



North Atlantic Division: Mapping of Historic Dredging Equipment Locations

ERDC Dredging Operations Technical Support Program (DOTS)

U.S. ARMY CORPS OF ENGINEERS

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Response Summary:

A District within the USACE North Atlantic Division (NAD) had a need for information about the positions of a group of vessels during a specific time but did not know if and where such information was available. The vessels of interest included a dredge and multiple support vessels. For this DOTS request, Automatic Identification System (AIS) vessel transponder data was the expected data source for time-stamped and geo-referenced position reports. Due to the age of the records being sought, the normal request process for AIS data from the U.S. Coast Guard (USCG) Nationwide Automatic Identification System (NAIS) archive was not available (this was confirmed in communication with the USCG). However, the historic AIS information is available through the Marine Cadastre website. The Marine Cadastre website is a joint program between multiple federal agencies which receives USCG-NAIS data, re-packages that data at a 1-minute sampling rate and allows for rapid public download of large amounts of data.



Figure 1. Example of multiple historic vessel position reports plotted together. Different colors represent different vessels of interest.

For this DOTS request, daily AIS files at the 1-minute sampling interval for the entire U.S. were downloaded for the period of interest. Then, a search for the vessels of interest was conducted using their Maritime Mobile Service Identity (MMSI) numerical identifier. Matching records were extracted and plotted on a series of maps.

Period of Performance: This work was performed in FY2023. The AIS position data used in the study was from before 2019.

Benefits of the Response to the USACE Dredging/Navigation Program:

This DOTS response provided direct assistance towards close-out of a dredging-related issue that has been open for multiple years.

Deliverable:

The deliverable for this DOTS request was a series of maps showing the time-stamped and geo-referenced position locations for the group of vessels requested.



Providing environmental and engineering technical support to the U.S. Army Corps of Engineers Operations and Maintenance navigation and dredging missions

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