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Bioaccumulation and Detoxification of Contaminants in Marine Organisms from Southern California Coastal Waters

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ABSTRACT

Large amounts of suspended solids, metals and organic compounds are discharged from the five major municipal outfalls in southern California. These substances accumulate in the sediments around the outfalls. Their occurrence is associated with changes of assemblages of benthic organisms which cover approximately 5 percent of the mainland shelf of southern California. Certain synthetic organic compounds are biomagnified in organisms from around outfalls but metals generally are not. Those organic compounds amplify with increasing trophic level in muscle of organisms while metals do not, with the exception of organic mercury. Most of those contaminants which are present in organisms are effectively detoxified. Contaminants are not present in edible portions of fish at concentrations which are hazardous to human consumption except in very isolated cases.