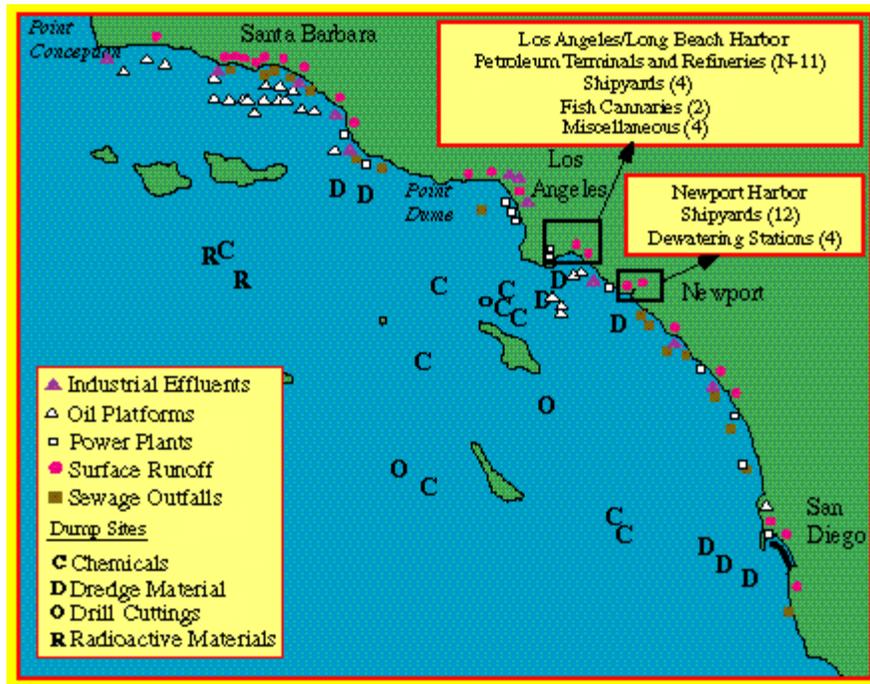


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Pollution and Waste Disposal, Los Angeles Shelf (1998)



A major focus of the [Pacific Coastal and Marine Science Center](#) is to develop an improved understanding of the sediment and pollutant transport processes near major metropolitan areas. The greater Los Angeles area is the second most populated area in the United States and its coastal environment is one of the most impacted by man's activities.

The southern California megalopolis, extending from Santa Barbara to the Mexican border, and centered around the city of Los Angeles, is the largest population and industrial center in the western United States, and the second largest in the nation. The metropolitan area fronts the Pacific Ocean along a coastline that is approximately 300 kilometers long. Within this urban ocean area, which is commonly known as the southern California Bight, waste products from both population and industry are released into the coastal waters, where they interact with and are transported with the bottom sediment. Understanding the geologic processes that modify, transport, and re-deposit the polluted sediment is essential if forecasting of future trends and design of remediation projects is to be accomplished.

A number of private organizations, government agencies and academic institutions have actively investigated pollution and sediment transport along the southern California margin.

The [U.S. Environmental Protection Agency](#) (EPA) recognized the detrimental effects that arise when multiple agencies conduct uncoordinated monitoring and research in an interconnected marine environment. Accordingly, the EPA

developed the Southern California Bight Pilot Project of the [Ecological Monitoring and Assessment Program](#) (EMAP), to systematically integrate bottom sediment pollution data gathered by the four major sanitation districts in southern California (City of Los Angeles, County of Los Angeles, Orange County, and City of San Diego).

Within the last century, but especially during the last 50 years, a human population explosion has occurred in southern California, and human activities have significantly impacted the southern California Bight.

- Most of the coastal rivers have been dammed, channelized, or even paved, greatly altering (usually decreasing) the quantity and nature of sediment brought to the coast.
- Sewage outfalls have been installed, introducing huge quantities of organic, particulate, and commonly polluted matter to the shelf.
- Coastal landslides, including the famous Portuguese Bend Landslide, have been activated and have introduced great quantities of sediment to the shelf.
- Harbors have been dredged, breakwaters have been installed, and beach retention structures have been built, sometimes to the detriment of adjacent beaches.
- A major offshore oil drilling industry has developed and many offshore drilling platforms have been constructed. At least one huge oil spill impacted the northern part of the bight and numerous smaller spills have resulted from tanker and other accidents.
- A number of offshore areas have been designated as waste and dredged material disposal sites.



Portuguese Bend Landslide

Between 1992 and 1994 extensive surveys and sampling were conducted off the southern coast of the [Palos Verdes Peninsula](#), as part of this program to study sediment and pollutant transport processes near major metropolitan areas.