



US Army Corps
of Engineers
Wilmington District

Engineer Repair Yard Flooding Issues, Wilmington, NC

- The Corps Engineer Repair Yard facility experiences frequent flooding
- Facility is critical for the vessel maintenance and infrastructure repairs
- Eight of the Ten highest water events happened within the last decade
- Pursuing PRIP to elevate and rehab entire facility



CONGRESSIONAL DISTRICT: NC 7

DATE: 25 March 2019

1. **AUTHORIZATION:** The original buildings and structures were funded with the Revolving Fund (4902) Appropriation in the 1950s.
2. **BACKGROUND:** The Wilmington District's Engineer Repair Yard (ERY) was built 1954 as a dockside service facility for the Wilmington District's shallow draft dredge fleet. Currently, the facility provides maintenance support for the Corps floating plant fleet, survey fleet, and five lakes projects. Additionally, the ERY is home to the Wilmington Survey Office. The ERY allows for efficient and timely response to the District's maintenance needs which allows the Wilmington District to meet its mission while also supporting multiple other Corps Districts in completing their missions as well.

In recent years, several weather events have revealed an increasing weakness with the ERY. Due to its location and low topographical profile the ERY is extremely susceptible to flooding. During the most recent Hurricanes Matthew (2016) and Florence (2018), the ERY was completely inundated with flood waters. Hurricane Florence was even more devastating after the storm passed as flood waters inundated the ERY at high tides for approximately a week.

Additionally, with rising sea levels, regular flooding at certain high tides has become prevalent. During 'king tides' and other full/new moon exaggerated tides the ERY will be inundated with flood waters rendering it inoperable for up to three days. The latest data shows that eight of the top ten high tides ever recorded have occurred in the past ten years. This trend indicates that the flooding issues at the ERY will only increase, thus causing decreased ability and eventual elimination of its ability to perform the current mission.

3. **OTHER INFORMATION:** During the 2018 Thanksgiving Holiday, the ERY was unexpectedly overwhelmed with flood waters. This flood caused over \$60,000 in lost equipment as well as multiple day's lost productivity due to subsequent clean-up operations. It was determined that the flood was brought on by a 'perfect' storm of several factors including moon phase, moon distance, river flow, and prevailing wind direction. The Asset Management Branch now tracks these variables in an effort to predict and mitigate the damages due to such an event. Preparations are taken when forecasts show a similar event forming.

The majority of the vessels in the dredge fleet are sixty or more years old. As with any aging equipment, maintenance will become more frequent and more critical for the equipment to remain operable. The fleet's newest vessel (Dredge Murden) is required to meet American Bureau of Shipping (ABS) standards which institutes more stringent maintenance requirements. Furthermore, the District's Lake Projects are aging and in need of increased reactive and preventative maintenance to continue operating safely. All of these opportunities will simultaneously require increased function from the ERY, thus creating an urgency to address the current flooding issues.

4. **STATUS:** In 2017, the Corps requested Plant Replacement and Improvement Program (PRIP) funds to elevate the entire facility and replace the existing warehouse, weld shop and various other buildings. This request received favorable approval in 2018 and funds were expected to be provided to begin the project in FY 2019. However, in December 2018 it was determined, based on a provision in the Water Resources Development Act of 2016, that no funds may be expended or obligated from the revolving fund to construct replacement buildings for use by the Corps of Engineers unless specifically authorized by law. In order to request specific congressional authorization, a prospectus of the proposed construction or major building renovation shall be transmitted to the Transportation & Infrastructure Committee of the House of Representatives and Environment and Public Works Committee of the Senate. The Corps is actively drafting the prospectus, and intends to provide it to USACE Headquarters in April 2019.