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Dredging Impacts to Delta Smelt and Other Fish Species in the Sacramento Deep Water Ship Channel

Abstract: Delta smelt, Longfin smelt, green sturgeon and other non-listed fish species have been present around the dredge while conducting fish community monitoring during annual maintenance dredging of the Delta's ship channels. Delta smelt and other species present in the fish community were entrained by the hydraulic cutter-head dredge. This has occurred in the Sacramento deepwater ship channel and other locations. This ongoing monitoring has been conducted since 2006, and data from 2006 through 2011 is presented. This monitoring is conducted for the United States Army Corps of Engineers (USACE) based on consultation with The National Marine Fisheries Service. Additionally, entrainment monitoring was conducted on the federal hopper dredge *Essayons* in 2011 while dredging in Pinole shoals, the Richmond Harbor area, and several locations in Suisun Bay. 20 species of fish were found, including delta smelt and longfin smelt. This monitoring was conducted for USACE at the behest of the California Department of Fish and Game.

Statement of Relevance: Information on dredging impacts to listed and other species is critical to the overall management of ongoing (maintenance dredging) and new dredging projects (Sacramento and Stockton channel deepening). Prior to the initiation of the monitoring program that began in 2006, there was very little current information on impacts to species that utilize the navigation channels when and where active dredging is occurring.