



Mitigating Sea Turtle Take during 2019 Dredging in Honolulu Harbor

ERDC Dredging Operations Technical Support Program (DOTS)

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Response Summary:

Since 1980, it has been documented that threatened and endangered sea turtles are occasionally killed when they are entrained by hopper dredge dragheads during dredging of U.S. coastal channels and harbors. These issues have been well documented and studied during hopper dredging projects throughout the southeastern U.S. and are also recognized as international issues of concern wherever sea turtle inhabit coastal locations requiring dredging. However, these issues have only recently been recognized as a potential for concern and mitigation during dredging projects throughout the Hawaiian islands. Dredging in Hawaii has historically been an infrequent occurrence at approximately 15 to 20 year intervals. In 2016 and 2018, USACE District Hawaii (CEPOH) requested assistance from ERDC to develop management plans and sea turtle protection protocols for hopper dredging in five Hawaii harbors. In 2016, ERDC assisted CEPOH with drafting the management plans and sea turtle protection protocols for the initial Biological Assessment documentation submitted to NMFS-NOAA. As a result, NMFS-NOAA issued a Biological Opinion with the Terms and Conditions for dredging of the five Hawaii Harbors. The 2016 Hawaii dredging was conducted by the DREDGE ESSAYONS (USACE District Portland (CENWP)). During the 2016 Hawaii dredging activities, ERDC also tested the feasibility of deploying Turtle Tickler Chains (TTC) in front of the draghead to prevent turtles from being entrained by the draghead. These feasibility tests were successfully accomplished but additional tests are needed to evaluate the effectiveness of the TTC technique. This DOTS response was requested by CEPOH for ERDC to provide additional assistance in drafting the updated 2018 Biological Assessment documentation for NMFS-NOAA and to develop strategies to test/document the effectiveness of the TTC for protecting sea turtles during dredging. The additional strategies and protocols drafted in the 2018 Biological Assessment included: 1) plans and specifications for improving the monitoring of the dredge material inflow to 100% screening; 2) improving the overflow monitoring to 100%; 3) install TTC on the dragarm ahead of the draghead; 4) and installing acoustic camera(s) to monitor the behavior of sea turtles when they encounter the TTC. Actual dredging from these plans will occur in March 2019 by the DREDGE ESSAYONS.

Period of Performance:

5 Mar 2018 – 11 Oct 2018

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

This response provided CEPOH dredging program with scientifically defensible strategies and historical data to develop documentation to work with NMFS-NOAA for an effective Biological Opinion and dredging plans for five Hawaii dredging projects.

Deliverable:

The primary product of this DOTS Response was the final 2018 Biological Assessment for Five Hawaii Harbors to NMFS-NOAA. Additional products included dredge equipment plans and specifications for inflow and overflow screening, Turtle Tickler Chains, draghead deflector specifications, and sea turtle protection protocols provided to CEPOH and the DREDGE ESSAYONS (CENWP). Multiple meetings were held with personnel from CEPOH and CENWP.



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

Dina D. Dickerson

DOTS ID: DOTS-18-38

Environmental Laboratory – dina.d.dickerson@usace.army.mil