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Stephanie Peck
Manager, Policy and Administration
Southern California Coastal Ocean Observing System (SCCOOS)
Scripps Institution of Oceanography
University of California, San Diego
9500 Gilman Drive, MC 0213
La Jolla, CA 92030-0213

Ms Peck:

**LETTER OF SUPPORT FOR THE SOUTHERN CALIFORNIA COASTAL OCEAN OBSERVING SYSTEM (SCCOOS AND THE REGIONAL COASTAL OCEAN OBSERVING SYSTEM)**

The City of Los Angeles, Bureau of Sanitation’s Environmental Monitoring Division (EMD) is supportive of the Southern California Coastal Ocean Observing System efforts to develop the Regional Coastal Ocean Observing System (RCOOS) for Southern California. SCCOOS provides badly needed coastal and ocean observations and generate extremely useful products for environmental managers, regulators, and nongovernmental agencies (e.g., environmental groups). The City conducts extensive monitoring in the coastal ocean of Southern California, primarily in Santa Monica Bay. A significant portion of this effort involves tracking the Hyperion Treatment Plant’s effluent plume as it is discharged from the 5-Mile Outfall pipe into Santa Monica Bay and estimating bacterial concentrations at a point depth in the surfzone due to the potential for pathogens to adversely impact public health. The effluent plume has the potential for traveling considerable distances and depositing organic particles, metals, and organic pollutants into the sediment within the Bay. Storm drains are the major source of bacteria and other pollutants to these waters, and they mostly discharge into the surfzone.

Southern California beaches and near-shore waters are world famous, and nearly 80 million people engage in water contact recreational activities at Los Angeles and Orange County beaches every year. This is not only an important component of the Southern California lifestyle, but also an important economic engine for the region. Unfortunately, it has been estimated that between 627,800 and 1,479,200 “excess” cases of gastrointestinal illness occur at these beaches each year with estimated healthcare costs of $21 million to $414 million annually; thus, ensuring good, safe water quality along our coast is a high priority. In addition, the deposition of pollutants and their subsequent accumulation have adverse impacts on the benthic macrofaunal and demersal fish and invertebrate communities. Some of the seafood, e.g., white croakers, have been issued fish advisory notices and may not be safe for consumption.
Knowledge of circulation patterns in the coastal region is meager, especially from a regional perspective. A better understanding of circulation in the shallow and near-shore regions could be extremely valuable because it holds the potential to forecast the fate of surfzone and near-shore pollutants, which would increase our ability to protect public health and the environment.

The work conducted by SCCOOS is important because it is focused on improving our understanding and potential for modeling dispersion within a few hundred meters of the shoreline, which is where most water-contact recreation occurs, as well as the near-shore waters. This information will be useful in studying stormwater dispersion and fate, as well as discharges from wastewater treatment plants. I believe this will greatly benefit monitoring efforts aimed at protecting public health and the environment.

The City of Los Angeles' Hyperion Treatment Plant recently diverted the flow of its wastewater from a pipe with an outfall that is five miles from the shoreline to one that is only one mile from the shoreline in order to inspect the 5-mile pipe. The diversion lasted approximately three days and about 800 million gallons of secondary-treated effluent was discharged through the 1-mile pipe. EMD in conjunction with other researchers conducted an extensive monitoring effort during this diversion. Our monitoring effort greatly benefited from surface current information provided through the Southern California Coastal Ocean Observing System (SCCOOS). The real-time current information provided by SCCOOS enabled us to adaptively modify our sampling grid to better track the discharge plume and to predict the dispersion of the surface plume by the use of a trajectory model developed by SCCOOS researchers using high frequency radar data. If the winds had blown onshore, EMD would have utilized the surfzone model developed by Scripps Institution of Oceanography through SCCOOS to predict the dispersion of the effluent in the surfzone. We believe improved understanding of dispersion in the surfzone may similarly benefit our monitoring efforts in the future, as well as those of the Orange County Sanitation Districts, which is planning a similar outfall inspection and 1-mile outfall diversion in the near future.

In summary, the City of Los Angeles shares an interest in better understanding the dynamics of water transport in the surfzone and near-shore waters, which may increase our understanding of the fate of flow from storm drains and other sources into the surfzone as well as the flow from offshore sources into the surfzone. Because of this, the City believes it is likely to directly benefit from the ocean observing activities proposed by SCCOOS; the City heartily endorses the proposal and recommends it be funded.

Sincerely,

Masahiro Dojiri, PhD
Division Manager
Environmental Monitoring Division