

PALMETTO CASILE



Summer 2018
Volume 11/Issue 3
Charleston District



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On the cover: The Charleston District is constructing reefs with the hard bottom material dredged from the Charleston Harbor's Entrance Channel. The bucket drops hard bottom material onto the scow, which transports the material to the reef construction sites.

News Magazine of the U.S. Army Corps of Engineers, Charleston District Circulation: 1,100

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From the Commander

Peak hurricane season is upon us and the district remains poised to vigorously respond throughout the region if we are needed. Our relationships with state and local officials remain strong and we know the many hours spent together in training scenarios will pay huge dividends in the event of a disaster. However, let's hope our luck holds and the good weather we've experienced so far remains with us for the rest of the season! It's hard for me to believe it's been a year since my first Palmetto Castle column, meaning I'm halfway through my time at the Charleston District. It is no exaggeration to say I continue to learn new things every day and meet many new people across the state who make South Carolina a great place to live.

If you're reading this on a South Carolina beach, there's a good chance you are benefitting from a Charleston District storm damage reduction project. We're currently in the middle of renourishing both Folly Beach and the Grand Strand, which are critical to protecting the people and infrastructure behind the dunes during storms. Since we are in hurricane season, it's critical to complete these projects as soon as possible. We recognize the work is an inconvenience to beach-goers, but it is a short-term impact for significant long-term benefits in the area.

Speaking of hurricane season, we always tell you about what you need to do to prepare for a hurricane coming our way or what we're doing for recovery efforts after a storm hits, but this year we decided to tell you about the people behind our disaster recovery efforts. We have a great article in this issue featuring several of our disaster team volunteers talking about why they decided to join the team and help out in times of need. Their stories are really from the heart.

In addition to the storm damage reduction projects, we have lots of other projects throughout the state. We recently issued a permit for the proposed expansion project at Waterfront Park. This project will enhance the beautiful space at one of downtown Charleston's most visited landmarks. We are also working on a reef project in the Charleston Harbor as part of the deepening project. As the three dredges are working in the Entrance Channel, new reefs are being built up to create essential fish habitats.

This issue will also cover some projects we're planning to start soon. We recently received supplemental funding to do storm damage reduction work on Pawleys Island and Edisto Beach, as well as a reevaluation of how we will do renourishment work on Folly Beach in the future. We also received funding to study flooding issues on



Lt. Col. Jeff Palazzini stands with Holly Carpenter, Post 45 project manager, looking over the scow where dredged material from the Entrance Channel is pumped.

the Charleston Peninsula, which have been a problem for a long time. On Joint Base Charleston, we're about to kick-off construction of a new visitors quarters, which will provide a much needed upgrade for those staying on JBC for short periods of time.

Finally, we're introducing you to two relatively new members of our team in this issue. Amanda Heath is our new regulatory special projects branch chief and she'll be overseeing many of the complex permit applications that come into our office. Maj. Paul Sipe has been here since this spring as the district deputy commander, making sure our processes run smoothly and efficiently.

I think you're going to like this issue of the Palmetto Castle. We've had one of the busiest summers that our team can remember along our coast and in our harbor, and we're fully focused on turning dirt for our partners in South Carolina and across the nation. Thanks for your interest in and support of our many rewarding missions!

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

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Folly & Myrtle Getting Sandy

By: Sean McBride

Pretty soon, the more than 15 million visitors each year to both Folly Beach and the Grand Strand will have new sand to set their chairs on. But, more importantly, the people and property behind the dunes will have a reduced risk from storms.

Stabilizing beaches and dunes through renourishment is a critical mission of the U.S. Army Corps of Engineers. The Charleston District is concurrently renourishing both Folly Beach and the Grand Strand, consisting of Myrtle, North Myrtle, and Garden City/Surfside beaches, in order to minimize the impacts to people and infrastructure during a storm event like South Carolina has seen in each of the previous three years.

The \$10 million Folly Beach project is being funded through federal emergency beach rehabilitation funding from Hurricanes Matthew and Irma. Through the project, approximately 750,000 cubic yards of material are being placed on Folly Beach.

“The project is unique in that it is considered a beneficial use project,” said Wes Wilson, project manager. “The material being placed on the beach is being dredged from Folly River, clearing the federal channel for recreational and commercial boaters, meaning two projects are being completed at once. Sand was also pumped from Folly River onto Bird Key Stono in March for wildlife habitat construction.”

While the Folly Beach project is scheduled to wrap up in September, the Myrtle Beach project just kicked off at the beginning of August. This \$34.8 million project is 100 percent federally funded and will place approximately 1.4 million cubic yards of material across the three reaches that make up the project. This follows up the 1.3 million cubic yards of sand that were placed just last year in North Myrtle and Garden City/Surfside beaches through emergency funding due to Hurricanes Matthew and Joaquin.

“We acknowledge that people may see temporary inconveniences while the project is underway, but it has many long-term benefits, especially during storm season,” said Wilson. “Barring mechanical or weather delays, active construction moves quickly and should only be in front of any particular building for three to four days.”

The Myrtle Beach project is scheduled to be completed in December. Work on each project happens 24 hours a day, seven days a week, and approximately 500 feet of beach is completed per day. As a portion of the projects are taking place during sea turtle nesting season, the contractor is complying with the requirements of the Endangered Species Act and the Marine Mammals Protection Act.

The public can view the progress of each project in real time on the Charleston District’s website.



Top photo: Sand being pumped on to Folly Beach.
Photo: Myrtle Beach being renourished.



Joint Base Charleston Visiting Quarters



By: Sean McBride

At 149,210 square feet, the Joint Base Charleston Visiting Quarters will be the largest building the Charleston District has ever constructed for a military customer.

Since 2011, the District has been completing projects at Joint Base Charleston ranging from janitorial services to dock cap replacements to building renovations. JBC facilities support more than 90,000 servicemen and women and civilians, as well as their dependents. The 24,000 acre base not only has full-time permanent personnel, but also some that come for a short time and need a place to stay. That's where the Visiting Quarters come in.

Joint Base Charleston is currently using three smaller, older buildings as their VQ. As part of the \$59 million project, the District will be demolishing two of those buildings and completing minor renovations to the third. But the majority of the project is the new VQ building, which will have 266 guest rooms and will be four stories tall.

"Essentially, the building has been needed for over 12 years," said Joe Abell, JBC lodging manager. "We have a requirement for over 350 rooms and we only have 80. It's a long-term fix for what we need, so we're excited to get this done."

The VQ will be used for "priority one guests," who are personnel coming to JBC on official business, such as meetings, training, and reserve activities. After their need is met, vacant

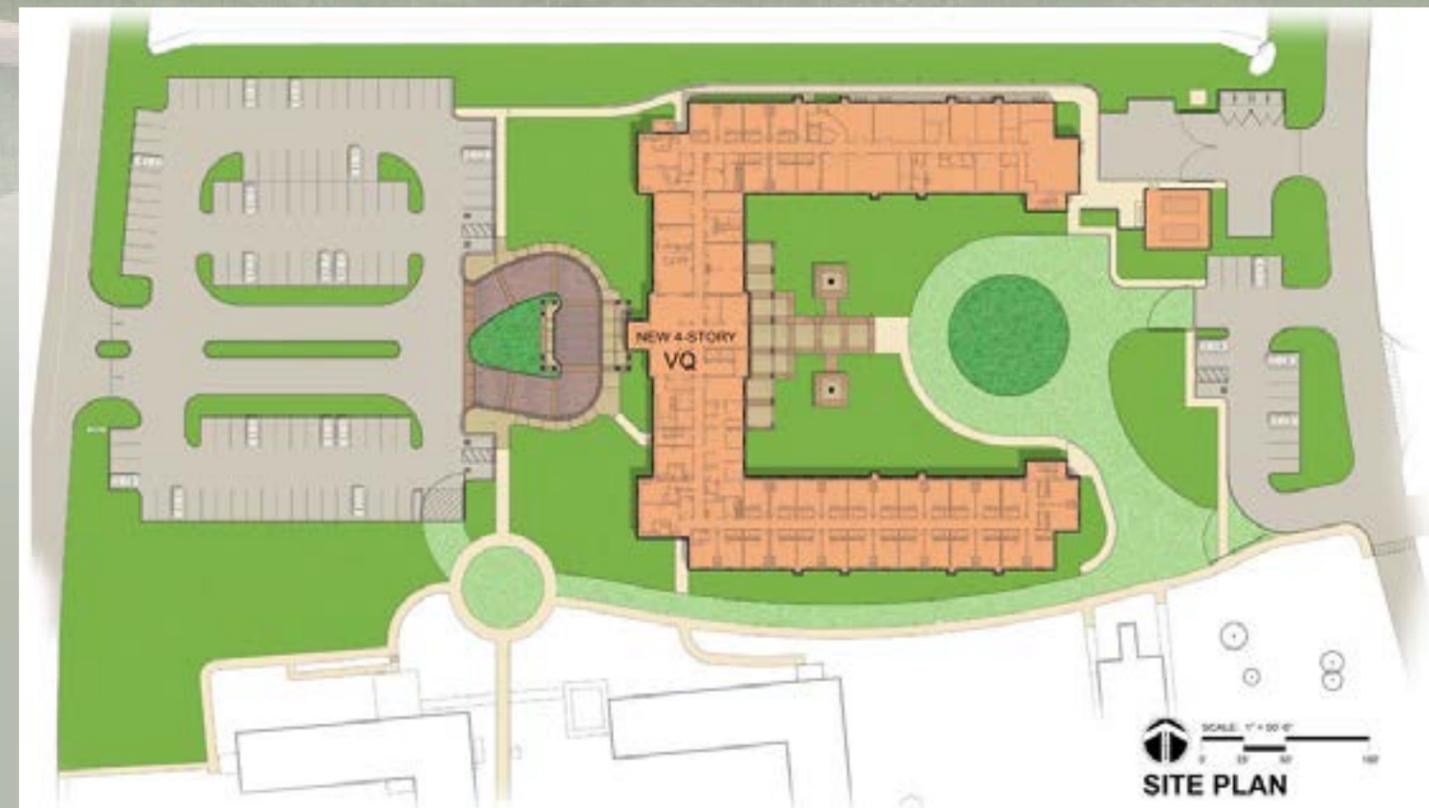
rooms are made available for dependents, retirees, or guests of service members. The stays range from a couple of days to a couple of months.

The new modern guest rooms and furnishings will provide visitors with a comfortable environment during their stay in Charleston. For added convenience and efficiency, the VQ will also have a café, exercise room, laundry facilities, and conference rooms.

All but around \$2 million of the funding for this project comes from the Air Force Services Agency, which provides bases around the country with funding for new initiatives and for the successful operation of essential food, fitness, child care, lodging and recreation opportunities for military members and their families.

"Normally, VQ construction is paid for with taxpayer dollars, but because this building has such a guarantee for continuous full occupancy, a waiver was approved to use lodging-generated funds," said Abell. "A pool of money is generated from each lodging facility around the country, and that money is used to fund each new building."

The new Joint Base Charleston Visiting Quarters facility is scheduled for completion in December 2020. Previously, the largest building the District had constructed for a military customer was the Quad Dining Facility at Fort Jackson in Columbia, SC, which was "only" 125,000 square feet.



If you build it, they will come

By Sara Corbett

There are several elements that need to be examined during any harbor deepening project, one of which includes where to put the material that is dredged from depths of the sea.

During the Feasibility and Pre-construction Engineering and Design phases of the Charleston Harbor Post 45 Deepening Project, the Charleston District developed several options, with input from stakeholder and partner agencies, for the placement of the dredged material. One aspect that was important to consider was the most cost-effective and environmentally-acceptable location for the dredged sediment. The final solution was a combination of placement areas for the dredged material, including using inshore and offshore placement sites, and, most creatively, building artificial reefs.

“Building reefs using the limestone rock that is being dredged from the entrance channel of the Harbor has several benefits,” said Holly Carpenter, project manager for Post 45. “We are building eight reefs that will each provide at least 33 acres of habitat in the Charleston Harbor for fish and invertebrates.”

Two of the reefs are intended to mitigate for existing hard bottom habitat that will be lost during construction in the entrance channel. The other six artificial reefs are being constructed as a “beneficial use” of the dredged material.

When the placement of dredged material provides an additional benefit, such as creating habitat, it is considered a beneficial use. With navigation projects, the Corps can explore possible beneficial uses of dredged material and implement them when they are the least-cost and an environmentally-acceptable placement option. The creation of six additional beneficial use reefs is a win-win for the Post 45 project as it is the most economical way to place the dredged material while also benefitting other natural resources.

The mitigation reefs are currently being constructed using the Dredge New York, a mechanical excavator dredge, which digs into the limestone rock and loads approximately two dump trucks of material onto a scow that transports and drops the material into the area of reef construction.

“We started building the reefs in June and expect to complete the mitigation reefs by the end of September,” said Carpenter. “The beneficial-use reefs should be completed by 2020.”

The locations of the artificial reefs were strategically planned based on survey data and input from stakeholders, such as the South Carolina Artificial Reef Program, commercial fishing outfits, and others, as to avoid particular areas and not conflict with the transportation uses of the Harbor, while promoting the potential for ecological success on the reefs.

Once the reefs are constructed, they will evolve to become fully functioning reef habitat over time. First, the stationary organisms, such as algae, sponges and soft corals, will attach themselves to the surface of the rocks. There are limited hard structures on the bottom of the ocean, so this is very valuable for habitat creation. Next, marine invertebrates such as shrimp, crabs and starfish, will be attracted to the reefs for food and protection, followed by juvenile fish who also need food and protection from bigger fish. Eventually the larger fish, such as red drum and sea bass, will come looking for food and to reproduce. This is economically important to South Carolina because many of these species are commercially and recreationally fished.

It should take about three to four years for the stationary organisms to colonize and mature, and, if everything goes according to plan, the invertebrates and fish will follow shortly afterwards.

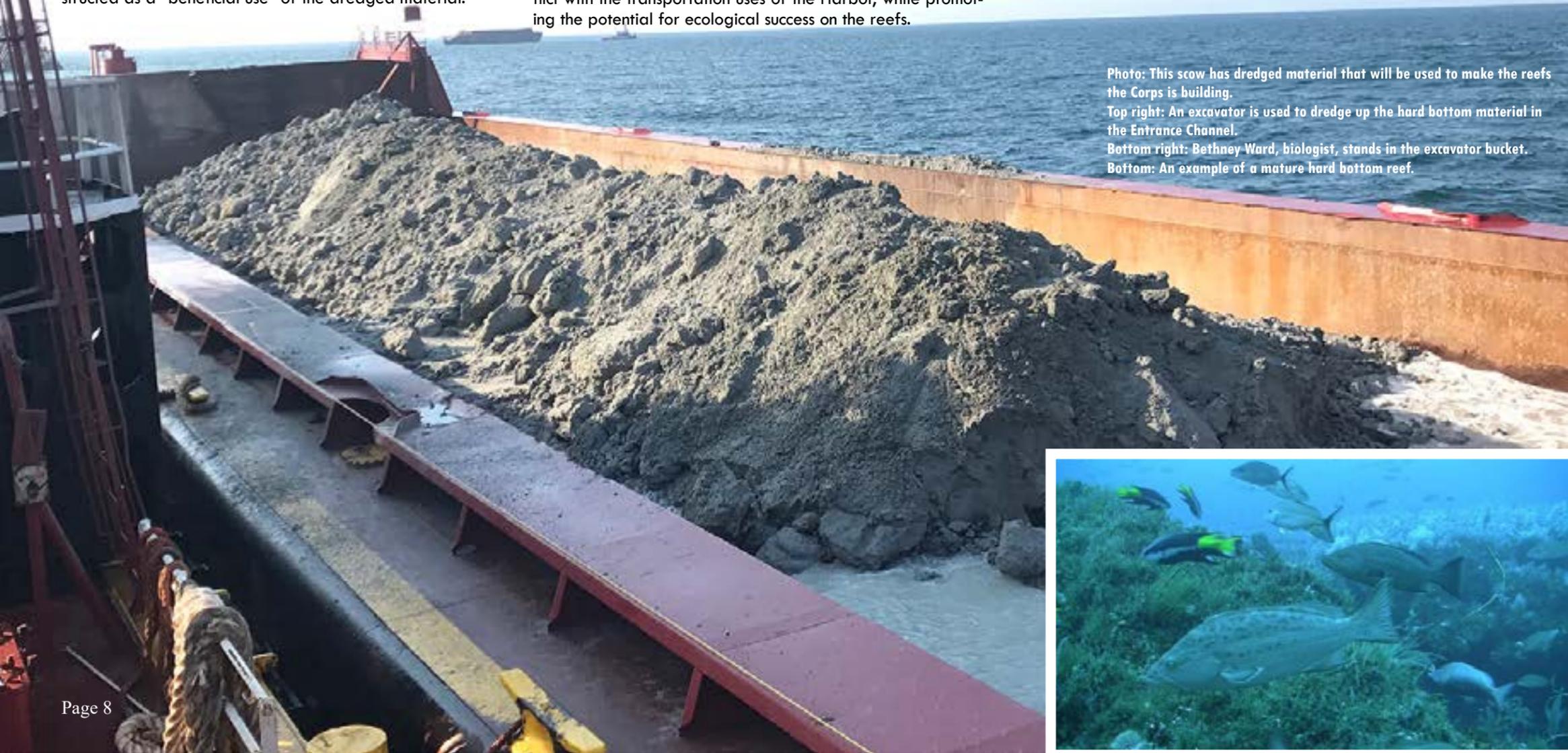
“We are building the reefs in a three-dimensional structure using native material from the Charleston Harbor, and we think this will be very attractive to marine life and there will be even more productive bottom habitat available after the harbor is deepened,” said Bethney Ward, biologist.

Photo: This scow has dredged material that will be used to make the reefs the Corps is building.

Top right: An excavator is used to dredge up the hard bottom material in the Entrance Channel.

Bottom right: Bethney Ward, biologist, stands in the excavator bucket.

Bottom: An example of a mature hard bottom reef.





Supplemental Funding Brings New Work to Charleston

By: Sean McBride

The recently-passed Bipartisan Budget Act of 2018 included quite a few projects for the Charleston District. These projects are being funded for disaster recovery and are part of the more than \$17 billion that was provided for long- and short-term disaster recovery projects across the country.

Headlining the funding the District received was money for storm damage reduction projects up and down the South Carolina coast. Folly Beach, Myrtle Beach, Edisto Beach and Pawleys Island all received funding to place much-needed sand on the beaches that was lost from hurricanes in the last few years. Folly Beach and the beaches along the Grand Strand are already in the process of receiving sand. For Edisto Beach and Pawleys Island, this will be the first construction funding they have ever received.

“Several years ago, Pawleys and Edisto were authorized as federal projects, but construction funding had not been appropriated until now,” said Brian Williams, chief of programs and project management. “As soon as we learned of this funding, we began working with the towns to come up with the best possible plan to construct those authorized projects and start realizing the benefits from reducing damages from future storms.”

The District also received supplemental funding for two new feasibility studies to look into local issues with federal implications. The Folly Beach feasibility study will examine alternative measures to continue to deliver the coastal storm risk management benefits. The Charleston Peninsula study will evaluate possible actions intended to provide long-term risk reduction from flooding on the City of Charleston’s peninsula. Both of these studies are proposed to be completed within three years and cost no more than \$3 million from the time they commence.

“We’re very excited about receiving supplemental funding made available after the recent hurricane damage,” said Lt. Col. Jeffrey Palazzini, district commander. “We already have some of these projects underway and are eager to start the projects and studies that we’ve never done before that will greatly benefit the entire state of South Carolina.”

The District also received maintenance funding for the Charleston Harbor south jetty and the Atlantic Intra-coastal Waterway. All of the projects that received supplemental funding will meet the intent of Congress to be used for rehabilitation, repair, and construction to address consequences of recent hurricanes in the state of South Carolina. The District looks forward to completing them as quickly as possible.



Top: East Battery, located on the Charleston Peninsula, is one of the streets that floods during storms. Photo: Palmetto Blvd on Edisto Beach post-Hurricane Matthew.

**By The
#’s**

\$17+
billion

**Overall
Supplemental
Funding for
USACE**

7

**Total Projects
Received
Funding in
South Carolina**

\$29
million

**Already at work
on
Myrtle Beach**

\$33+
million

**For Folly, Edisto,
and Pawleys
Island Beach
Renourishments**

\$3
million each

**Charleston
Flooding and
Folly Beach
Studies**

Why I Volunteer for Emergency Response...



Top left: Ryan Bamberg, right, deployed to Puerto Rico to assist with recovery efforts.
 Middle left: Tommy Fennel has deployed several times.
 Top right: Kebeck Rosario deployed to Puerto Rico.
 Bottom & next page: Colton Bowles has deployed numerous times to help with recovery efforts.



By: Sean McBride

Every year, June 1st rolls around and people along the Gulf Coast and Eastern Seaboard collectively begin holding their breath and don't let it out until November 30th. For this half of the year, hurricane season is in full swing.

These months are considered the "best conditions" for a hurricane to form. However, the Charleston District prepares for hurricane season all year long, planning and training for who would respond to any disaster and what their roles would be. The District's Emergency Management Branch only has three full-time employees, however there are currently 30 trained District personnel on standby around the state that have volunteered to serve in various roles to complete any USACE authority missions and response/recovery missions given by FEMA.

Each person has their own story as to why they volunteer. Some just want to help, some want the overtime hours, but some are drawn to it because of a personal story. One of those people is Tommy Fennel. Fennel is the Conway Regulatory Field Office chief, but serves as a liaison officer between the District and Horry and Georgetown Counties during a mission. As a life-long resident of South Carolina, Fennel has experienced devastation from many storms.

"I was a senior in high school when Hurricane Hugo slammed into the coast in September 1989," said Fennel. "We lived in a rural area and were without electricity for almost four weeks. The fact that our home was still standing amidst all the rubble and debris still amazes me."

So after Fennel joined the District and learned about the Corps' emergency management mission, he volunteered for the liaison officer position. Since then, he's had the opportunity to be part of response and recovery efforts from major storms, such as the recent Tropical Storm Joaquin and Hurricane Matthew.

"Having lived through several storms, I understood the shock and emotional experience of being displaced or in need after a major disaster and wanted to share my abilities and expertise by being one of the first people to put my boots on

the ground and do my part to expedite recovery efforts and, hopefully, lift the spirits of those in need," said Fennel.

Ryan Bamberg, structural engineer, had similar feelings when he joined the Infrastructure Assessment Planning and Response Team. He also grew up on the east coast and experienced devastation from many hurricanes and wanted to put his knowledge to good use. Last year, Bamberg spent several weeks in Puerto Rico assessing the viability of buildings and schools after Hurricane Maria devastated the island.

"A big draw to come work for the District was the fact that USACE is FEMA's main go-to agency in the event of a natural disaster," said Bamberg. "It's rewarding to see your efforts and skillset have a positive, and almost instant, impact on a local community."

Colton Bowles, plan formulator, serves as a local government liaison in times of disaster. As an LGL, he has to deploy within six hours of being called and serves to expedite missions by improving communications between local, state and tribal governments to the federal government. During the recovery efforts from Hurricanes Maria and Irma, Bowles was deployed in Florida for 42 weeks.

"I quickly realized that they are dealing with issues regarding life and safety and how serious they took their jobs," said Bowles. "Our missions impact communities and subsequently lives by assisting with recovery and preparation for the next event. The technical issues that arise with infrastructure recovery and resiliency has forced me to expand my knowledge base. Despite the sacrifices (you eat a lot of meals by yourself and I was in Florida so long I think my dogs forgot me), I would not relinquish my experiences for anything."

In the last three years, the Charleston District has deployed 50 people to Florida, Puerto Rico, the U.S. Virgin Islands and throughout South Carolina as part of recovery efforts from major storms. These stories are just a few from the dedicated volunteers who step up during a disaster situation. The District never wants to see an emergency situation, but the District's volunteers stand ready if needed.

Meet Our:

Maj. Paul Sipe District Deputy Commander



Describe your job. I serve in three roles. At times, I am a coordinating staff officer, working with District employees to develop concepts and refine those into actionable plans...for all types of initiatives. I supervise the General and Administrative staff, who are all experts in their field. So, much of my job is to understand how they enable key efforts in the District, and to synchronize those efforts to best serve our customers, stakeholders and partners. In this role, I work to apply a set of standards across the staff to communicate effectively, see the big-picture, identify problems and coordinate solutions, provide clarity to situations, and to support the leaders in the District. As the deputy, I remain always willing to serve as the commander. I continue to learn the “science” of the total job and feel the “art” of serving as deputy. My intuition tells me I must consider each situation, and choose which role best serves the District.

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

I pause to answer that to recognize that the District has had many great officers pass through as commander and deputy, and I am honored to follow in their footsteps. All personalities are different; mine encourages relationship-building. I intend to use that to strengthen networks within the District, to find opportunities to engage others and to generate solutions with others' help. I continue to be interested in understanding what it means to be “human.” I appreciate the subtle (and sometimes not subtle) differences in each of us. While that is interesting to me, I find a certain peace in my belief that our differences are not good nor bad, but just “are.” I am a strong believer in reciprocity, and I intend to live that each day while engaging others.

What is the most rewarding part of your job?

My answer is a resounding – THE PEOPLE. Since arriving, I have been received with kindness and openness. I sense that many employees act as family as I witness them interact. I enjoy the opportunities I have to work with the senior leadership and the daily interaction I have with employees across the organization. I find the Corps of Engineers a unique organization that has great values and produces amazing results for the nation.

Highlight a notable milestone or memory in your career.

I served in a previous Corps assignment at the Norfolk District, where I was assigned to Arlington National Cemetery, which is one of the most purposeful places I can think of. I was, and feel am still, part of a team that is committed to preserving the honor and beauty that is found all around those hallowed grounds. While there, we began the Millennium Project, which is a 27-acre development that allows the cemetery to continue to provide burial space to service-members and patriots. The project is substantially complete and provides an additional 30,000 in-ground burial spaces and crematorium spaces combined. That's significant for several reasons, but one of which is that it allows the Cemetery to continue with burials for the next 10 years.

What goals do you hope to accomplish in your position?

To be successful, I want to support what the District is doing to “Deliver the Program” to Charleston, South Carolina, and the nation. I continue to learn who supports the total effort and how it all comes together to provide value for customers, stakeholders, and partners. As I understand that, I will focus the staff on key events and activities. I will feel successful as we provide value with our support while the District executes a wide range of important work to support the nation.

Amanda Heath Chief, Regulatory Special Projects



Describe your job. As the chief of the Special Projects Branch in the Regulatory Division, I supervise a group of amazing folks whose role is slightly different than the rest of the regulatory staff. My staff are either assigned to evaluate proposed projects from a particular applicant, such as the South Carolina State Ports Authority or the South Carolina Department of Transportation, proposed projects that are more involved and may even require an environmental impact statement, or aspects of the Regulatory Program that require more specialization, such as mitigation banking and reviewing proposed projects for effects to historic properties. Brass tacks, I help the folks who make up the Regulatory Division's Swiss army knife.

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

A quirky sense of humor with a charming Yankee accent!

What is the most rewarding part of your job?

Being a public servant has always been the most rewarding part of my job, which started when I was a chemist with the Alaska District, and it's still the most rewarding part of my job now that I am chief. When I first joined USACE, I thought that I would never want to a supervisor. In my role as a regulatory project manager, I worked with the public on a daily basis, which sometimes was trying, but I found that as a whole it was very rewarding. At that time, I thought that my supervisor was too detached from what I thought was a public servant, but then I had the opportunity to do a detail as the supervisor for my section. I spent those 60 days being a project manager responding to applicants, supervising my folks who were also my peers, and answering to upper management. It was crazy! Even crazier was that I eagerly signed up for a second and third supervisory detail. I realized that as a supervisor I had more responsibility to the public because I not only answered to them, but also to the folks within the Regulatory Division. It was amazing! I find it very rewarding being a part of something greater than myself.

Highlight a notable milestone or memory in your career.

Being selected for this new position is the highlight of my career. Coming from the Alaska District and only having regulatory experience from that District, I figured that I would have a difficult time convincing another District that I was capable of adjusting to the complexities of their Regulatory Division. It was an amazing feeling to get the call that I was selected! The journey to move back to the “lower 48” was stressful and trying to get up to speed with the various projects of the Branch has been a challenge, but the Charleston District has been very welcoming and the Regulatory folks have been patient as I catch up. My folks seem happy that I'm on board and that makes me happy.

What goals do you hope to accomplish in your position?

To be a cornerstone for not just the folks in my Branch, but also to the folks of the Division is my main goal. The Regulatory Program is challenging since you have to manage the requirements of evolving regulations with the expectations of the public. I've gone through periods when I felt adrift and that I wasn't supported by my supervisor. It's an awful feeling! I don't expect that my folks and I will always agree on every issue, but I want them to know and feel that they have been heard and that they are supported. If they are successful, then the Charleston District is successful.

Digging Deeper

By: Sean McBride

Dredging in the Charleston Harbor Entrance Channel is underway as the first part of the Post 45 Harbor Deepening Project.

Working on the first two contracts for the \$529 million project, three dredges and roughly 40 support vessels began deepening and extending the Entrance Channel to 54 feet in March.

“The first two contracts revolve around the Entrance Channel to remove more than 19 million cubic yards of material from the federal navigation channel,” said Holly Carpenter, project manager. “The Entrance Channel construction is the most time consuming portion of the project. The next contract for the Lower Harbor deepening and widening construction is planned to be awarded next year and completed concurrently with the Entrance Channel work.”

Great Lakes Dredge and Dock Company was awarded both contracts for the Entrance Channel. They are using the cutterhead suction dredges *Texas* and *Carolina*, the two largest dredges of their kind in the United States, for the majority of the work. The material from these dredges is pumped into scows, which are essentially floating dump trucks, and transported to the Ocean Dredged Material Disposal Site, where it is placed.

Top left: The dredge *Texas* uses a cutterhead to dredge material from the Entrance Channel.

Left: The bucket on the dredge *New York* dropping hard bottom material onto the scow.

Bottom left: A container ship passes by the dredges in the Entrance Channel.

The excavator dredge *New York* is being used to scoop out larger chunks of material, compared to the finer material created by the cutterhead dredges. The larger material being dredged up by the excavator is also being placed into a scow, but is then being transported nearby to create two mitigation reefs equaling approximately 66 acres of hard bottom habitat.

“Creating the two mitigation reefs is critical to this project,” said Carpenter. “We are also able to create more hard bottom as a beneficial use placement for some of the material.”

In addition to the three dredges and their scows are pipes, pumping decks, tug boats, survey vessels and more, all working together to ensure the job is done properly. More than 200 people work on these vessels daily and the dredging operation takes place 24/7, unless delayed for weather or mechanical issues.

The Post 45 Project construction is anticipated to last 40-76 months and will include the Upper and Lower Harbor in addition to the Entrance Channel.

Top right: The amount of dredges and vessels in the Entrance Channel make it seem like a small city.
Right: The front of a cutterhead dredge.
Bottom left: The various dredges and vessels lined up.
Bottom middle: Material is pumped from the pipes onto the scow.



Permitting the Waterfront Park Expansion Project

By Sara Corbett

The Joseph P. Riley Jr. Waterfront Park, one of the Charleston's most iconic settings, is about to get bigger.

The Charleston District issued a permit to the City of Charleston on August 15th to expand upon the existing Waterfront Park, a half-mile long, eight-acre linear park along the Charleston Harbor in downtown Charleston.

"The proposed project, which is adjacent to Fleet Landing restaurant and the SCSPA Headquarters office building, will expand the park by approximately half an acre and includes a public pier with a commercial marina and a water taxi service," said Leslie Estill, regulatory project manager.

Expanding the Waterfront Park consists of constructing 700-feet of bulkhead and filling .54 acres of tidal marsh behind the bulkhead as well as constructing a 15-foot wide by 310-foot long walkway that will lead to a partially covered two-story 29-foot by 104-foot pierhead. A large floating dock with a connector float and gangway will be constructed on the south side of the pierhead, which will be utilized by the commercial marina for day and overnight public dockage, and a pick-up/drop-off water taxi service.

During construction, there will be a 20-foot buffer around the construction area in tidal saltmarsh, which will provide the necessary space for construction of the park expansion project as well as the equipment needed. This buffer includes .30 acres of tidal marsh, but a special condition of the permit requires that the permittees adhere to an approved restoration plan that details how the buffer area will be restored, if impacted, once the project is completed. The permittees will monitor the restoration project for four years after completion of the project.

Construction for the existing Waterfront Park broke ground in 1988 and the park opened in May 1990, despite Hurricane Hugo hitting Charleston in 1989 and causing approximately \$1 million damage to the park. The park is broken into several distinct sections, which includes a fountain at the entrance, a pier that extends into the Cooper River and has sheltered picnic tables, benches and swings as well as a floating dock attached. The largest portion of the park, which is approximately a quarter of a mile, has two sections of parallel walkways. One walkway has a dense, shady canopy of oak trees with benches, while the other walkway contrasts the shady areas with open lawn that is adjacent to the Cooper River and landscaped with palmetto trees. In the center of the park is the famous Pineapple Fountain.

Prior to construction of the Waterfront Park, the area was the center of the maritime traffic with several wharves and shipping terminals, but a devastating fire at one of the terminals in June 1955 permanently closed the wharves and terminals leaving the area vacant and in rubble for nearly 25 years.

The permitted park expansion is part of the 1980 Charleston Waterfront Master Plan, which uses urban design to emphasize the historical and natural beauty of Charleston for public use. Utilizing the design concepts of the Master Plan the park expansion includes an elevated park plaza, gardens, an amphitheater, elevated seating and several small gathering areas.

"When Waterfront Park rose along the banks of the Charleston Harbor nearly three decades ago, it was an extraordinary gift not just to our visitors, but to our citizens as well - a truly remarkable public space to visit, to enjoy, to share with family and friends," said John Tecklenburg, Charleston mayor. "Now, with Lowe's planned expansion moving forward, Charlestonians will be able to access and experience even more of this priceless public treasure in the years ahead."



Raising the Cranes

By Sara Corbett

While a 115 foot crane is extremely high, especially from the top of it, it's not quite high enough to accommodate the neo-Panamax ships that are calling on the Port of Charleston. The solution? Raise the cranes another 40 ft.

With the construction phase of the Charleston District's Post 45 Harbor Deepening Project in progress, more neo-Panamax ships will be calling on the South Carolina Ports Authority's Wando Welch Terminal, making it necessary to raise the cranes to 155 feet.

"In August of 2016, two new 155-foot cranes were delivered," said Ed Stehmeyer, project manager/design manager in the engineering department of the South Carolina Ports Authority. "We used the new cranes to lift containers that were higher up and used the shorter cranes to get the remaining containers. It was inefficient, but we made it work since it was somewhat infrequent. Once the Panama Canal opened it become more of a problem, so we got two more new cranes in March 2018 and why we're retrofitting four of our existing cranes. Now, we can service any type of ship that comes into the Charleston Harbor."

Raising of the cranes began in August 2017, with each crane taking approximately four and a half months to complete and costing approximately \$4.5 million to retrofit, and is scheduled to be completed by January 2019. Two of the four cranes have been completed and are back in service, one crane is currently underway and one crane is left to retrofit. Compared to the one and a half years it takes for the procurement of a new crane and the cost of approximately \$11 million, retrofitting makes much more sense.

The process of retrofitting the cranes is a relatively simple one. A self-propelled modular transport, which is a platform

vehicle with a lot of wheels that can rotate 360 degrees, is used to move the cranes from the docks to the work area and back. Once the cranes are in the work area, the retrofitting begins.

"Think of the crane legs as your legs, what we do is cut the crane above their 'ankle' and below their 'knee' and we add a 44-foot extension in the middle," said Stehmeyer.

One cut across the existing crane leg is made, it's raised up on a jack system, and a 40-foot steel leg extension is welded into place, which will be part of its new leg. Crane stiffening, which includes placing diagonal bracing and portal beams, to make the cranes stronger is the final piece of the retrofit.

"There are multiple teams of welders and fabricators on-site and they will typically get two leg extensions installed in one day," said Stehmeyer. "That's not the final installation, but you'll actually see it in place. Once the next two legs are installed, they slowly drop the crane down on top of them and, finally, start welding."

While the process of retrofitting a crane might be easy, the process of prepping the work area where the cranes were retrofitted was not. Most ports will raise the cranes on the docks, but the Port decided that would be too much of an inconvenience to their customers, so they built a work area in the container yard. This consisted of installing piles and steel beams below the pavement to strengthen it so it could hold a 1,600-ton crane.

With the crane retrofitting nearly complete and the deepening of the Charleston Harbor Entrance Channel well underway, the Port of Charleston is ready for the neo-Panamax ships.





HAPPY RETIREMENT!

Best of luck to two previous Charleston District commanders on their recent retirements! After 25 years of service, Col. Jason Kirk retired after being the commander of the Jacksonville District and Col. Ed Chamberlayne retired after being the commander of the Baltimore District.

Kirk was commander of the Charleston District from July 2009 to July 2011 when he passed the flags to Chamberlayne, who was commander from July 2011 to July 2013.



Col. (ret) Jason Kirk



Col. (ret) Ed Chamberlayne

In a twist of fate, on July 13, 2018 Chamberlayne handed command of the Baltimore District over to another former Charleston District commander, Col. John Litz, who was commander from July 2013 to July 2015 and had taken over command from Chamberlayne in 2013.

Despite the unusual sequential change of commands from Charleston District to Baltimore District, this is not the first time this has occurred. In July 2015, Col. Richard Jordan, commander of Charleston District from July 2007 to July 2009, handed command of the Baltimore District over to Chamberlayne.

Thank you for your service!