



Lake Elsinore, CA Dredging and Island Building Assessment

ERDC Dredging Operations Technical Support Program (DOTS)

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG®

Response Summary:

Lake Elsinore is a large natural lake in southern California. It is fed by the San Jacinto watershed and augmented with reclaimed water from the Regional Water Reclamation Plant. Lake levels are variable and nutrient supply is high in the natural lake basin. Water quality and aquatic habitat is affected by lake levels, but excessive algae is a significant public health concern. Cyanobacteria dominate the plankton community and harmful algal blooms are common. Aquatic and riparian plants are degraded, and the fish community is non-native fish dominated by common carp and recently smaller minnow species and air-breathing mosquito fish.

A Section 204 CAP investigation is considering a dredging alternative to remove nutrient rich sediment and build aquatic habitat features like islands and treatment wetlands. The CAP PDT has requested ERDC consultation on dredging and dredged material management alternatives. ERDC will provide expert consultation in a white paper discussing Lake Elsinore sediment management alternatives.



Period of Performance:

1 May, 2022 to 31 May, 2022

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

Managing nutrient rich sediment is one mechanism to reduce the occurrence of harmful algal blooms in lakes and reservoirs. Dredging is often the preferred alternative because it removes nutrients and improves aquatic habitat and water quality. The costs for dredging and sediment management are high and the available measures may be unfamiliar to District planners. ERDC review of this CAP alternative can support LA District planners and provide feedback into ongoing restoration dredging and HABS research. This site has been regarded as uniquely degraded and it provides an opportunity to explore dredging alternative for HABS management in the far West where HABS management is becoming necessary.

Deliverable:

The purpose of this activity is to visit Lake Elsinore and meet with the Section 204 CAP PDT and sponsor. We will review available sediment and water quality information, examine site characteristics, and make recommendations regarding island design and construction, treatment wetlands, and watershed measures in a white paper for the PDT.



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

Chuck Theiling
ERDC Environmental Laboratory • Charles.h.theiling@usace.army.mil

DOTS ID: DOTS-22-R07(2)