

# CENTERLINE

A Newsletter from the NCDOT - Environmental Analysis Unit

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## Improving Processes To Bring About Positive Change

By: Amy Chapman, DWR Transportation Permitting Branch Supervisor

### View Point



After I graduated from college, I started in state government in South Caro-

lina and worked there for 8 years before moving with my husband to North Carolina to begin my North Carolina state government adventure. I've been in North Carolina government for 12 years now (dang I feel old). I have seen the evolution of many processes through my years and with my colleagues, have helped shape many of the guideline and internal procedures we follow today.

When I began with state government, I wanted to make a difference

for the environment and the people of the state. During my time in state government thus far, there has been a lot of change for me and people I have worked with there. I had the wake-up call early in my career that in government, the norm does not exist. There are always unexpected challenges and things can swing completely one way and then sometimes back the other really quickly. As the old adage goes: "The only consistent thing in life is change." (I want to kick

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## Natural Environment Section Coordinating SAV Mitigation on the Coast - Part 2

By: Kathy Herring, EAU Biological Surveys Group

### Project Spotlight

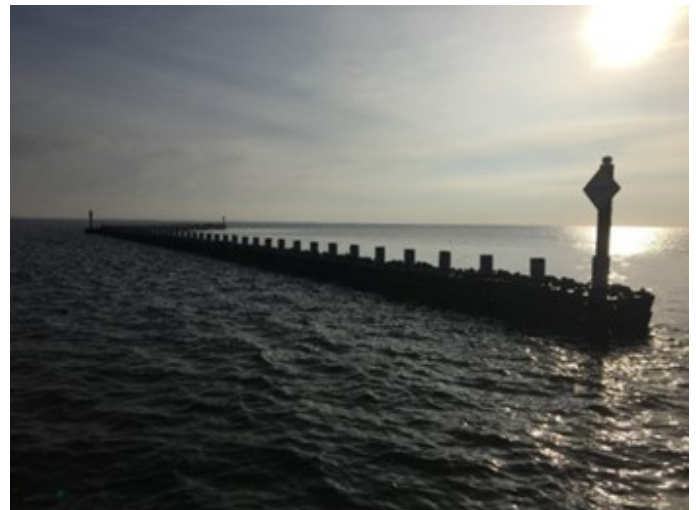
As reported in the last Centerline Newsletter (Vol. 2, Issue 9 - March 1, 2017), the NCDOT Environmental Analysis Unit completed construction of a "living reef," or wavebreak, for mitigation for submerged aquatic vegetation (SAV) impacts from the construction of the new Bonner Bridge. This project is part of a larger long-term effort to determine the best strategy and methodology for seagrass or SAV restoration and mitigation in North Carolina.

This wavebreak will provide habitat to generate 1.3 acres of lift in SAV mitigation and is coupled with an additional 0.3 acres of hard surface habitat suitable for colonization by algae, oysters and other sessile communities. The wavebreak will be a permanent "living" structure.

After installation of the wavebreak structure, CSA Ocean Sciences, Inc. conducted the baseline monitoring survey in January 2017. Baseline monitoring tasks included revisiting all bioturbation mesh experiments, installing epibiota monitoring stations on the wavebreak structure, installing wave sensors, and collecting

baseline seagrass cover data across the entire mitigation site. This survey established the baseline conditions that will be monitored for the next 4 years.

It is now 6 months later and the structure is causing the sand adjacent to it to move around (as any new structure in the Pamlico Sound would). To alleviate



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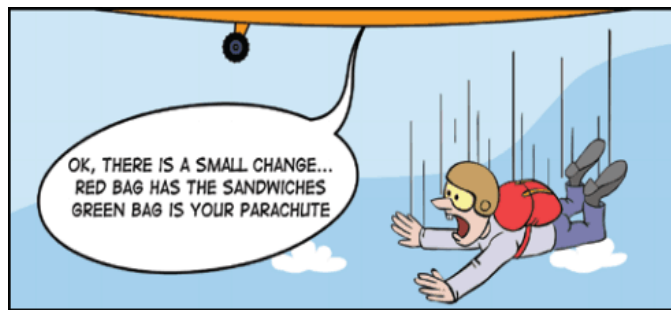
(Viewpoint continued from page 1)

the guy that said that right now).

It has been my experience that change can be the scariest thing you experience in life, or it can be the most exciting. It depends on so many variables.

In state government, most of us go into working there knowing that change will be part of our lives. Not only have I personally experienced the changes the Department of the Environment (DEQ) has gone through, but in my current position, I've also seen and continue to see the changes the NC Department of Transportation (NCDOT) is going through. I think of DEQ and NCDOT as sister agencies because we both are working towards the same goal of doing the work efficiently and being environmentally sensitive in the process. When you go through change with folks that you trust and have a quality working relationship, it makes these transitions more palatable and rewarding.

One of the biggest changes recently within the Division of Water Resources (DWR) has been moving to an electronic Preconstruction Notification. This effort



is underway through our partnership with the Corp of Engineers and the NCDOT. The timeliness of this effort is critical as the NCDOT is evolving to a model where their regional offices (14 Divisions) are writing many of the Clean Water Act 401/404 applications. We are also working out some of the bugs in this process with NCDOT. We know that with so many 401/404 applications being written out of the 14 NCDOT Divi-

sion offices, the workload has changed by getting more demanding for those Division staff. The goal of having this online form is to help facilitate shorter review times by both resource agencies and reduce the initial processing time for NCDOT. This process change will benefit NCDOT, the Corps of Engineers and DWR as it becomes more ingrained in the way we all do business.

Looking forward, I know we will continue to have the great working relationships between our sister agencies and we will continue to strive for more cost and time saving solutions. Please don't hesitate to contact the Transportation Permitting Branch of DWR. Our lines of communication are always open and we are continually ready to assist NCDOT as much as we can in order to meet critical project delivery deadlines.

## Employee Spotlight

Tyler Stanton is an Environmental Program Consultant in a long, slow transition from the Environmental Coordination and Permitting Group to the Biological Surveys Group. He has been at NCDOT for 14 years.

Tyler began his professional career working at the Conservation Management Institute at Virginia Tech. There he worked as a field ecologist conducting bird research, GIS based vegetation mapping, and ecosystem management at various military bases, wildlife refuges, and national parks across the eastern and central U.S.

Tyler earned a bachelor's degree in Fisheries and Wildlife Science from NCSU and completed a masters degree in Forestry while working at NCDOT.

Tyler was born in Corpus Christi, TX but spent most of his life

here in North Carolina. His formative years were spent in Lumberton, NC, where in middle school he met his high school sweetheart. They've been happily married for 17 years!

When Tyler is not working he enjoys spending time with his wife and two children. He also enjoys contemplating travel, talking about travel, planning travel, and traveling (preferably to warm tropical places). Tyler owns several instruments he can sort-of play, enjoys backpacking and home brewing (but doesn't have much time for either), goes kayaking and to the beach, and helps coach his son's baseball team.







distance of 2.6 miles from a point approximately 1.8 miles north of the southern boundary of the Pea Island National Wildlife Refuge to approximately 170 feet north of Myrna Peters Road (SR 1492) in Rodanthe.

The project area consists of the open-water area anticipated to be shaded by the proposed bridge and totals 10.6 acres. Within these 10.6 acres there are 6 acres of seagrass.

A total of 2.8 acres of existing seagrass will be either permanently or temporarily impacted by the construction of this bridge. In the past, the NCDOT has been required to mitigate for the entire bridge length over water as SAV habitat whether there was grass in the area or not. The premise was that the habitat would be degraded by shading from the bridge.

this knowledge about the area, we approached the permitting agencies and convinced them to allow the NCDOT to take a wait and see approach in mitigating for the impacts to seagrass. We propose to monitor the recovery of the temporary impact areas as well as monitor the entire bridge length over water for shading impacts. Since this bridge will have a north/south orientation, we believe that the shading impacts will not be very great.

At the end of this monitoring period, the NCDOT will know the exact amount of impact to seagrass resulting from the construction of this bridge and will mitigate for that amount only by adding on to the existing wave-break structure to attain the additional amount of SAV mitigation needed. In the past the NCDOT would have been required to mitigate for the entire 10.6 acres.



any concerns, the NCDOT began a monitoring program to specifically track the movement of sand around the reef. This monitoring provides monthly data and observations to help determine sand transport along the bottom of the structure. Field measurements, underwater photos and wind patterns will be used to determine scour depths. Monthly field measurements will be compared to the established baseline to determine if the structures bottom scouring will reach an equilibrium or continue to increase in depth.

Elsewhere in Pamlico Sound... The B-2500 Phase IIB project is running full steam ahead. Phase IIB is the long-term solution at the northern Rodanthe breach area, which includes the Rodanthe 'S' curves hot spot. This hot spot is the section of NC 12 that was extensively damaged by Hurricane Irene in August 2011.

The Phase IIB project area extends for a

For this project, the NCDOT anticipated the impacts and have been monitoring these grasses for 5 years. We have established that the areas covered in grass have remained constant over the last decade using the data we collected and historic aerial photography. With

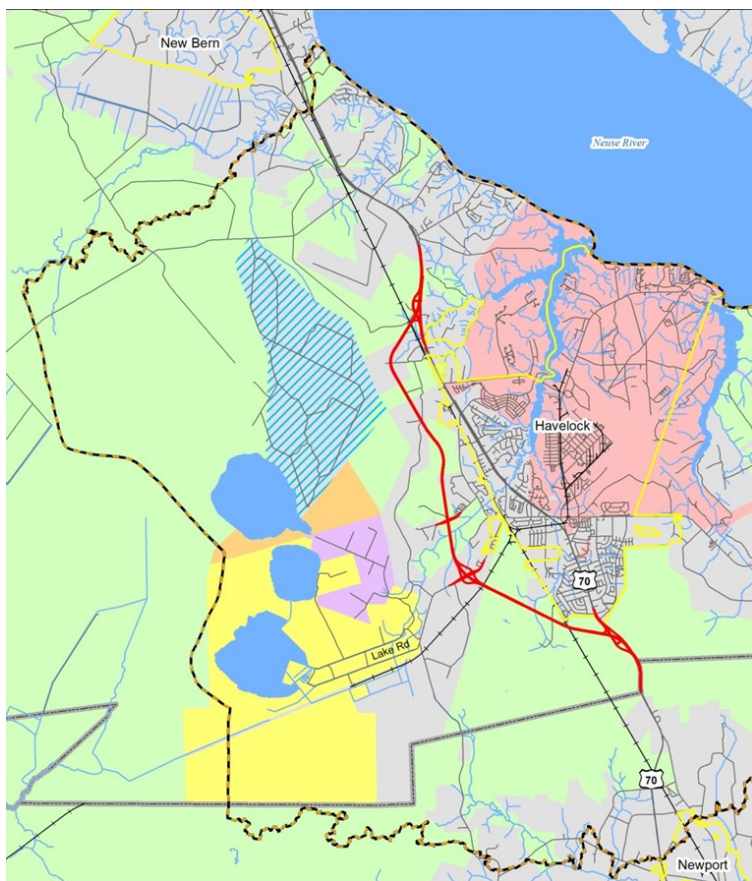


## R-1015, The Havelock Bypass

*By: Colin Mellor & Gordon Cashin, EAU Environmental Coordination and Permitting Group*

### Technical Article

The NCDOT is preparing to construct the US 70 Bypass of the City of Havelock in Craven County. Havelock is located near the Neuse River and is bordered by the Cherry Point Marine Corps Air Station. A large portion of the project study area traverses the Croatan National Forest (CNF) and privately-owned forested lands. The CNF and adjacent forested areas contain habitat for a number of protected



plant and animal species, including the red-cockaded woodpecker. There are also large stream and wetland systems present in the project study area.

The proposed project's purpose is to improve traffic operations along the US 70 corridor and enhance regional connectivity in eastern North Carolina. The US 70 corridor connects Raleigh, Smithfield, Goldsboro, Kinston, New Bern, Havelock and Morehead City. Regionally, US 70 provides connectivity with the Port of Morehead City, Global TransPark (a 2,500-acre multimodal industrial park in Kinston, NC), industries in New Bern and Craven County, Cherry Point US Marine Corps Air Station, Camp Lejeune and other military facilities, and it functions as a primary route for

seasonal beach traffic.

Because US 70 is the state's primary connection to the Port of Morehead City and a main route between military facilities and the port, the NCDOT Strategic Highway Corridors vision to provide a freeway on this section of US 70 is particularly important to regional and state decision makers. Commercial, institutional, and residential growth in the City of Havelock and an increasing regional reliance on US 70 have led to deteriorating traffic operations along the existing route. By eliminating a large volume of through-traffic on existing US 70, the proposed bypass would also provide congestion relief and a more relaxed driving experience through the City of Havelock.

The proposed bypass was initially included in the 1979 Havelock Thoroughfare Plan, and then included in the NCDOT State Transportation Improvement Program in 1983. Environmental studies began in 1992, with an Environmental Assessment (EA) approved in January 1998 and a Corridor Public Hearing held in May 1998. Based on the project context and significant jurisdictional impacts presented in the EA, the decision was made in 2003 to prepare an Environmental Impact Statement (EIS). In late 2011, the Draft EIS was completed. The Final EIS for the project was issued in October 2015, followed by the Record of Decision in December 2016. It is scheduled for Let in July 2018.

The Southern Environmental Law Center, on behalf of the Sierra Club, has threatened litigation against NCDOT because of the project. In general, the Sierra Club contends that the proposed bypass will adversely impact long leaf pine habitat within the CNF. However, the project's National Environmental Policy Act/ Clean Water Act § 404 Merger team, which includes members from the US Army Corps of Engineers (USACE), NC Division of Water Resources, NC Division of Coastal Management (NCDCM), NC Wildlife Resource Commis-





sion (NCWRC), National Marine Fisheries Service (USFS), US Forest Service, US Fish and Wildlife Service (USFWS), and the US Environmental Protection Agency (USEPA), carefully balanced the need for the project with its potential impacts to the environment.

Multiple environmental commitments have been made in order to avoid, minimize, and mitigate for the effects of the proposed project. For example, the NCDOT has committed to the seed collection and propagation of endangered plants within CNF lands and the periodic closure of the bypass in order to facilitate controlled burns by the USFS. Furthermore, over a mile of the proposed roadway was specifically designed so that the tree-to-tree cleared width is less than 200 feet, which reduces impacts to red-cockaded woodpecker flight.

However, perhaps the largest environ-

mental commitment to the project was the purchase and development of the Croatan Wetland Mitigation Bank (CWMB), a 4,035-acre tract of land northwest of Havelock in Craven County. The site was formerly a hunting club with a large lodge and an extensive network of ditches that drained the natural wetland and stream network. With the purpose of providing compensatory mitigation to streams and wetlands for the Havelock Bypass project, NCDOT strategically plugged the ditch network, and graded and replanted significant areas of the site, returning it to its natural condition. The CWMB not only provides stream and wetland mitigation but also helps mitigate for habitat fragmentation specific to the Havelock Bypass project. As a condition of the 2003 Mitigation Banking

Instrument entered into by NCDOT, USACE, USEPA, USFWS, NMFS, NCWRC, NCDCM, and NC Division of Water Quality, the CWMB title will ultimately be conveyed to the USFS.



The NCDOT will also provide money for forest management in upland portions of the CWMB to facilitate the growth of long leaf pines.



There has been a lot of big news since the last newsletter was distributed. The Section formerly known as the Natural Environment Section has been combined with the Human Environmental Section to form the Environmental Analysis Unit (EAU). These two groups were together many years ago and due to the fact that they provide many of the technical expertise that filter in to the planning documents, it makes sense that these groups are reunited. As a result of this reorganization, *Centerline* will begin including articles from both the Natural and Human Environment. This is a

welcome change and should add a lot of new color to the newsletter!!!

Welcome Missy Pair to the EAU!!! We are excited to announce that Missy has returned to her old project Development and Environmental Analysis (PDEA) family as the new EAU Noise/Air Quality & Cultural Resources Group Leader. In this position, she will manage Noise & Air Quality, Historic Architecture, and Archeology teams. We are really happy to have her and are looking forward to all of her enthusiasm and innovative ideas as she enters this new phase of her career.

Congratulations to Marissa Cox!!! Marissa was recently selected as the EAU Biological Surveys Group Leader. Marissa was previously part of the EAU Mitigation and Modelling Group and is anxious to join the strong team of biologists and scientists in her new group. She brings with her a vast knowledge of programmatic agreements, a strong work ethic, great or-

ganizational skills and is a proven leader.

As part of the EAU reorganization, Michelle Carroll has joined us!! Many of you are familiar with Michelle as she comes to us from the PDEA front office. In her previous job, she helped arrange meetings, organize files, answer phones and take care of all those other clerical duties that are critical to making an organization run smoothly. She will perform many of these same tasks as she works with her new EAU team. Welcome Michelle and we look forward to our new working relationship!!!!

NCDOT

Environment Analysis Unit

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