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Benthic macrofaunal community condition in the Southern California Bight, 1994-2003

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ABSTRACT

To assess benthic macrofaunal community condition in Southern California, 838 sites were sampled using spatially random designs in 1994, 1998, or 2003. Benthic community condition was assessed on a four-category scale and the area in each category estimated. Overall, benthic macrofauna in Southern California were in good condition during 2003, with 98% of the area in reference condition or deviating only marginally. There was no evidence of disturbance near Channel Islands or small wastewater discharges, and virtually none on the mainland shelf. In contrast, bay and estuary macrofaunal communities were more frequently disturbed with nearly 13% of the area supporting disturbed benthos. The condition of the mainland shelf did not change substantially over the 9-year period, with 1.6 – 2.8% of the area in poor benthic condition. Southern California benthic condition evaluations may be improved by extending the depth and salinity ranges of assessment tools, and improving trend detection methods.

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