
BIOLOGICAL FEATURES OF INTERTIDAL COMMUNITIES NEAR THE U. S. NAVY SEWAGE OUTFALL, WILSON COVE, SAN CLEMENTE ISLAND, CALIFORNIA

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ADMINISTRATIVE STATEMENT

This report describes ecological studies of intertidal communities near the San Clemente Island sewage outfall conducted by scientists from California State University, Fullerton, and the University of California, Irvine, in cooperation with the Naval Undersea Center. These studies provide basic information on the environmental impact of typical domestic sewage from a small community.

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**Title:** Biological Features of Intertidal Communities Near the U.S. Navy Sewage Outfall

Wilson Cove, San Clemente Island, Calif.

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**Abstract:**

Studies on the effects of a low-volume discharge of raw sewage on rocky marine intertidal communities near Wilson Cove, San Clemente Island, California included taxonomic surveys and quantitative assessments of standing stock, community structure and primary production for the sewage-affected area and nearby unpolluted (control) areas. Additionally, a comparative populational study of the limpet Acmia limatula revealed that only larger individuals were present in the outfall area. Near the outfall pipe, intertidal...
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communities were characterized by lower species diversity, reduced standing stocks of large, canopy-forming intertidal macrophytes (which largely had been replaced by a low-growing algal turf) and an abundance of suspension-feeding animals. The most productive macrophytes were among those most abundant in the outfall area. Additional manipulative studies revealed that the outfall area consisted of disclimax communities.