

Analyzing U.S. Coast Guard Facilities for Operational Resiliency

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The U.S. Coast Guard (USCG) is on the front lines of our Nation's effort to protect the American people, homeland, and way of life. As a Service, the USCG is responsible for the maritime safety, security, and environmental stewardship of U.S. ports and protects and defends more than 100,000 miles of U.S. coastline and inland waterways. In addition to a fleet of ships and aircraft, the USCG maintains and operates numerous waterfront installations. Following a wide-area contamination event at a port city, the USCG (due to their geographic jurisdictional authority and location) is in a position to be the lead federal agency for response activities.

Through a Department of Homeland Security (DHS) funded research study, the U.S. Coast Guard is working with Homeland Security Research Program at the EPA Office of Research and Development on an effort to build capabilities to predict water-driven biological contaminant movement in a wide-area environment. Such predictive capabilities will enhance response operations (time, cost, effectiveness, etc.) by allowing responders to more effectively utilize sampling, decontamination, and mitigation resources. This effort will focus on landforms and terrain characteristics of USCG facilities and adjacent maritime areas. To gather information about current USCG facility capabilities with respect to stormwater response, information from Facilities Engineers at facilities throughout the Coast Guard is being gathered. The information collected will inform the study and assist the research team in understanding the current capabilities of USCG facilities in terms of controlling stormwater and mitigating pollutant dispersion. While some gaps and needed capabilities may be specific for the USCG, in general these largely align with gaps and needs for response and recovery to any wide-area biological contamination incident in an urban environment. The information obtained in this study will be used to provide an informed recommendation as to what stormwater modeling tools and containment strategies would be rapidly deployable during an incident for the remediation of USCG facilities and assets, as well as the wide-area urban scenario.