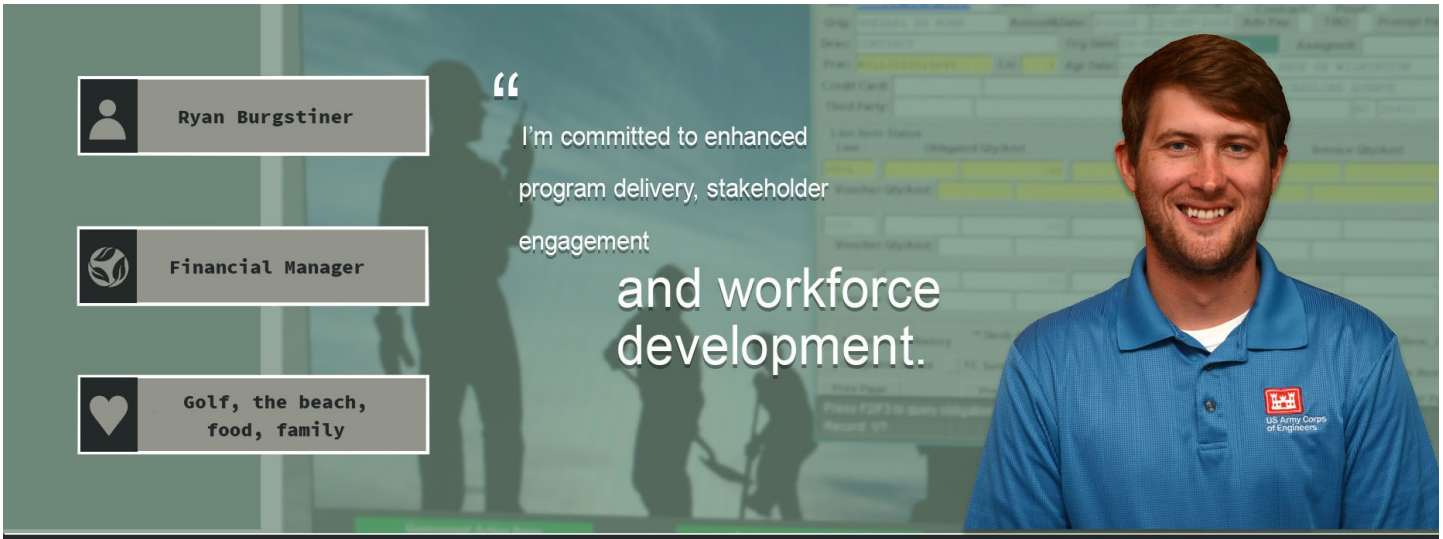
I’ve been working for USACE for 23 years. I came to the Wilmington District from the Middle East District in Winchester, VA. I'm currently serving as a budget analyst in Resource Management. I serve as the primary budget analyst for the Regulatory Division and its field offices. I develop, monitor and analyze budgets and expenses.

NEW EMPLOYEE HIGHLIGHTS



Dedicated Assistant

As an administrative assistant with the Wilmington District's Fort Bragg U.S. Army Special Operations Command Resident Engineer Office I assist our project managers and the entire staff with loading and organizing contracts, change requests, modifications payment applications and all other basic office duties in our high operations tempo office.



Resourceful MANAGER

I serve as the Chief of the Resource Management Office and I'm the District's Chief Financial Officer. The Resource Management Office provides valuable budget, business practices, finance & accounting, and manpower advice to commanders, staff, and customers. I have nine years of experience in the financial management field with the U.S. Army Corps of Engineers.