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**Application of the California Sediment Quality Objectives Human Health Assessment Framework**

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**Abstract**

The State of California recently established a Sediment Quality Objective (SQO) to protect human health from the consumption of fish exposed to sediment associated contaminants. A draft framework has been developed to assess if sediment at a site or waterbody meets the SQO. The framework follows a tiered process using two indicators: consumption risk to humans and sediment linkage. Tier I screening determines if sediments in a waterbody pose a potential human health hazard and warrant further evaluation. Tier II determines if human consumers are at risk from bioaccumulated contaminants and to what degree the bioaccumulation is linked to sediment contamination. This study investigated the outcome of applying the draft framework to sixteen California areas to evaluate sediment quality impacts from chlordanes, DDTs, PCBs and dieldrin. The results indicate that sediment concentrations of DDTs, dieldrin and chlordanes in most areas were unlikely to exceed the human health SQO. However, sediment PCBs were linked to unacceptable health risk in several areas including Los Angeles and Long Beach Harbors, San Diego Bay and portions of San Francisco Bay. The results were comparable to previous assessments using other evaluation methods. Assessment outcomes can be strongly affected by factors such as seafood species and dataset selection. Results from this study will help to refine the draft framework and to produce a standardized assessment method for use in the identification of water bodies of concern, to determine permit compliance and to inform management actions.