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Army Corps update on Northern Ocean County dune project

PHILADELPHIA (July 20, 2018) – The U.S. Army Corps of Engineers' Philadelphia District began dredging and beachfill operations at Ortley Beach in Toms River Township in mid-July. The work is part of the 14 mile beachfill and dune construction along the Barnegat Peninsula. The project is a joint effort of the Army Corps' Philadelphia District and the New Jersey Department of Environmental Protection (NJDEP) and is designed to reduce coastal storm damages.

During beachfill operations on July 12th, the project team observed a darker material being pumped onto the beach with the beach sand. The team initiated a geotechnical investigation to better understand the situation. It appears the dredge hit a peat layer in the offshore borrow area. Peat is a naturally occurring material and is typically a combination of ancient soil and vegetative materials. After a brief period of time the discharge retuned to the expected beach sand and color. Then, on July 19th the dredge EW Ellefson hit a layer of peat again, similar to the previous encounter the discharge returned to typical sand after a period of time.

All project borrow areas are rigorously sampled during the planning of the project and fully coordinated and reviewed by the various Federal and State environmental agencies to obtain approval to use the material for the project. Given the complexity and history of the offshore environment, from time to time there are natural deposits within the borrow areas that are not anticipated based on the available investigations and sampling locations. The finer grained soil materials (peat, silt and clay) when agitated by the dredging process, will temporarily result in turbidity near the dredge discharge point.

USACE and NJDEP will work closely with Weeks Marine to ensure inclusion of these materials in the beachfill are kept to a minimum, but occasionally these materials may be present in the beachfill, but present no danger to the environment or public. The USACE team has been coordinating with Weeks Marine and is plotting the cuts of the offshore borrow area where the peat layer has been encountered. Moving forward, when the team observes peat being discharged in the beach, pumping will continue for a period of time (dredge cannot immediately turn off pumps) and if the issue persists, the dredge will be relocated to a different location within the borrow area.

The project team will continue to monitor the material being pumped onto the beach as always. Thus far, USACE has successfully pumped more than 2 million cubic yards of sand onto the beaches of Mantoloking and Brick Township as part of the project. The project, once fully completed, will cover approximately 14 miles of coastline along the Barnegat Peninsula and will reduce the risk of storm damages for the communities of Point Pleasant Beach, Bay Head, Mantoloking, Brick Township, Toms River Township, Lavallette, Seaside Heights, Seaside Park, and Berkeley Township. More than 11 million cubic yards of sand will be dredged from approved borrow areas and pumped through a series of pipes onto the beaches of the municipalities. The sand is then built into a dune and berm system designed to reduce potential damages to infrastructure, businesses, and homes that can occur from coastal storm events. For most of the project area, dunes will be built to an elevation of 22 feet. Beaches will be constructed from 100 feet to 300 feet wide and to an elevation of 8.5 feet.

Details on the process to identify sand borrow areas

The coastal geology of New Jersey is extremely complex, influenced over the millennia by sea level rise and fall; movement of inlets, and geologic deposition processes. The sand borrow area identification process includes sampling at multiple locations over a period of years and close coordination with a multitude of state and federal regulatory agencies. This is a scientific approach; however due to the extremely complex geology, there are sometimes pockets of soil materials other than sand such as silt, clay, gravel and peat.

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