



P rojects

U.S. ARMY CORPS OF ENGINEERS - PHILADELPHIA DISTRICT

INDEFINITE DELIVERY CONTRACT FOR GEOTECHNICAL, GEO-ENVIRONMENTAL AND HAZARDOUS/TOXIC SERVICES

Client: U.S. Army Corps of Engineers, Philadelphia District
Contact: Daniel J. Kelly, P.E. 215-656-6889

Duffield Associates was retained by the U. S. Army Corps of Engineers, Philadelphia District for two consecutive open ended engineering services contracts. Emphasis was placed on geotechnical, coastal structure and environmental engineering, which includes projects of varying scope including:

Vibrocores, Bathymetric Survey, and Geo-acoustic Survey - performed extensive vibrocore sampling off the Atlantic Coasts of New Jersey and Delaware to obtain off-shore sediment samples from potential beach replenishment borrow sources as well as maintenance soils from active shipping lanes.

Instrumentation Installation and Monitoring for a New Cross Dike at Wilmington Harbor South - performed geotechnical design for state of the art geotechnical instrumentation to monitor the performance of geogrid reinforcement placed at the foundation of a new cross dike at the Wilmington Harbor South Confined Dredge Disposal Facility.

Bethany Beach and South Bethany Beach Fill and Dune Construction - designed an approximately 2 million cubic yard beach fill construction template and prepared bid documents and compilation of data. This assessment included collection and analytic testing of sediment samples. Samples were analyzed for organic and inorganic substances, including PCB congeners, dioxins and furans to part per quadrillion levels

Hazardous, Toxic and Radioactive Waste Assessment for Wilmington Harbor - identified potential substances of concern that might be present in the water column or sediments and potential sources of these substances utilizing vast internal and external data bases to facilitate a complete, cost effective and timely geo-environmental report.

F.E. Walter Dam - performed a geotechnical/hydrologic evaluation and design to replace a weir. Also performed a subsurface evaluation to determine foundation conditions beneath the right abutment of this 3,000-foot long earth dam.

Dredged Material Neutralization Study, Courthouse Point, MD - analyzed samples of dredged materials from the Courthouse Point Containment Area as well as future dredge material from the C&D Canal and provided recommendations for its neutralization.

Pearce Creek - completed a feasibility study of the long-term utilization of this dredged material containment area for 20-years and 50-years of capacity.

Drilling and Lab Testing Program, Design of Replacement Jetty, Cofferdam, Christina River - performed the subsurface investigation and geotechnical testing of soil samples from the Wilmington Harbor, Cellular Sheetpile South Jetty.

Drilling and Testing Program, C & D Canal Project Office, Bulkhead Replacement - performed geotechnical investigation, laboratory testing and analysis for a subsurface investigation along the existing Chesapeake City bulkhead adjacent to the Philadelphia District's Chesapeake City Project Office.

Design Of Protective Breakwaters For The U.S Coast Guard Station, Cape May, NJ - assisted in the evaluation of the design and feasibility of a breakwater. Engineering services provided included a review of currents, mooring configurations, observed storm conditions within the harbor, and a proposed breakwater design proposed by the USCG.

Molly Anns Brook/Herman's Garage - failure of an existing building's foundation wall was observed as part of the USACE stabilization of Molly Anns Brook flood control project. Duffield Associates responded quickly to evaluate the stability of the structure and provided remedial recommendations for its stabilization.