

SEPTEMBER 2018

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In 2008, Raleigh, North Carolina was within weeks of having little or no water after Falls Lake Reservoir nearly dried up after a severe drought. This spurred the city of Raleigh officials to look seriously at water conservation measures, and eventually developed into the U.S. Army Corps of Engineers (USACE), Wilmington District initiating the Falls Lake Reallocation Feasibility Study.

"The study was initiated because the city of Raleigh realized it was vulnerable to drought and that its population was growing," said Chief of Planning Branch Elden Gatwood. "They had not considered that there was potential for the Wilmington District to use



Falls Lake was dangerously close to drying up during the drought of 2008. (USACE photo)

Falls Lake as a reallocation source. We received a waiver from Headquarters USACE, and we have almost completed the study which is now being processed and awaiting a final report in Washington, D.C. If it's approved, it will go to the Assistant Secretary of the Army for Civil Works for approval of a new water storage agreement which would increase the allotment

of water that the city of Raleigh has within our Falls Lake project. This will give them approximately 5.5-billion gallons of storage which will help them in their drought contingency planning and to plan for future population growth."

Gatwood said the complex study looked at various levels of storage areas within Falls

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Summer's over, but water safety's always important

Public safety is the number-one priority of the U.S. Army Corps of Engineers, and the Corps of Engineers urges anyone planning to be on or around water to practice boating and water safety throughout the year. Life jackets save lives and should be worn at all times by anyone in a boat, including those waterfowl hunting or fishing. Statistics show that nearly 90 percent of those who drown were not wearing a life jacket and nearly two-thirds didn't plan to be in the water.

If you plan on being outdoors near or on the water in the upcoming fall season which is right around the corner, be sure to dress appropriately for the water temperature and not the air temperature because you could find yourself capsized, or thrown from a boat. You could be in cold water and unable to swim because in a short

amount of time your muscles will get cold and you will lose the ability to rescue yourself. Many suspected drowning victims actually die from cold water immersion instead of hypothermia. Hypothermia is still something that you should be aware of. It is a condition in which the body loses heat faster than it can produce it. Violent shivering develops which may give way to confusion and a loss of body movement.

The U.S. Army Corps of Engineers National Operations Center for Water Safety advises that the danger to individuals immersed in cold water increases as water temperature decreases below normal body temperature (98.6 degrees F). Cold-water immersion follows four stages: cold shock; swimming failure; hypothermia; and post-rescue

collapse. Most cold-water drownings are attributed to the first two stages.

It is critical to wear a life jacket to keep afloat and your head above water. Life jacket styles are available for many activities, including hunting and cold weather. There are float coats available in many colors including camouflage for waterfowl hunting and for those who boat when air and water temperatures are cool.

It is important for all boaters to wear a life jacket, avoid boating alone, tell someone where you are going and when you will return, check the capacity plate and don't overload your boat, dress for the water temperature, and know how to minimize heat loss if you end up in the water. Life Jackets Worn...Nobody Mourns, learn more at PleaseWearIt.com.

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U.S. Army Corps of Engineers
Wilmington District

Feasibility Study Con't

Lake to investigate whether it was possible to reallocate water.

Wilmington District planners found that there was excess storage space in the conservation pool.

"There are different pools within the Falls Lake Reservoir," Gatwood said. "The first one is on the bottom and is used for sediment storage. The second one up is for water conservation storage and water supply, and it also has water quality storage. The reservoir was originally designed to have more water quality storage than was probably needed after construction. That pool has never been depleted. We studied the effects of reallocating water from one side of the pool to the other."

Gatwood said that downstream stakeholders will not see any changes once the plan is in effect. The study, he said, included a demand analysis and a flow analysis.

"We determined that downstream flow would be insignificantly affected because we have enough storage within the existing conservation pool that we can meet downstream flow targets. Therefore, people downstream shouldn't be impacted. And the city's also planning and

executing other means by which they can provide additional storage," he explained.

Gatwood said the assumption in the Wilmington District's modeling and in reality is that people will use less water in the future, and that people will learn to conserve water and become more knowledgeable. In addition, there's also an assumption that they re-use water in an expanded fashion in the future.

"The city of Raleigh is already engaged in water conservation and re-use measures right now. When there's a drought situation everybody is going to have to do their fair share to contribute to using less water. A critical part of the recommended plan is the assumption that they're going to engage in further conservation and water use," he said.

Gatwood, who has experienced living in drought conditions in the west, said that water supplies are not infinite. What helps conserve water at the grassroots level is how people think about using it more efficiently.

"In drastic areas that you see out west, they have planned for people to move into these areas. They cannot find additional water for them or

water storage, particularly in the central areas of California that are very mountainous, or they don't have a lot of opportunity for ground water storage. The city of Raleigh is leaning very far forward showing a great deal of foresight about what their water future is going to look like, so this makes their water future much more safe. They would have more storage available when they get to periods when they need it," he said.

According to the North Carolina Office of Management and Budget, Wake County is predicted to have a population of 1.1-million people in July of 2020, and growing to 1.3-million by 2030. And it's expected to grow even larger in the future.

"USACE is looking at water storage over an approximate 30-year period," Gatwood said. "The city of Raleigh will have to look beyond that. At some point it's going to become necessary to look at an even longer term. And that being said, it's unusual for communities in this part of the country to look at conservation at all. There are people who are continuing to move to North Carolina. The city of Raleigh is moving ahead and planning for its future."

Wilmington District Contributes Vital Role in Supporting North Carolina Ports

Competition is fierce among Atlantic seaboard ports for commercial products from around the world that enter U.S. ports on container ships. The North Carolina ports at Wilmington and Morehead City compete with other state's ports to enhance North Carolina's economy. The competition means N.C. Ports leaders continually look for opportunities to improve their operations to attract more customers. This past March for example, the Port of Wilmington added two neo-Panamax cranes and four post-Panamax container cranes to accommodate ships that pass through the Panama Canal enroute to North Carolina.

According to N.C. Ports officials, the ports in Wilmington and Morehead City, 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



The Port of Wilmington is 284 acres with an inside harbor channel depth of 42 feet . (NC Ports images)

each year in state and local tax revenues.

The U.S. Army Corps of Engineers Wilmington District adds to the overall operations of the Ports of Wilmington and Morehead City by conducting daily surveys of the federal channels that lead to the ports, and by periodic dredging to remove debris and sand formations called shoals that accumulate to help ensure safe passage of commercial

vessels.

“North Carolina Ports relies on the U.S. Army Corps of Engineers to keep its channels accessible for vessels to safely and efficiently navigate to the Port of Wilmington and the Port of Morehead City,” said N.C. Ports Director Paul Cozza. “North Carolina's ports are strategically located on the East Coast and are important freight

NC Ports Con't

gateways for moving goods into and out of the southeastern United States. As both ports continue to grow at a record-setting pace it is extremely important that vessels are able to safely navigate to our ports to help meet our growing customer demand.”

The survey vessels *SWART* and *SANDERSON* that are berthed at the District’s Engineer Repair Yard across from the Port of Wilmington operate nearly every day by providing sectional surveying. The surveys are analyzed and then posted the next business day on the Wilmington District’s website where N.C. Ports officials can monitor the channels at both ports.

“Our vessels get surveys of various sections of the channel over a period of a few days,” said Wilmington District Geospatial Survey Section Chief Adam Faircloth. “It takes about a month for the vessels to survey the entire federal channel. That is from the Anchorage Turning Basin past the Cape Fear memorial Bridge to Bald Head Shoals where the Cape Fear River flows into the Atlantic Ocean.



The Yang Ming Unity, measuring 1,101 feet in length and 140 feet in width, was the largest vessel to utilize the expanded turning basin and call the Port of Wilmington. The Yang Ming Unity called the Port of Wilmington on August 7, 2016.

The length is just more than 38 nautical miles.”

Throughout the year, the Wilmington District contracts dredges to remove material from the federal channels at both ports. The Wilmington Harbor project maintains an authorized 42 to 44-foot deep channel that require improvements to address potential navigation hazards and/or inefficiencies.

“There are certain sections of the project that really need attention in order for vessels to reach the Port of Wilmington safely,” said Chief of Civil Works Programs and Project

Management Bob Keistler. “The entrance channel that leads from the Atlantic Ocean near Bald Head Island is subject to rapid and persistent shoaling and can hamper navigation under typical and tidal conditions. The Port of Wilmington relies on us to keep that section of the channel navigable as well as the entire channel so it doesn’t slow down shipments that need to reach the port up river.”

At Morehead City, Keistler said keeping the channel at its authorized depths is challenging, especially those areas where it’s vulnerable to

NC Ports Con't

shoaling during rough weather conditions. The channel extends 10 nautical miles from the Morehead City Harbor to range A which is the main buoy that identifies the beginning of the channel. The authorized project depth there is 47 feet at mean low water, and leads to the east leg that has an authorized depth of 45 feet, which continues to the shipping terminal at the port. At the military load out terminal, the west and northwest leg is 35 feet deep. The Wilmington District maintains a survey office at the Port of Morehead City where the survey vessels *BEAUFORT* and *WALT* gather data for project depths. Like in Wilmington, technicians analyze that data, then upload it to the District's website.

The Wilmington District's role in helping to maintain the federal channels directly impacts the expansion of the ports as a key part of the state's 25-year vision for North Carolina. N.C. Ports officials said that includes providing access for the Panamax vessels, expanding access to the ports inland by developing intermodal train service at the Port of Wilmington, and



The Port of Morehead City is 128 acres with an inside harbor channel depth of 45 feet.

pursuing opportunities to develop intermodal facilities along the I-95 corridor to improve the movement of goods through North Carolina and along the East Coast.

Port officials say demand for access to the Wilmington Harbor is growing as North Carolina strengthens its position as a freight gateway. In order to keep pace with demand and open new opportunities, Port of Wilmington leaders want to enhance its navigational channel to allow deep

draft vessels to efficiently navigate to the Port. They say a more efficient channel would modernize the Port, attract more import and export business's, mitigate East Coast congestion, and North Carolina Ports would become an even stronger player in this competitive landscape, thereby supporting the economies of Wilmington, New Hanover County, eastern North Carolina and the entire state.

DISTRICT COMPLETES CONSTRUCTION AT EAGLE ISLAND CONFINED DISPOSAL FACILITY

When the Wilmington District performs maintenance dredging of the federal channel in the Cape Fear River it must dispose the material in an area where water can percolate and the remaining material is stored. As more material began filling up three separate storage cells over the years at the District's Eagle Island Confined Disposal Facility (CDF) the challenge has been trying to figure out how much more material Eagle Island can hold.

The most recent construction contract at Eagle Island was recently completed in August 2018. The scope of this contract included raising the dikes around the facility to a height of 42 feet and to improve spillways in cell 3. This contract is part of a wider plan to raise the dikes further to optimize the capacity of the facility. This wider plan will be implemented over the coming years based upon the availability of funding.

"The recent construction contract was completed without any major issues, although a portion of the dike around cell 2 did experience some minor interior slumping in response to heavy rainfall events this season," said Project Manager Pamela Castens. "We will be repairing this minor slump as we move forward with future maintenance work at the facility."

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"We will be repairing this minor slump as we move forward with future maintenance work at the facility," she said.

Construction of exterior toe berms are needed for stability in order to raise the dikes higher than 42 feet. The Wilmington District began placing fill material on Eagle Island in the 1930s over unstable wetlands. Stability has always been an issue. Environmental impacts associated with the toe berm construction have been coordinated with the appropriate agencies and current efforts to purchase mitigation credits to offset these impacts must be completed before toe berm construction can begin.

"Our Project Delivery Team is concurrently confirming the optimal height to which the dikes can be raised once the mitigation credits have been purchased and toe berm construction has been completed," Castens explained.

Immediate plans for the future include



The Eagle Island Confined Disposal Facility is where material dredged from the federal channel in the Cape Fear River is stored.

the purchase of toe berm mitigation credits, confirmation of dike raise specifications, and preparation of design documents for the next dike raise contract. Castens said the ability to move forward with future construction contracts is dependent upon the availability of funding.

"The current approved Wilmington Harbor Sand Management Plan dated February 2000 guides the placement approach for material dredged from the navigation channels at Wilmington Harbor, particularly in regard to beach-compatible sand resources," said Castens. "This plan provides for the use of the Eagle Island CDF as a potential disposal location for non-beach compatible sand from these channels."

(Note: The Wilmington District obtained ownership of Eagle Island on Nov. 9, 1966 by transfer from U.S. Maritime Commission.)

Permitting takes center stage in September for World Equestrian Games

By Lisa Parker

The World Equestrian Games (WEG) which are administered by the Federation Equestre International (FEI), the worldwide governing body of equestrian sport, is the major international championship event for the eight core equestrian disciplines of show jumping, dressage, and para-equestrian dressage, eventing, driving, endurance, vaulting and reining.

The Tryon International Equestrian Center (TIEC) at Tryon Resort in Tryon, North Carolina will host FEI WEG from September 11-23, 2018. The U.S. Army Corps of Engineers (USACE), Wilmington District staff in the Asheville Regulatory Field Office have worked diligently with TIEC and its consultants over the last five years to permit the site in anticipation of this world-class event.

According to TIEC, alternate sites throughout the mid-Atlantic were considered. Ultimately the Tryon Resort site was chosen for several reasons, including the available competition licenses in this region, the areas existing horse culture, and the temperate climate.

It is anticipated that this event will be one of the



The Tryon International Equestrian Center is located in Tryon, NC.

largest sporting events held in the state of North Carolina, with 500,000 spectators and more than \$400 million dollars of projected economic impacts. The FEI WEG is held every four years, halfway between the Summer Olympic Games. In 2014, it was held in Normandy, France, where more than 984 athletes, 1234 horses, 74 nations and 1900 accredited media from 52 countries and 575,000 spectators attended the event.

“There are several equestrian facilities globally that have hosted the WEG since 1990, when FEI consolidated the World Championships of eight disciplines into one competition, but in the past those competitions have been spread out over various facilities,” said Steven Kichefski, USACE Wilmington District, Regulatory Project Manager.

Equestrian Games Con't

According to FEI, hosting all WEG events at one location really began in 2010 with the Kentucky Horse Park and has been trending that way since. The TIEC was very concerned with providing a facility that could host a variety of equestrian activities, yet was compact enough for spectators to shuttle between different events.

“Working with the TIEC on their timelines and evolving project needs while ensuring the project followed the appropriate review process was a challenge for all involved. In fact, in 2017 the USACE had just issued a permit for a facility expansion around the time when the TIEC learned they would be hosting the WEG. USACE actually had to suspend that permit because the significant infrastructure changes they proposed for the WEG invalidated the previous Environmental Assessment. Also, a large portion of the equestrian center property included a failed development with its own permit history spanning the previous decade which had to be considered in the process,” said Kichefski.

“While I have been involved with other large development projects in Charlotte and the mountains, the combination of economics, politics and timing with this project was definitely a first for me,” stated Kichefski.

There were many unique equestrian and

logistical criteria driving the infrastructural needs and configuration of this facility, such as the 100 mile endurance event, the four on-site hotels, the international “Olympic style” village or the lodging/parking needs for half a million visitors. “At times it was like looking at a bunch of puzzle pieces and trying to verify each piece’s need and if its impacts could be avoided or minimized by fitting them together in a different way,” Kichefski stated.

TIEC consultants first reached out to USACE’s Asheville Office to discuss the Equestrian Center in June 2013. Phase I was permitted on Dec. 23, 2013. As other components of the project evolved additional permits were needed. The most recent permit was issued Sept. 14, 2017, and included infrastructure improvements to meet the needs of the WEG.

“During the 404 permitting process, we coordinated with several local, state and federal agencies including the U.S. Environmental Protection Agency, the U.S. Fish & Wildlife Service, the NC Division of Water Resources (DWR), the NC Division of Wildlife Resources, the State Historic Preservation Office and Polk County, NC. The state, especially DWR, has really put a lot of work into this process as well,” stated Kichefski.

Construction Support to USASOC Continues at Fort Bragg

Construction continues at Fort Bragg of state-of-the-art facilities that are being built to accommodate the specific needs of the U.S. Army Special Operations Command (USASOC). Project managers at the U.S. Army Corps of Engineers (USACE), Wilmington District's Fort Bragg USASOC Area Office have an intense schedule, and are meeting the demands of the Special Operations community by keeping the projects on time and on budget.

"Our stakeholders know what their facilities require to meet their mission and they work hand-in-hand with us through the life of the projects," said Ron Cannady, Area Engineer at the Wilmington District's USASOC Area Office. "We take pride in our projects, by partnering with our stakeholders and contractors to make every project successful."

Feedback from the stakeholders is immediate. Project managers such as Michael Hinsley works on



Project Manager Michael Hinsley, rear, briefs, Wilmington District Commander Col. Robert Clark and Chief of ECP Division Cathy Gill about construction projects for USASOC at Fort Bragg.

projects for the 3rd Special Forces Group said some of the biggest comments are improved convenience and operability of the new facilities over the decrepit buildings the Soldiers used to occupy.

"These units in recent past have been somewhat strung out between different buildings in generally the same area," said Hinsley. "As you can imagine, that can make

command and control, coordination, and logistical support challenging, so they are very pleased to be all under the same roof. It is a drastic improvement in the quality of the facilities. Many of the buildings that they have been operating in are old, wooden, World War II-era structures that originally had an expected lifespan of roughly 15 years. The new

USASOC Con't

facilities are like mansions in comparison.”

USACE designed the facilities to be modified at will, especially with sophisticated communications equipment. Communications equipment can be outdated within months and need replacing immediately. After working with USASOC Soldiers over the years Hinsley knows what they expect, and he understands how critical it is for them to have the best equipment possible.

“In warfare, knowledge has always meant power, and creating operational spaces where vast amounts of data is received and synthesized into actionable information is powerful,” he said. “These information nexus in the facilities really facilitate the modern warfighter in the completion of their missions, and is impressive to see once assembled.”

To meet Army energy efficiency needs there are modern amenities to keep operating costs down. Solar panels, for example, help heat water for showers and other



When construction began on this particular project for USASOC, it has since transformed into high-tech facilities that are meeting the needs of the Special Operations community.

needs, and darkened windows help keep rooms cool in the summer and warm in the winter.

“These new buildings are quite impressive, and contain some of the latest technology on the market for the building sciences. We’ve installed energy efficient HVAC and controls systems, and combined with extremely tight building envelopes, this means the Army is able to operate them with minimal costs,” Hinsley said.

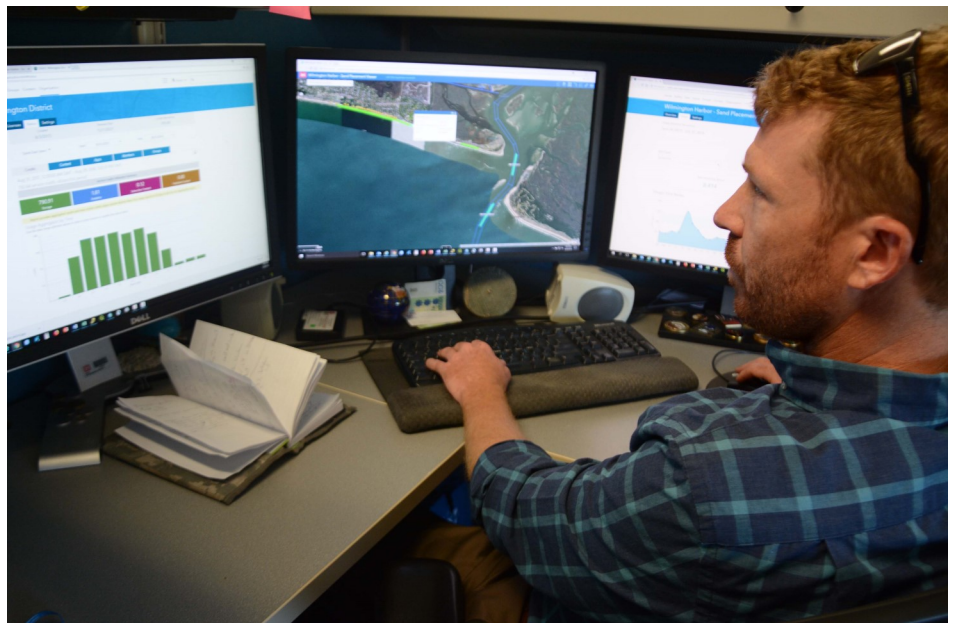
USACE’s support to USASOC means that the Soldiers can plan

their missions more efficiently in state-of-the-art facilities. For Hinsley, being able to support the green berets means they’re not just ordinary stakeholders.

“There is a certain pride that comes from helping to accomplish this mission for the Special Forces,” he said. “These individuals are literally the tip of the spear on the battlefields of today, and aiding in their mission by providing modern facilities from which to train and to deploy is quite rewarding.”

Interactive map helps keep public informed at Caswell Beach and Oak Island

Because there was no dredging contractor bidding on the Wilmington Harbor Inner Ocean Bar project when the contract was first advertised in November of 2017, the U.S. Army Corps of Engineers (USACE), Wilmington District had to do the work outside of the normal beach placement environmental window, and which coincided with the summer tourist season. There were numerous concerns by Oak Island officials, environmental agencies, rental agencies and tourists who did not anticipate beach construction activity during summer. The Wilmington Harbor Project Delivery Team (PDT) rolled up its sleeves to brainstorm innovative ways to keep all interested stakeholders up to date on the work in progress. Enter a solution to help inform the public via an interactive map on the District's website. "Our Navigation PDT has always worked hard to provide our partners and stakeholders the most current information available on the status of beach placement of dredged



Trevor Lancaster works on the interactive map using ArcGIS Online software.

material," said Pam Castens, Project Manager. "In the past, that information took the form of static snapshots in time of the contractor's location on a particular day. Our terrific Geographic Information System capabilities provided a tremendous opportunity to transform our static updates into an electronic format that could be updated more frequently with tailored search capabilities for the user."

Wilmington District Geographer Trevor Lancaster was tasked with the project that he designed with

daily updates to keep the public informed of the project.

"My first thought was that this was a great opportunity to leverage our existing Wilmington District ArcGIS Online website," he said. "Districts throughout the Corps of Engineers have been increasingly using this platform to interface with the public, and this project provided a great pilot opportunity for us to do so."

Lancaster said the viewer was easy to put together. He said ArcGIS Online, a platform for

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Interactive map Con't

organizations to create, manage, share, and analyze spatial data, has a variety of templates for map viewers that are easily customizable.

“We have spent the past year or so familiarizing ourselves with the ArcGIS Online workflows and spatial data management,” Lancaster explained. “The upfront work involved acquiring project data from the Construction Branch and the Coastal Section, and migrating the data to online GIS layers. Once this data was hosted online, it was relatively easy to maintain and update as the Construction Branch reported progress. The challenge, of course, was to project out when certain stretches of Caswell and Oak Island Beaches would be receiving sand, and thus closed to foot traffic.”

Lancaster incorporated useful elements into the map for user ease. He created a color-coordinated legend that corresponded with various sections of the project under construction that were represented by squares. When users clicked on a particular square it would identify the location where they were staying on the beach in a rental home. Or if



More than 17,000 people viewed the interactive map with a peak of 909 over the July 4th holiday.

they were simply looking for the closest beach access they received updated information about the progress of the construction.

“Keeping the map viewer updated required a focused effort to get frequent live information from the dredging contractor through the USACE construction branch to Trevor” said Castens. “The team did a tremendous job and feedback from the towns on Oak Island and the general public were extremely positive.”

“I think the viewer was highly beneficial to a number of parties,” Lancaster said. “Internally at the District headquarters it was successfully used in briefings and

meetings, while externally I think it provided an excellent communication tool to the public. We look forward to utilizing this platform for similar projects and applications in the future and are excited to provide additional, publicly-accessible, GIS data to our partners and stakeholders.”

To keep tabs on the numbers of daily viewers Lancaster used a counter. The final tally of views was 17,314 with the peak number of views of 909 on July 3rd.

“Residents and visitors were certainly interested on the dredging progress as it related to the 4th of July week,” he said.

COAST GUARD OFFICER LEARNING USACE/ SAW MISSIONS IN USCG TRAINING PROGRAM

A U.S. Coast Guard training program is helping grow a stronger relationship with the Wilmington District and is helping the Coast Guard gain better insight into the various missions of the U.S. Army Corps of Engineers (USACE).

U.S. Coast Guard officer Lt. Brittany Akers is spending six months with the Wilmington District Navigation Branch through the Coast Guard's Industry Training program. After she completes the program, Akers will move back to her role as the Waterways Management Division Chief for Coast Guard Sector North Carolina based in Wilmington. She's the second Coast Guard officer to have been in the program to learn USACE and Wilmington District's missions.

"Because the U.S. Coast Guard and U.S. Army Corps of Engineers work so closely together to maintain safe and navigable channels, the six-month industry training will pay dividends to both agencies when I



Lt. Brittany Akers reviews a map with Wilmington District Navigation Section members Gloria Price, left, Sharon Sutton and Dennis Moran.

return to my Coast Guard position," she said. "When the Coast Guard receives calls from industry or the community reporting shoaling or hazards to navigation, I now have a better understanding of how to coordinate with USACE to see if it's within their jurisdiction, and if they can put it on their dredging schedule."

Akers said the Coast Guard's Waterways Management Division is charged with maintaining safe

waterways for both commercial and recreational boater traffic. They process marine event permits, receive calls regarding hazards to navigation, and oversee the placement and maintenance of federal aids to navigation. Under her direction are three Aids to Navigation Teams and the U.S. Coast Guard Cutter *Bayberry*. During dredging season, she said the Coast Guard works closely with

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COAST GUARD CON'T

District before, during, and after dredging takes place.

“If we have aids to navigation on the waterway being dredged, we’ll work to shift the aids outside of the dredge area, and put them back in post-dredging. The Coast Guard also releases notices to mariners regarding dredge projects that may be taking place inside the navigable waterway,” she explained.

Akers said that USACE and the Coast Guard are both exceptionally diverse agencies with a multitude of missions. She noted that both agencies are somewhat similarly sized. USACE has approximately 34,000 employees, and the Coast Guard has just under 42,000 active duty members. She said the diverse mission sets combined with the smaller work force means that both agencies have personnel with experience and training in a wide range of disciplines. She noted that there are some USACE missions that closely reflect Coast Guard missions, and she already has networked to touch base with key North Carolina industry partners and Wilmington District officials.



At Oregon Inlet to observe a Wilmington District survey mission, Akers was able to see construction of the new Bonner Bridge.

“Both agencies participate in post-storm assessments,” she said. “If a hurricane comes to the North Carolina Coast, I will know exactly who to call at USACE to obtain post-storm hydrographic surveys to see how the channels have changed and where navigational aids need to be placed after the storm. While the Coast Guard and USACE have different missions and objectives, they often overlap in regards to maintaining safe vessel navigation, and it is imperative to have good information exchange between the two agencies, which industry

training program facilitates.”

Akers said that the program is paying off. She has a better understanding of USACE and Wilmington District’s various missions that will benefit her in her job as a Coast Guard officer.

“I will leave USACE with knowledge of how they conduct surveys, how their funding works, how projects are planned and prioritized, as well as the capabilities and limitations of the different types of dredges USACE manages.”

Online “Story Map” helps explain District’s Navigation mission

U.S. Army Corps of Engineers (USACE), Wilmington District cartographer Dennis Moran has always had a fascination with maps and map making. He graduated from University North Carolina Wilmington with a bachelor of science in environmental sciences, and minored in Geosciences where his interest in Geographic Information Systems (GIS) began to grow. Because of his work in the Navigation Branch using GIS, he tries to stay abreast of technical

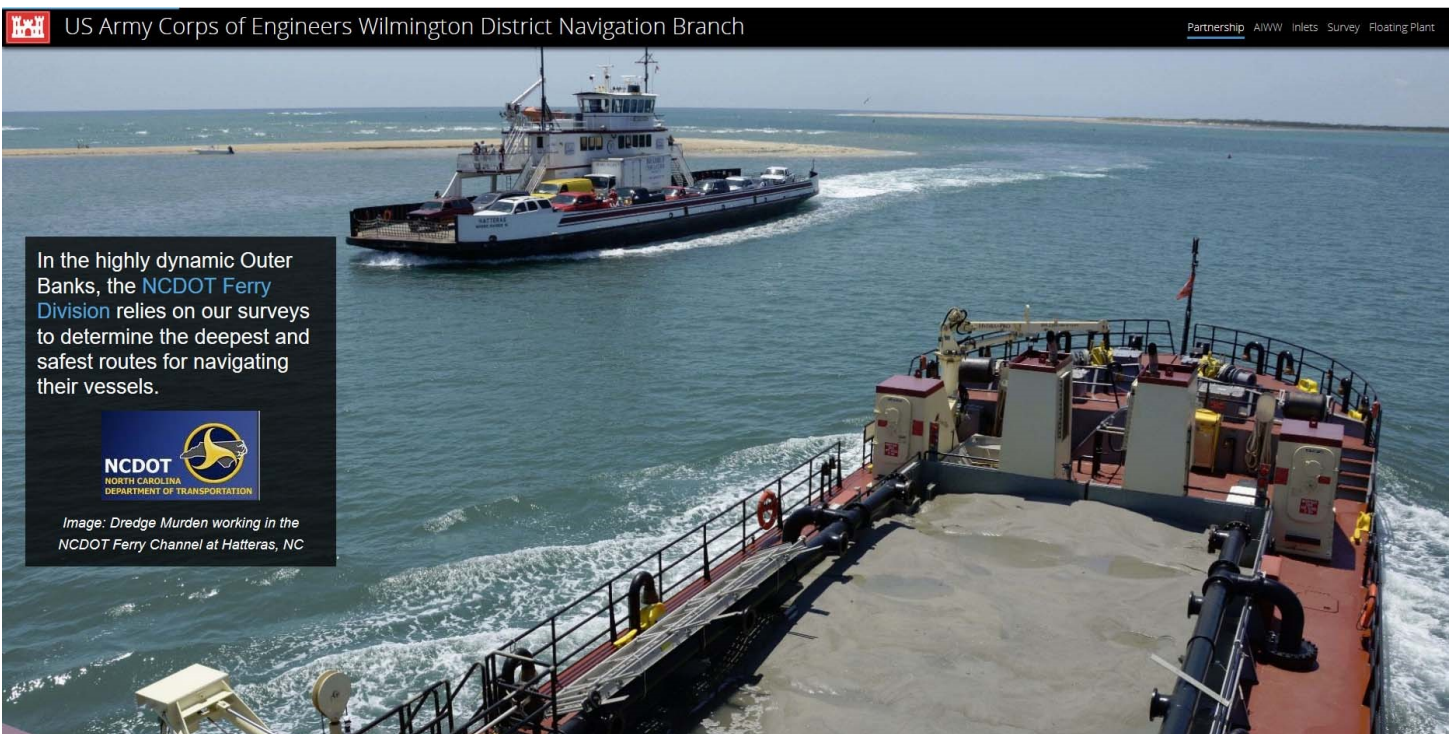
advances and applications in the areas of mapping and geospatial sciences. This led him to research some software that he envisioned would help to explain the District’s navigation mission more effectively.

“During my studies of ArcGIS Online, I discovered how various industries were creating ‘Story Maps’ to promote their business lines, so I figured that we could do the same for USACE,” Moran explained. “A Story Map is a tool that allows the viewer to see a

combination of interactive maps, illustrations, narrative text and other multimedia content in the format of an informative story. I thought that I could start by creating a Story Map that provides a brief overview of the Wilmington District’s Navigation Branch program.”

Moran said that over the years, the Navigation Branch section members have done a great job capturing photos of various projects and efforts, and he thought what better

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Story Map Con't

way to use some of the pictures than to include them in the overview story. The goal was to create something simple and clear, something that had a user friendly experience, which showed a full, yet brief, overview of the District's Navigation Branch capabilities.

"I started the project by creating an outline and gathering relevant multimedia, then I created a few interactive maps to embed within the story," said Moran. "This allowed me to figure out how I wanted the story laid out, which ultimately helped me in choosing the correct story map application for the job. The intent was to inform the public

of the general mission, vision, and tasks Navigation Branch performs each day, through a series of illustrations and maps. Through the use of the District's enterprise ArcGIS Online account, I was able to create the story map and provide access via the current Navigation Branch website."

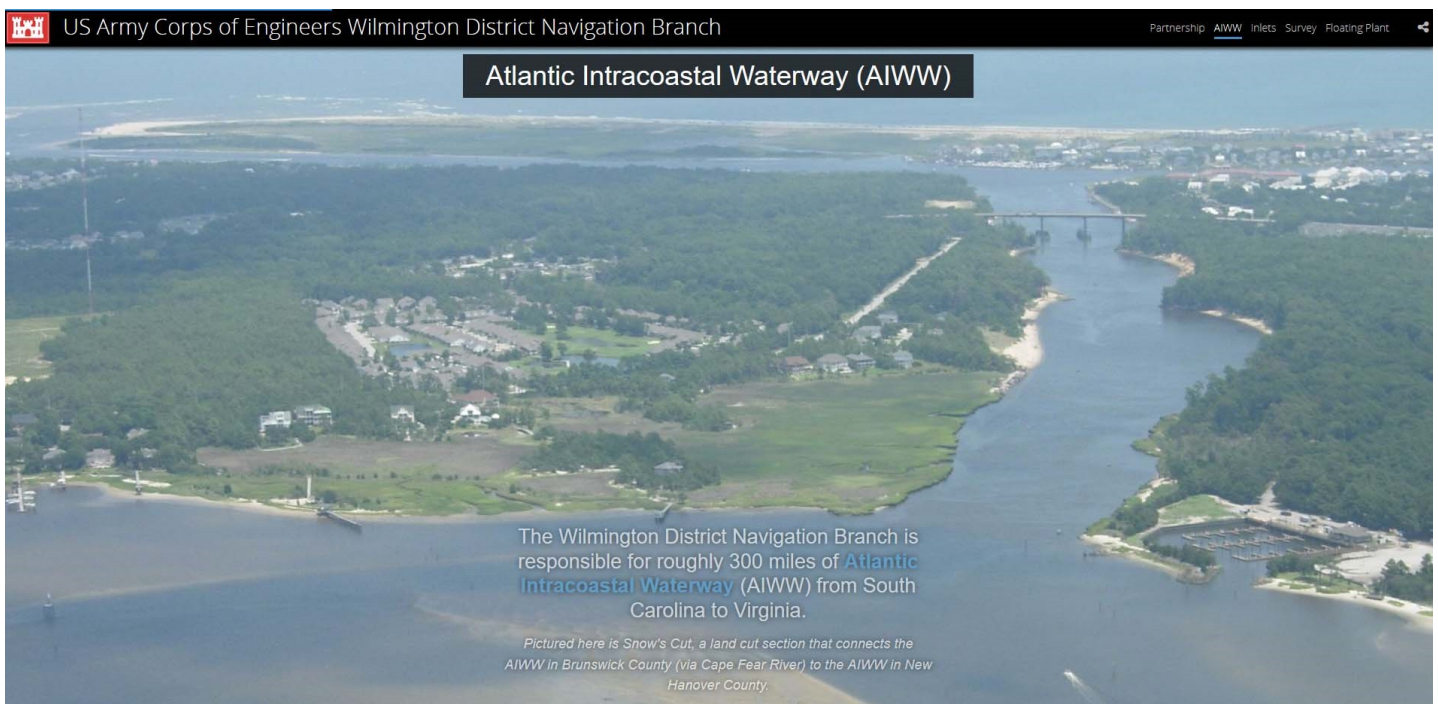
Moran noted that as the evolution of ArcGIS Desktop continues to advance to online platforms, he takes time to explore ArcGIS Online for other ideas. ArcGIS Online, he said, is a comprehensive online approach to where people can build and share interactive maps and spatial data, or expand their work with other ArcGIS

products. With the success of the Story Map, he's confident that the project will further explain the complex Navigation Branch's mission more easily and possibly lead to the creation of other useful Story Maps.

"My hope is that the application will reveal some of the projects our program supports, show the range of resources we possess, and highlight some of the efforts our field staff routinely performs," he said.

To view the Story Map go to the following link then click on Branch Overview;

www.saw.usace.army.mil/Missions/Navigation.aspx



PARK AND RECREATION MONTH IN JULY PROMOTES YEAR-ROUND OPPORTUNITIES TO ENJOY THE OUTDOORS

July is designated as Park and Recreation Month. It's a time set aside to observe the positive aspects of outdoor recreation, and challenges the public to explore the "undiscovered" roles of local parks and recreation, like science, technology, engineering and math (STEM) programming, senior programs, innovative health and wellness opportunities, and community celebrations to name a few.

The U.S. Army Corps of Engineers (USACE), Wilmington District's own B. Everett Jordan Lake offers numerous recreational opportunities in the Raleigh, Durham and Chapel Hill area. There are five campgrounds with more than 1,000 campsites, four day-use swim beaches, 13 parks with hiking trails, and 12 boat ramps with 14,000 acres of water recreation. Additionally, the American Tobacco Trail, a 22-plus-mile refurbished bicycling route,



Campsites like this are easily accessible at Jordan Lake. (NC State Parks photo)

connects Jordan Lake to downtown Durham.

"Recently, I openly asked our Facebook followers what brings them out to the lake," said Jordan Lake Ranger Blake Johnson. "The general response I received was that our guests are pulled by the peace and quiet. From my personal observations, I notice the recreation most of our guests partake in are fishing, hiking, boating, camping,

and relaxing. On the weekends, you can see both bicyclists and motorcyclists lapping the lake and taking in the scenery."

Johnson said part of the appeal of camping at Jordan Lake is its aesthetically pleasing views. He explained that all of the campgrounds border the lake with many of the campsites being

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directly adjacent to the water.

“Even the campsites not directly on the water offer scenic views to relax. I find our campsites so pleasing that I’ve even compiled notes and photos of some of the greatest campsites in the general area, and one of the campgrounds is located here. Furthermore, Bald Eagle and Osprey sightings are fairly common across our campgrounds as well,” he said.

For those who appreciate looking for flora and fauna while hiking, Johnson said there are numerous areas to explore.

“If you want to hike along the campground trail at Poplar Point, you can spot some flowering trees such as Fringetree, Magnolia, Sourwood, Dogwood and Witch Hazel. Another one I’d recommend is Poe’s Ridge Trail by the Dam. It has a 4-mile loop with rolling hills along the way and a nice view of the lake through half of the trail.”

USACE rangers are the eyes and ears to the public who help explain the numerous advantages of recreational opportunities that are available. They often receive



Sundown along the shoreline of Jordan Lake makes for breathtaking views. (NC State Parks photo)

positive feedback from hikers, boaters or nature lovers who laud the Corps of Engineers for promoting those opportunities and for its environmental stewardship.

“I hear many guests refer to Jordan Lake as a ‘hidden gem’ amongst the Triangle area of Raleigh, Durham, and Chapel Hill,” said Johnson. “I feel the same way about the lake. Directly bordering the lake itself is property that is managed by the U.S. Government. This grants a quite buffer between nature and civilization. Aside from this, you have a plethora of recreational activities to choose from at Jordan Lake.”

Johnson said that USACE encourages Wounded Warrior-sponsored events at Jordan Lake and throughout the Nation. He said USACE officials make an effort to

attend and assist as much as possible.

“Currently, we are working on bettering our relationship with the Wounded Warriors organization to be more aware of when events are being planned and how we can facilitate their efforts. Several non-profits use the lake for Wounded Warrior activities namely in the form of fishing events. In May, Warriors on the Water hosted a Military Appreciation Bass Fishing Tournament, and in September Operation North State will be hosting a ‘Fishin’ Festival’ at Jordan Lake for Wounded Warriors.”

With recreational opportunities offered at Jordan Lake comes the responsibility of promoting year-round water safety. Jordan Lake Ranger Jerry Jarman recently won

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recognition for a water safety message of the month. As a retired deputy sheriff with the Mecklenburg County Sheriff's Office, he worked numerous drowning incidents that he felt could have been avoided if the person had been wearing a Personal Floatation Device (PFD).

"Now, as a Park Ranger, I can interact with more people," said Jarman. "I walk through the parks and the beach areas speaking with children and their parents about wearing PFD's. I also pass out water safety items to the children

and explain to the parents the hazards of the lake, like water drop offs and underwater debris. I also explain to the parents how hard it was in my previous job to tell a parent or a loved one that a family member had drowned when I felt if they had taken better safety precautions it could have been avoided. It is my goal to educate as many people as I can to keep such tragedies from happening."

Jarman said that as far as year-round water safety, PFD's are very important during the winter. He said

that people tend to diminish the fact how much colder the water really can be or how the additional layers of clothing will weigh them down and restrict their movements if they fall into the water.

If you'd like more information about Park and Recreation Month please go to www.nrpa.org. And for more information about B. Everett Jordan Lake go to the following link; <http://www.saw.usace.army.mil/Locations/District-Lakes-and-Dams/B-Everett-Jordan/Recreation/>



There are more than 1,000 campsites at Jordan Lake. (NC State Parks photo)

Long trip out west pays off for enthusiastic paddler

Regulatory's Henry Wicker has been paddling for more than 50 years. He started out doing canoe trips with his Dad with such memorable trips as paddling the Lumber River twice from the beginning to the end during a six-day trip, and the Cape Fear River from Fayetteville to Southport on a five-day trip.

"I like paddling because it's just nice to be outside and on a river," he said. "You never know what you will see."

Wicker loves his vessels, and he also loves using them competitively. He's competed in six states, and this summer he added a seventh state when he and his teammate participated in the

Whitewater Nationals in Salida, Colorado. They placed second in the sprint race and won the 10-mile canoe race for the 55-plus age group. They had the second fastest time overall for the 10-mile race for their boat class (all ages).

"I have been racing for 40 years. There are basically two types of river canoe racing: whitewater and marathon. It's fun and practically ageless. You can race into your 60's and 70's. The best paddlers are the older guys because they have learned technical paddling skills and are the most experienced. They are the ones who normally win," Wicker explained.

Being on the water in different states and appreciating their individual beauty is something Wicker always takes advantage of. The western U.S. took him by surprise.

"The scenery was awesome," Wicker said. "William, my partner, went up a few days before the race and ran the river to learn the rapids. There were several class 3-plus rapids that we paddled through. For the most part we stayed dry and therefore had fast times."

Wicker shows no signs of slowing down. He keeps himself in shape throughout the year so he can get an extra edge during competition.

"Right now I am the steers person in the Wrightsville Beach Outrigger Canoe Club," he said. "I have done several races with them. These boats are 46-feet long and have six people paddling. It can get really nuts when we go out into the ocean. I plan on going to the Whitewater Nationals next year, and maybe the Marathon Nationals. I really enjoy the camaraderie and competition. The person you compete against today may be your partner for the next race."



Wicker and his teammate paddle down the Arkansas River near Salida, CO.

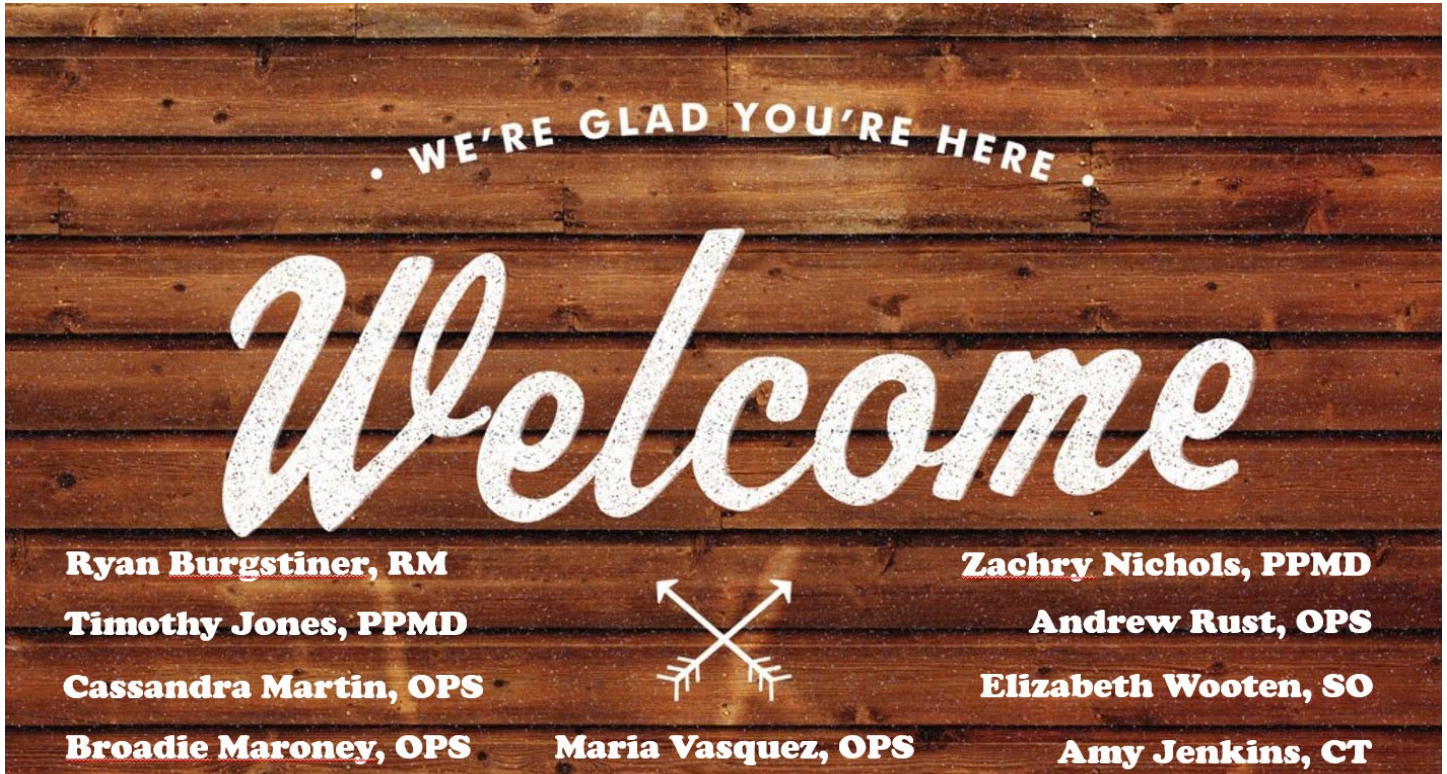
Inspired by a film



Chief of Contracting John Mayo's daughter, Karly, started archery when she was 11 years old. She was inspired by the film "The Hunger Games." She's currently ranked number one in North Carolina for girls in the Bare Bow 11-13 age group, and number five in the U.S. in the same category. She participated earlier this year in the Junior Olympic Archery Development Outdoor National Tournament which is the United States Olympic Archery Programs tournament for up and coming under 18 archers. According to Mayo, she shoots every day beginning at 6:30 AM in the backyard of their home in a 60-foot area set aside for her sport. (Photos by John Mayo)



HAIL AND FAREWELL TO COLLEAGUES



FAREWELL WISHES TO COLLEAGUES



HIGHLIGHTING EMPLOYEES



Sophia Crumpton

Construction Control
RepMusic, reading,
family

“

I'm new to the Control
Representative world,
and I'm excited to

learn
more
about it.

**Eager
LEARNER**

I have been working for the Corps for 10 years starting out as a Field Office Clerk. My new position is developmental, so I will be learning everything that I need to know about it. Some of my previous duties as a Project Management Specialist correlate to Construction Control Rep duties such as processing pay estimates and fiscally closing out a project financially.



Neill Ray



Engineering Technician



Family

“

Teamwork is essential
in everything we do.

Every team member

plays an
important
part.

**Jack of all
TRADES**

Engineering technicians are jacks of all trades. I was able to use my surveying background to benefit the work I do with the Geotech Section. I also manage and collect the data from our dams and levees in our district. This information is used by the geologist and engineers to monitor the conditions inside those structures.

HIGHLIGHTING EMPLOYEES



Craig Garrison



Mechanical Engineer

Anything on the water,
hunting

“

This job allows me to
have a positive impact
where I live and play.

It doesn't
get better
than that!

Team
PLAYER

As a Mechanical Engineer with the Army Corps of Engineers I get the opportunity to be a jack of all trades. In the morning I could be working on a hydraulic lift for one of our water management projects, and in the afternoon I might be on a dredge figuring out how to make the vessel as efficient as possible.



Timothy Jones

Deep Draft Navigation
Project ManagerRunning, basketball,
watching movies

“

A project manager who builds a
team through honest working
relationships develops a team
chemistry that will overcome

challenges
that seem
impossible
to overcome.

Team
BUILDER

As a project manager with the Army Corps of Engineers I touch every aspect of a project from cradle to grave. I work with internal and external stakeholders that have a common interest in dredging the deep draft navigation channels at Wilmington Harbor and Morehead City Harbor. On any day I lead a multi-faceted team to deliver a project for our customers.