



Summary of 2008 Southern California Bight Regional Monitoring Program (Bight '08)

Coastal Ecology Component

Significance

The oldest component of the Bight Regional Monitoring Program, dating back to 1994, is the Coastal Ecology survey that measures the large-scale condition of sediment contamination, as well as fish and invertebrate communities on the sea bottom. Contaminants often accumulate in sediments, directly impacting the animals that live there or accumulating up the food chain. Unlike other site-specific monitoring programs, the Bight survey measures the cumulative impacts of multiple contaminant sources.

Goals

This component aimed to (1) assess the extent and magnitude of sediment contaminant impacts (2) compare the relative impacts among habitats of interest and (3) quantify the bioaccumulation of contaminants in sport fish.

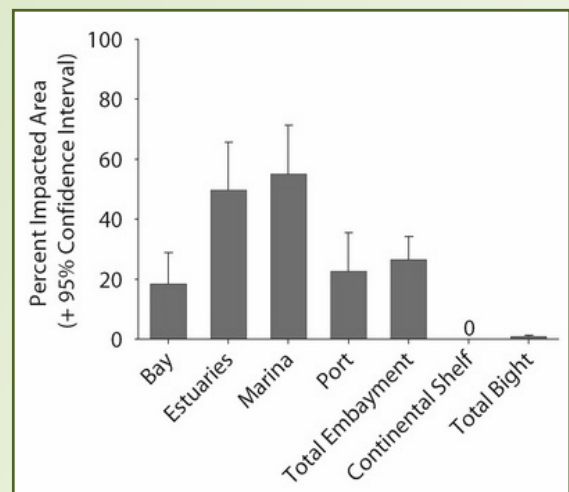
Approach

Nearly 400 locations were sampled for sediment chemistry, sediment toxicity, marine debris, benthic infauna communities, demersal fish and megabenthic invertebrate assemblages, and gross fish pathology. Sites were randomly selected from embayments (estuaries, marinas, ports, bays) and offshore (continental shelf, slope and basins, Channel Islands) marine habitats. In addition, over 1,000 sport fish were caught for measuring bioaccumulation.

Findings

Based on a multiple line of evidence approach, only a small fraction (2%) of the Bight was impacted by sediment contamination. This fraction occurred almost exclusively in embayments, where over half of estuarine and marina habitats were considered impacted. Even in these impacted habitats, though, sediment contamination has been improving steadily over the last three regional surveys. Likewise, only a small fraction (4%) of fish communities appeared to be impacted and gross pathologies, which were once common, are now exceedingly rare.

Bioaccumulation of contaminants in sport fish was widely observed, but at low to moderate levels. Mercury in particular exceeded the state's lowest action levels for restricted fish consumption in some of the region's most popular sport fish such as kelp bass, Pacific mackerel, and white croaker.



Extent of impacted sediments by strata

Final Reports

- [Coastal Ecology Synthesis Report](#).
- Volume I. [Sediment Toxicity](#). SCCWRP Technical Report 640.
- Volume III. [Sediment Chemistry](#). SCCWRP Technical Report 661.
- Volume IV. [Demersal Fishes and Megabenthic Invertebrates](#). SCCWRP Technical Report 655.
- Volume VI. [Benthic Macrofauna](#). SCCWRP Technical Report 665.
- [Sport Fish Tissue Contamination](#). SWAMP Report.

