

PALMETTO CASTLE



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On the cover: Sen. Lindsey Graham pushes the ceremonial "first throttle" during the kickoff ceremony for the Charleston Harbor Post 45 Harbor Deepening Project construction, which sent steam and streamers through the air. The event was a celebration of many years of hard work by many agencies.

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From the Commander

What an interesting winter! We were surprised to see all the snow and ice, which I know is very rare for the Lowcountry. I hope everyone enjoyed the beautiful scenery and stayed safe throughout the cold and slippery conditions. As the Lowcountry was returning to normal operations, I deployed to aid in the recovery operations in the Caribbean. I certainly didn't mind leaving the cold weather for a few weeks, and my family understood the pressing need for the Corps' assistance to those affected by Hurricanes Irma and Maria. USACE has an integral role in supporting FEMA during disaster response and recovery efforts, and the South Atlantic Division mobilized in full force to help Puerto Rico and the Virgin Islands. We have been very busy placing temporary roofs, assessing structural integrity of critical infrastructure, removing debris, restoring the power in Puerto Rico and so much more. I am incredibly proud of all the district personnel who have selflessly volunteered over the last six months to leave their families behind and help those in need. I witnessed firsthand the tremendous impact USACE continues to have when we are called into action to support our fellow citizens.

Since my return, I've been thrilled to see the progress on many of our projects. Our largest, the Charleston Harbor Post 45 Deepening Project, has officially entered into the Construction Phase. A dredge in the water is something we all have been eagerly awaiting, and the South Carolina Ports Authority hosted a great celebration aboard the USS Yorktown to mark this historic event. The District was honored to have the USACE's Chief of Engineers in town to help commemorate the occasion (page 10).

Another important federal project will be under construction soon. Folly Beach will have 750,000 cubic yards of material (the equivalent of 7,500 dump trucks) placed on a portion of the east side of their beach. The project is funded through emergency beach rehabilitation funds due to the impacts of Hurricanes Matthew and Irma. Construction will begin in March and is an essential component of protecting the people and property who live behind the dunes (page 4).

We broke ground in mid-February on another great project, the Lake Marion Regional Water System, Dorchester Reach. This 10.7 mile water main is the sixth water transmission project on which the District has collaborated with local partners to build as part of our Environmental Infrastructure Program. We are so proud to be part of bringing clean drinking water to thousands of residents and hundreds of businesses and industrial users between Harleyville and Ridgeville in Dorchester and Berkeley counties (page 6).



I also hope you enjoy seeing some photos from the recent filming of our upcoming feature on the Discovery Channel, as well as reading about all of the activities that have happened at our Cooper River Rediversion Project located in St. Stephen, SC (page 16). Speaking of the CRRP, this project is one of several new responsibilities for Joe Moran, who was recently hired as our Operations Chief and becomes an important member of the District's senior management team (page 18). Congratulations to Joe and to my deputy commander, Jason Legro, who was recently promoted to the rank of lieutenant colonel. He'll be leaving us soon for his next assignment in the Army and we wish him well!

I look forward to seeing you in the coming months as I settle back in to the day-to-day business of the District and make some long overdue visits. As always, thank you for the trust and confidence you place in the Charleston team. We are continually looking for ways to better support the nation and the state, and your ideas are always welcome. Essays!

A handwritten signature in black ink, appearing to read "Jeffrey Palazzini".

Jeffrey Palazzini, PMP
Lieutenant Colonel, U.S. Army
Commander and District Engineer

*Shown above is Lt. Col. Palazzini (right) discussing debris removal operations in the U.S. Virgin Islands while he temporarily served as the commander.

Folly Beach Emergency Renourishment

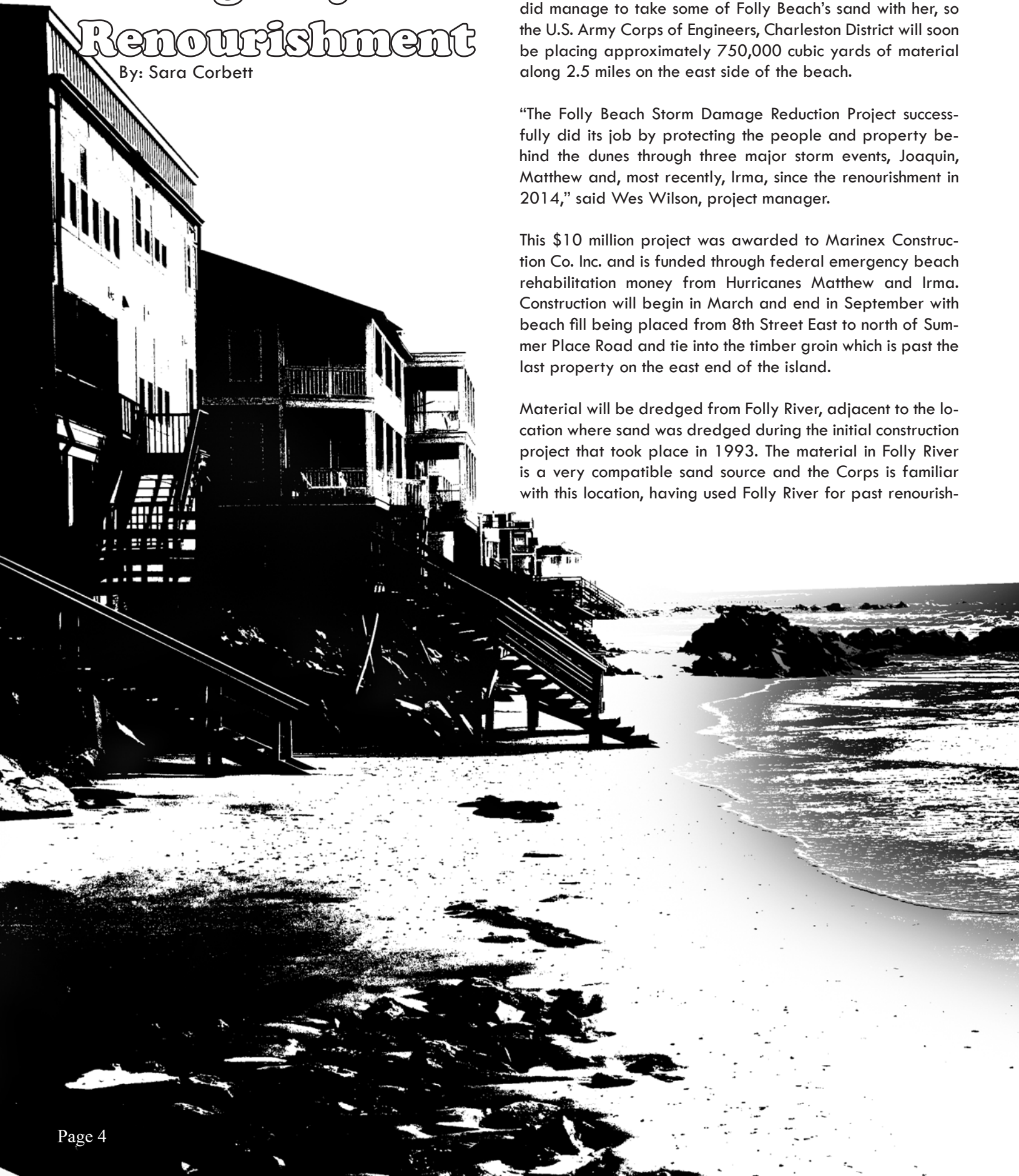
By: Sara Corbett

Mother Nature can be a force to be reckoned with and, for past few years, Folly Beach has been at the receiving end of that force. And while Mother Nature's wrath blew through quickly with recent hurricanes and did minimal damage, she did manage to take some of Folly Beach's sand with her, so the U.S. Army Corps of Engineers, Charleston District will soon be placing approximately 750,000 cubic yards of material along 2.5 miles on the east side of the beach.

"The Folly Beach Storm Damage Reduction Project successfully did its job by protecting the people and property behind the dunes through three major storm events, Joaquin, Matthew and, most recently, Irma, since the renourishment in 2014," said Wes Wilson, project manager.

This \$10 million project was awarded to Marinex Construction Co. Inc. and is funded through federal emergency beach rehabilitation money from Hurricanes Matthew and Irma. Construction will begin in March and end in September with beach fill being placed from 8th Street East to north of Summer Place Road and tie into the timber groin which is past the last property on the east end of the island.

Material will be dredged from Folly River, adjacent to the location where sand was dredged during the initial construction project that took place in 1993. The material in Folly River is a very compatible sand source and the Corps is familiar with this location, having used Folly River for past renourish-



ment projects, making this area an ideal sand source for Folly Beach.

"In conjunction with the Folly Beach emergency rehabilitation we will also dredge a small portion of the Folly River Federal Channel and historically, when we dredge that area, we also place fill on Bird Key as a beneficial use for wildlife habitat," said Wilson. "Placing fill on Bird Key is the least cost disposal site for the operations and maintenance of the Folly River Federal Channel, which enables us to be good stewards of the taxpayer's money and protect the environment."

Bird Key will receive 40,000 cubic yards of material, or the equivalent of 4,000 dump trucks, and cost \$300,000 that will be 100 percent federally-funded.

For this project, the contractor will use a cutterhead dredge, which sucks up sand and water from the floor of the Folly River and pumps it onto the beach through pipes. Elbow pipe segments on the beach direct the sand to where it needs to go and then bulldozers shape the sand.

During active construction, the majority of Folly Beach will be open and available for the public to enjoy. However, due to the amount of beach fill required to fill the template, the contractor will be in each section of the project from five to seven days. These sections are fenced off and are usually about 1,000 feet long, so it's easy to go around the active

construction area. Pipelines running along the beach outside of the fenced area can safely be crossed where the contractor places crossover sand ramps over the pipes. The public should keep away from pipelines and only cross them at the sand crossovers. The contractor works 24 hours a day, seven days a week during construction, usually completing up to a few hundred feet-per-day, barring mechanical or weather/sea condition delays.

"Both the Corps and our non-federal sponsor, City of Folly Beach, acknowledge that construction during the summer will cause temporary inconveniences to people using these stretches of beach for recreation," said Wilson. "However, beginning the construction project now enables the major, long-term benefits of protecting people and property from storm damage to be realized before the height of hurricane season."

The City of Folly Beach, in partnership with the State of South Carolina, will be conducting a separate, but concurrent groin rehabilitation project between 8th to 13th Street East.

Updates on where active beach renourishment construction is taking place and where it will be next can be found using the interactive map at <https://arcg.is/1CPGD4>.



Lake Marion Water Supply Project

By: Sean McBride



When they drove their shovels into the ground, it was the beginning of something exciting happening in Harleyville, S.C. Thanks to the freshly broken ground, a new water transmission line, which will bring safe, reliable drinking water, will soon be a reality for this underdeveloped area.

The groundbreaking happened on February 12th, with nine representatives poised with golden shovels on solid ground. These people represented agencies involved in the Lake Marion Regional Water Supply Project, including the U.S. Army Corps of Engineers, Santee Cooper, Dorchester County and the Lake Marion Regional Water Agency. Also digging in was Rep. James Clyburn, South Carolina's sixth district representative, who has been invested in the Lake Marion project from the beginning.

"I'm all for development, but the most important thing to me about this project is the safe, clean drinking water for our citizens," said Clyburn. "That's why I've stayed the course... to help cure the water issue in underdeveloped areas in my district."

This most recent phase of the project is labeled as the Dorchester Reach and this segment of water transmission line will stretch 10.7 miles from Harleyville to Ridgville. The project began in 2008 with the construc-

tion of the Lake Marion Water Treatment Facility that has the capability of producing eight million gallons of clean drinking water per day from Lake Marion. Five phases of reaches have been constructed since then and, with the addition of the Dorchester Reach, will amount to 45.4 miles of water transmission pipes. The Dorchester Reach will serve approximately 25,000 residents, as well as countless businesses and the future Volvo plant complex, which is expected to be a huge economic engine for central South Carolina regionally.

Plans are ongoing to extend the state-of-the-art system further into the region when federal and local cost-share-matching funds become available in the future.

"The Charleston District is proud to partner with [these agencies] to provide a reliable source of clean drinking water to Calhoun, Dorchester, Orangeburg, and Berkeley Counties for both municipal and industrial consumption," said Lt. Col. Jason Legro, Charleston District deputy commander. "We've enjoyed this partnership for over a decade now and are proud to be part of the team bringing a reliable source of potable water to portions of multiple counties and six municipalities."

The Dorchester Reach will cost approximately \$10 million and is scheduled for completion in early 2019.



Opposite: Rep. James Clyburn, SC 6th District, giving the keynote speech prior to the groundbreaking.

Top: Representatives from all the agencies involved in the project break ground.

Bottom Left: Contractors set-up the staging areas with the pipes that will be used during construction.

Bottom Right: Lt. Col. Jason Legro speaks on behalf of the Charleston District prior to the groundbreaking.

Fairlawn Plantation Mitigation

Article by: Sara Corbett

Photos by: Eric Krueger, The Nature Conservancy

The U.S. Army Corps of Engineers, Charleston District, continually strives to balance responsible economic development with environmental protection, so when a property owner or a business applies for a permit to impact wetlands or other waters of the U.S. the Corps requires them to avoid and minimize potential impacts to the maximum extent practicable. Compensatory mitigation is used to offset the unavoidable loss of aquatic resource functions and ecological services on the project site.

“The overall goal of compensatory mitigation is to maintain and improve the quality of aquatic resources in a watershed,” said Nat Ball, project manager. For example, if a property owner needs to fill wetlands in order to develop a new residential or commercial facility, they must submit a mitigation plan that restores, enhances, or preserves other aquatic resources within the same watershed as the project site.”

There are two ways that an applicant can satisfy the requirement for compensatory mitigation: buying credits from an established mitigation bank, or preparing and implementing a permittee-responsible mitigation plan.

When Boeing approached the Corps about expanding their existing facility, it was clear that the proposed project would have substantial impacts to waters of the U.S. At the time, there were two mitigation banks located within the Cooper River watershed, but the loss of more than 150 acres of aquatic resources on the Boeing site would require the purchase of all of the available mitigation credits within the watershed. There weren't enough available to offset their impact, so they would also have to implement a permittee-responsible mitigation plan.

Boeing had to get creative and find their own permittee-responsible mitigation site. Working with several environmental and resource agencies, they were able to identify and purchase nearly 4,000 acres of land, including more than 2,200 acres of land in the privately-owned Fairlawn Plantation.

“Fairlawn Plantation is surrounded by the Francis Marion National Forest,” said Ball. “Approximately 500 acres of wetlands at Fairlawn were restored about 10 years ago to create a mitigation bank. Boeing's proposed mitigation plan would add to this acreage of restored wetlands, and would turn the entire 2,241 acres of wetlands and uplands over to the U.S. Forest Service for public access and management as part of the national forest.”

Restoring the property back to its natural state is no easy task so Boeing is working with The Nature Conservancy to successfully restore it.

“Fairlawn was historically a longleaf pine forest,” said Eric Krueger, director of science and stewardship for TNC. “A healthy longleaf pine ecosystem consists of mature pine trees and low shrubs, like blueberries, and grass and wildflower floor covers. When a longleaf pine forest is neglected for long periods of time, mid-story hardwoods, such as sweet gums and water oaks, take over and choke out the floor covering because they don't get any sunlight. Our goal for this restoration is to get rid of the mid-story hardwoods, and reduce industrially-planted pines back to natural densities.”

Prescribed burnings, herbicide and logging are some of the methods that TNC included in the restoration plan they created for this project and so far the plan is working.

“Restoration overall is progressing excellently and we are on track with the plan,” said Krueger. “We've had some challenges, particularly with how wet it's been over the last few years, but the bulk of the logging and targeted herbicide work is completed. Next up is the second prescribed burning and continued planting of longleaf pine trees.”

Boeing is three years into the restoration project with approximately two more years of work until it's complete. Boeing submits an annual monitoring report to the Corps outlining the work they have done on their mitigation sites and their plans for the next year.

TNC goes to Fairlawn Plantation twice a year to monitor the property for tree density, an increase in grass cover and low shrubs, and a decrease in mid-story hardwood trees.

Boeing's efforts and success have paved the way for other businesses to purchase additional land and to perform additional mitigation activities at Fairlawn plantation. Since then, the South Carolina Ports Authority, Palmetto Railways and Mercedes-Benz have each purchased tracts at Fairlawn Plantation. These companies will follow in the footsteps of Boeing to restore the land then turn it over to USFS.



Before Prescribed Burn



During Prescribed Burn



After Prescribed Burn

Post 45 Construction Underway

By: Sean McBride

At the scene of most kickoff events or groundbreakings, you'll see ceremonial shovels digging into the ground or framed blueprints of the new facility standing proud and tall. However, if your groundbreaking is actually taking place three miles off-shore, your ceremony looks a little different.

On March 2nd, a ceremony was held aboard the *USS Yorktown* to celebrate the start of construction of the Charleston Harbor Post 45 Deepening Project. The event, put on by the South Carolina Ports Authority, was a celebration of eight years of planning and hard work to begin deepening the federal channel portion of Charleston Harbor to 52 feet.

"The Corps has been maintaining the Charleston Harbor for more than 140 years and today's celebration is proof of our commitment to the generation of jobs, the movement of imports and exports, helping to grow a stronger economy, protecting our environment and improving the quality of life for all Americans," said USACE Chief of Engineers Lt. Gen. Todd Semonite. "Together we will provide world class service to the nation and will continue to lead in finding ways to deliver our infrastructure through innovation."

The event featured a handful of speeches from Semonite, South Carolina Gov. Henry McMaster, U.S. Sen. Lindsey Graham, SCPA CEO Jim Newsome, several state senators and others. Each talked about the impact the port has on the state and nation and how the economic engine will be

able to continue growing thanks to the deepening by the Charleston District.

Great Lakes Dredge and Dock Company deployed their dredge the next day and begin pumping material from the Entrance Channel. The Entrance Channel will take the longest of the three reaches that need to be deepened, so it was started first. The Entrance Channel is actually being dredged to 56 feet, where the dredge will encounter harder material, such as limestone, that will be more difficult to remove, not to mention the more difficult sea conditions. The current dredging cycle will end on March 31st in order to avoid turtle nesting season.

"I am committed to the Corps becoming an agent of change in addressing the water resource needs for this nation," said Semonite. "We will to find ways to deliver first class water resource solutions to the nation as effectively and efficiently as possible, to be innovative and forward thinking."

The project has come a long way since the Charleston District began the reconnaissance phase of the project in 2011 to determine if there was federal interest in this project. Now, the Charleston District is looking at a 40-76 month window to complete the entire dredging of the federal channel. For the next several years, expect to see at least one dredge, if not more, at pretty much any given point as we work toward a deeper channel that will reduce transportation inefficiencies in Charleston Harbor.





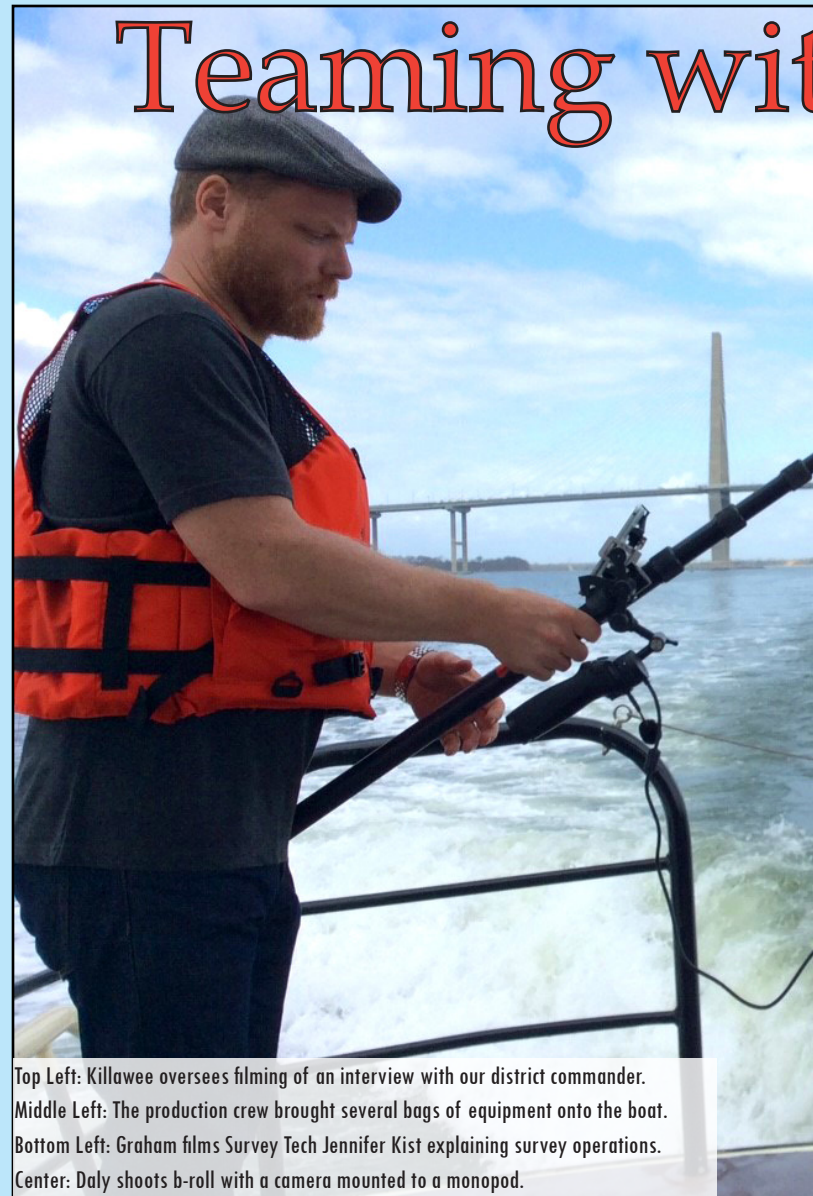
Left: Lt. Gen. Todd Semonite addresses the crowd at the Post 45 celebration.



Opposite page left: Gov. Henry McMaster talks about the impact of the Post 45 project on South Carolina.

Opposite page right: The Post 45 officially started.





Top Left: Killawee oversees filming of an interview with our district commander.
Middle Left: The production crew brought several bags of equipment onto the boat.
Bottom Left: Graham films Survey Tech Jennifer Kist explaining survey operations.
Center: Daly shoots b-roll with a camera mounted to a monopod.

The Charleston District has received plenty of local media coverage over the years, but it is a rare opportunity to experience national media coverage. Recently, a production team contracting for the Discovery Channel was in town to film for an upcoming story in an eight-episode series on "Mega Marine Machines."

The three specialists from Arcadia Entertainment traveled to Charleston from Canada to learn about how our survey team paves the way for dredging to take place in Charleston Harbor. The episode will feature the dredging industry and how their mega machines make it possible for container ships, another type of mega machines, to come into ports. With the harbor deepening project construction underway, getting information about both pre- and active-dredging operations was a unique opportunity. Aboard the *Survey Vessel Evans*, the crew learned how the survey team constantly monitors the depth of the harbor to ensure navigation is safe by being at the required depths. The survey team showcased their equipment, including the multi-beam

th Discovery

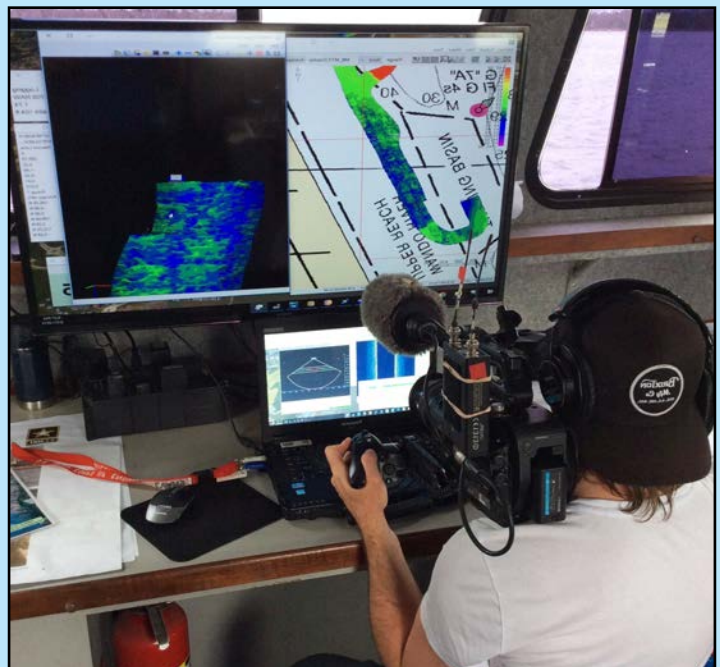
By: Sean McBride



Top Right: Graham films the survey team lowering the multi-beam sonar.

Middle Right: Graham films Daly launching a drone to film the SV Evans.

Bottom Right: Graham films the computer systems onboard the SV Evans.



sonar system that is used to see through the water and produce an image of what the channel looks like underwater.

The production crew, which included a producer, Andrew Killiwee, and two videographers, Doug Graham and Bob Daly, spent their time on the boat filming interviews and lots of b-roll footage. They learned about the process and filmed various aspects, including computer imagery, lowering the multi-beam, and normal boat operations, as well as footage of ships, Charleston and the SV Evans itself, which was done with a small drone. The crew used a variety of camera equipment to get the shots they needed in order to make sure that the show is interesting.

The crew will return to Charleston this summer when the Charleston Harbor deepening is underway in order to learn more about the tough dredging machines for the second half of their story. The series will run on the Discovery Channel sometime in the spring of 2019. Stay tuned to our social media channels later in the year for more information.

New Dorn VA Parking Garage

By: Sara Corbett



A parking spot isn't something most people give much thought to, except when they're having a problem finding one. The solution to this problem is one that the William Jennings Bryan Dorn Veterans Affairs Medical Center and the U.S. Army Corps of Engineers, Charleston District are putting a lot of thought into. The Dorn VAMC, located in Columbia, SC, has a big parking problem and to solve it the Corps is providing them support by overseeing the construction of a new parking garage that will provide 278 parking spots for the veterans and their families that visit the Dorn VAMC.

"We are always looking for ways to support our veterans," said Lt. Col. Jeffrey Palazzini, Charleston District commander. "The new parking garage is only 50 feet away from the entrance, which will provide easy and accessible parking. It's our pleasure to do this for these heroes who fought for our freedom."

A groundbreaking celebration for the garage happened on February 23. This \$8 million project was awarded to Billy W. Jarrett Construction Company, Inc., which is a certified service-disabled veteran-owned small business contractor and one of the reasons they were awarded the project. Construction will begin in March and is scheduled to be completed by the end of fiscal year 2019.

Construction for this project is broken into three phases; phase one is relocating the perimeter of a road 50 feet to the west to make room for the parking garage, phase two is demolition of the existing surface parking lot and preparing the site and footprint for construction, and phase three is the construction of the three-story parking garage.

"There has been an influx of patients visiting Dorn VAMC because of the great of services they provide to veterans in the Columbia area," said Jim Whiteman, chief of the interagency and international services branch. "The parking garage will have 97 spots on the ground level, 120 spots on the second level and 69 spots on the partial third level."

The parking garage is the first of five projects estimated at \$40 million that the Corps will construct at the Dorn VAMC over the next three years. The projects include a medical clinic, rehabilitation center, prosthetics and sensory aide center, and behavioral health center of excellence.

All of these projects are necessary to ensure that veterans and their families receive the best medical care possible. Despite being only a few months into FY 2018, Dorn VAMC has already served more than 80,000 veterans and in FY 2017 they tended to approximately one million patients.

"It's an honor to provide support to Dorn VAMC and the veterans they serve," said Palazzini. "I look forward to getting these projects underway and providing the world-class facilities that veterans and their families deserve."





Opposite Top: Shovels and hard hats are prepared before the groundbreaking.
 Opposite Bottom: Lt. Col. Palazzini speaks about the Corps' involvement at the ground-breaking ceremony.
 Top: The official rendering of the new parking garage.
 Bottom: Lt. Col. Palazzini breaks ground with representatives from the VA and construction company.

Preparing for Fish Passage Season



By: Sara Corbett

Every December, before fish passage season begins, personnel from the U.S. Army Corps of Engineers, Charleston District, South Carolina Department of Natural Resources, U.S. Fish and Wildlife Service, and NOAA Fisheries meet at the Cooper River Rediversion Project to conduct a pre-season inspection of the fish lift to discuss the upcoming passage season, current and future projects, and other issues.

"There is too much work and information for one organization to handle alone," said Joe Moran, chief of operations. "These partnerships and pre-season inspections are critical to ensuring that the system functions properly so that migrating American shad, striped bass, blueback herring, and other species can pass through the lift safely. Getting the fish through the dam and into Lakes Moultrie and Marion helps ensure their life cycle will continue so that future generations will be able to enjoy them for years to come."

The fish lift acts as an elevator, lifting the fish up and over the CRRP dam, where approximately 750,000 adult anadromous fish return to spawn every year from February to April.

While the Charleston District monitors and maintains the fish lift year-round, the pre-season inspection is a more in-depth process. The group tours the fish lift operations room, fish passage, and visitor center, while checking the mechanical and electrical systems with an inspection checklist. As they move through each portion of the inspection, they brainstorm and discuss ideas, improvements and completed improvement projects.

"The discussions are where the best ideas for improvements come from," said Moran. "This year, we spent a lot of time inspecting the newly installed fish lift control panel, which hadn't

been upgraded since it was originally installed in 1985. This upgrade is a direct result of past pre-season inspections, which shows that these meetings are crucial to keeping the fish lift in good shape."

The updated control panel brings the fish lift operating system into the 21st century and provides the SCDNR operators the capability to manually control all of the various functions of the fish lift. Before the upgrade, the operators had to shut down the entire system if a problem occurred. Now, operators can manually operate each gate and function if necessary to help prevent possible breakage. Other improvements that can be attributed to these inspections include adding vents to several valves to equalize pressure and decrease turbulence in the entrance chamber and installing rail rollers and skid plates to help the 'lift basket' glide smoothly up and down.

Each partner agency has its own, unique interest in the operation of the fish lift; the Corps for maintenance, SCDNR for operations during passage season, USFWS for freshwater species preservation, and NOAA for endangered marine species. However, they all share the common goal of keeping the fish lift operational and recognize that by partnering together the fish lift will continually improve, be more efficient, and help maintain and improve populations of these native species.

"Every year, we look forward to these inspections," said Jim Carter, CRRP operations project manager. "Thanks to these partners and their commitment to the fish lift, we always walk away with new ideas for projects and improvements that can be made in the future."



Opposite: The pre-season inspections included the exterior of the fish lift.
 Top: Agency representatives meet inside the fish lift operations room.
 Lower Left: Agency representatives inspect the CRRP fish passage from above.
 Lower Top Right: The newly upgraded control panel inside the fish lift operations room.
 Lower Bottom Right: The group checks out the renovated visitor center.

Meet Our:

Chief of Operations

Joe Moran



Describe your job.

My main responsibility is to ensure the Charleston District's operations team has the tools to deliver our varied missions. We have an outstanding mix of skill sets and experience that are brought to bear on an extensive portfolio of work. Our work includes designs of the Post 45 project, ongoing federal channel maintenance projects, surveys to ensure work is accomplished within budget and on time, and much more. The Port of Charleston is a multi-billion dollar economic engine and it is our responsibility to ensure it is maintained through dredging. Our spatial data mission grows nearly daily in support of most projects in the District. The staff at the Cooper River Rediversion Project works hard to keep our hydropower facility operational 24/7 to provide power for as many as 40,000 homes. Our environmental mission crosses all of the items above – helping native fish species fulfill their life cycles as they pass through the CRRP fishlift, and working with our federal and state natural resource partners to maintain the channels in an environmentally-responsible manner.

What is the most unique thing you bring to the District?

I have substantial experience with several agencies at local, state, regional, and national levels, including nearly 14 years in Washington, DC. I was able to spend lots of time on the Hill, sit in front of the Office of Management and Budget on a regular basis, and gain an appreciation of how local efforts fit into the bigger picture. I am confident that the sum of my experience will be beneficial as the District and the operations team move forward.

What is the most rewarding part of your job?

I really get charged up when our operations team takes a project from concept to completion of a high-quality deliverable. That happens often! I also am very heartened to see staff grow in their careers and move up in USACE. Our District employees can be counted on to do great things through their whole federal careers!

Highlight a notable milestone or memory in your career.

If you are around long enough, a couple of milestones or cool memories will happen. I have seen a pygmy sperm whale in the ocean close enough to touch, helped organize a meeting of Native American natural resource professionals that resulted in a national policy, witnessed the delisting ceremony for the bald eagle on the steps of the Lincoln Memorial (with my son – both he and I are Eagle Scouts), and most recently, being selected for this position. It is very humbling to have the District's senior leadership place trust in me.

What goals do you hope to accomplish in your position?

To help position the operations division and the District for future growth and success, to help staff achieve their personal and professional goals, and to support the South Atlantic Division and the USACE missions while serving the citizens of South Carolina.

A Powerful Relationship



By: Sean McBride

For 32 years, the Charleston District has been operating the St. Stephen Dam and Powerhouse at the Cooper River Rediversion Project in St. Stephen, S.C., to control sedimentation in the Charleston Harbor and generate power as water moves from Lake Moultrie to the Santee River. The 84 megawatts of power produced by the three hydro turbine generator units inside the powerhouse can provide electricity for approximately 40,000 homes. That power is managed by Santee Cooper, one of the District's closest partners.

There are currently 10 District employees who work at the powerhouse to ensure it stays maintained and operational and to troubleshoot any problems that may arise. These employees are critical to the needs of the region because the turbines have to be ready for use 24 hours a day, 365 days a year.

"Santee Cooper remotely operates our turbines from their facility and will turn them on whenever they need power," said Joe Moran, chief of operations. "When they flip the switch, our turbines are operating at full power within 10 minutes."

Except recently that didn't happen exactly how it was supposed to. The St. Stephen Powerhouse serves as a "peaking power plant," meaning that Santee Cooper usually turns the turbines on during periods of peak use, such as extremely hot or extremely cold days when power is at a premium and its customers are using a lot more energy. During the rare snow event in January that left an average of five inches of snow and sub-freezing temperatures in the area for five days, Santee Cooper

customers were using a lot of energy and the utility company flipped the switch to turn on the District's three turbines... but only two turned on.

"Our team got to work immediately to get the unit back up and running as soon as possible," said Jim Carter, operations project manager at the powerhouse. "There are a lot of steps that have to be completed in a specific order to find the root cause of a problem like this one, so it can take some time to safely troubleshoot. Our guys had the turbine producing at full capacity for Santee Cooper in just 27 hours, which is fast for completing these steps."

This down time was extremely rare for the powerhouse team. Routine maintenance is scheduled well in advance and, in 2017, the turbines were available to Santee Cooper 96.96 percent of the time. This is substantially above the District's goal of 95 percent availability.

The District is committed to being available to produce the power needed by Santee Cooper, even though the 40,000 homes that can be powered by the St. Stephen Powerhouse is a drop in the bucket compared to the more than two million customers that are served by the utility company. The District also remains committed to the overall care of the facility, as the powerhouse will be turned over to Santee Cooper's full control in 2035, as part of the agreement signed when it was constructed. Santee Cooper and the Charleston District work together to make sure the facility and turbines stay in good condition in order to keep the citizens of South Carolina warm in the winter and cool in the summer.



Lisa Metheney, senior civilian, was surprised with the Order of the Palmetto during an employee Town Hall.



Gov. Henry McMaster and Lisa Metheney at the Post 45 Kick Off Celebration, which took place shortly after Metheney received the award.

Order of the Palmetto

A big congratulations to the Charleston District's Senior Civilian Ms. Lisa Metheney who was recently awarded the Order of the Palmetto, the state of South Carolina's highest civilian honor, from Gov. Henry McMaster. It was awarded for her dedication to the Charleston Harbor Post 45 Harbor Deepening project and the state of South Carolina. Without Metheney's effective leadership and guidance over the past seven years, it is very likely that one or more of the numerous risks for significant delay would have come to pass and this important project would not be starting physical construction now.

The award was presented to her by Lt. Gen. Todd Semonite, chief of engineers, when he was in town for the South Carolina Port Authority's celebration event (page 10). Her contributions to South Carolina go way beyond the Post 45 project. Her dedication and work on the District's storm damage reduction projects on Folly Beach and Myrtle Beach, Lake Marion Regional Water Supply project, which will bring potable water to an underdeveloped area, and Atlantic Intracoastal Waterway and Charleston Harbor annual maintenance dredging, which saves taxpayers over \$18 million a year, will be felt by South Carolinians for many years to come.