

Improving Southern California's Coastal Waters

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ABSTRACT

During the first half of this century, raw screened domestic and industrial wastes were discharged to coastal waters with little or no effective regulation. Harbor and nearshore discharges were tolerated for years as long as coastal discharge sites were remote from population centers and human activity. One of the population centers that took advantage of the available deep open ocean waters for wastewater disposal was the Southern California coastal region.

In the 1950s and '60s, coastal area bacterial incidents spurred state legislation to specifically control and monitor ocean discharges. Widespread chemical pollution in the late 1960s and early 1970s led to new state and federal legislation. Diffusers were added to ocean outfalls, and new outfalls were extended farther offshore. Source control, improved solids removal, and increased treatment led to reduced levels of suspended solids, trace metals, and organic contaminants in municipal effluents in the 1970s and '80s. These reductions in contaminant mass emissions should continue as planned changes and treatment facility improvements are implemented.

In 1987, 16 municipal wastewater treatment plants discharged to the coastal waters of Southern California (Figure 1). The four largest of these plants are Los Angeles (LA) Hyperion Treatment Plant, County Sanitation Districts of LA County's (CSDLAC) Joint Water Pollution Control Plant (JWPCP), County Sanitation Districts of Orange County (CSDOC) Plants 1 and 2, and the city of San Diego's Point Loma Treatment Plant. These four contribute 90% of the $4.9 \times 10^6 \text{ m}^3/\text{d}$ (1290 mgd) of effluent discharged to Southern California coastal waters and an even greater percentage of contaminants. Major reductions of inputs to the ocean continue despite increases in population and wastewater flows (see Side Bar).

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