

Wilmington Harbor Confined Disposal Facilities

The Delaware River Main Stem and Channel Deepening involves deepening the main shipping channel of the Delaware River from Camden, New Jersey, to the mouth of the Delaware River. Authorized by Congress in 1992, the project is being managed by the U.S. Army Corps of Engineers (USACE), Philadelphia District.

PROJECT RESULTS

By mobilizing quickly and coordinating closely with USACE personnel, Kleinfelder completed the site analyses ahead of schedule. Based on Kleinfelder's findings, the USACE continues to evaluate the feasibility of storing additional dredge materials at the Wilmington Harbor CDFs.



NEED TO STORE ADDITIONAL DREDGE MATERIAL

Approximately 11.9 million cubic yards of sand, silt, and clay taken from the river portion of the project is scheduled for placement in existing federal upland Confined Disposal Facilities (CDFs) in New Jersey and Delaware. Two of those facilities are located adjacent to the river in Wilmington, Delaware. The USACE needs to determine the feasibility of raising the perimeter dikes of these CDFs in order to store additional dredge material.

IN-DEPTH ANALYSIS TO EVALUATE FEASIBILITY

Kleinfelder conducted in-depth site analyses of the Wilmington CDFs to provide the USACE the data needed to evaluate the stability of the facilities' embankments. Field work included test borings, surveys of dikes, and installation of inclinometers to monitor slope movement. High-end geotechnical laboratory testing included consolidation testing, unconsolidated undrained (UU) triaxial compression tests, and consolidated undrained (CU-bar) triaxial compression tests with pore pressure measurements of soft elastic silt, organic silt, fat clay dredge, and alluvium deposits.

Location:

Wilmington, Delaware

Owner:

U.S. Army Corps of Engineers, Philadelphia District



Evaluating raising CDF perimeter dikes



Inclinometers monitor slope movement

