**Eileen Y. Deng*[1], Changming Dong[2], Nikolay P. Nezlin[3], Xavier Capet[2], James C. McWilliams[2], Keith D. Stolzenbach[1].**
Simulation of Stormwater Plumes in the Southern California Bight Using the Regional Ocean Modeling System.

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Southern California estuaries are affected by both direct inputs and inputs from upstream, urbanized coastal watersheds. These inputs include sediment, dry and wet weather urban runoff, and industrial discharges. Management of estuarine and near-shore water and sediment quality requires an understanding of the relationship between inputs and estuarine responses. Linked watershed-estuary models provide a powerful tool to help understand these interactions and to evaluate the effect of proposed management actions. We will present the development of a linked hydrodynamic model for the San Gabriel watershed and estuary.

The San Gabriel River estuary in an urbanized system that receives both direct and watershed-based inputs. Freshwater flow into the estuary is predominantly from two streams. Two large power-generating stations (PGSs) also discharge once-through cooling seawater taken from a nearby bay into the estuary. During summer months, discharge from the PGSs is generally over an order of magnitude greater than the terrestrial inputs. This greatly influences typical bi-directional estuarine flow conditions. Observed flows during the study period of July through October 2005 were consistently seaward near the mouth of the estuary, averaging 16 m3 s-1. Additionally, the seawater discharged from the PGSs influence the water column stratification with an observed stratified water column above the discharge and a well mixed one below. An estuarine hydrodynamic model was calibrated based of the 2005 field data and then used to simulate observed wet weather flows from the 2005-06 storm season. Results of the modeling indicate that upstream of the PGSs the estuary is stratified with storm water inputs to the system being approximately an order of magnitude greater than the dry season flows. Downstream of the PGSs, the hydrodynamics are dominated by the effects of the PGS discharge. The results of this model may be use to evaluate pollutant mixing and dilution in the estuary.

**Andrew DeVogelaere*[1], Erica J. Burton[1], Richard H. McGonigal[1].** Protecting Deep-Sea Corals by Including Davidson Seamount in the Monterey Bay National Marine Sanctuary.

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There are 20 documented deep-sea coral taxa on the Davidson Seamount. The distribution of these corals was characterized during a cruise in 2002, and public interest in the seamount has been growing since then. Interesting science and high quality images from the cruise generated an award-winning interactive CD, extensive print and television media coverage, two web sites, an agency promotional poster, numerous public presentations, as well as peer-reviewed publications. As a result, the potential for protecting Davidson Seamount through sanctuary designation arose in the management plan review process for the Monterey Bay National Marine Sanctuary (MBNMS). After receiving input from a focus group of stakeholders and experts, the MBNMS Advisory Council voted to pursue inclusion of the Davidson Seamount in the MBNMS. Sanctuary status would increase national opportunities for education on deep-sea corals and limit extraction of corals from the Davidson Seamount. The potential regulations to achieve this have been presented to other public agencies for consultation, and NOAA's Pacific Fishery Management Council supported protection of the seamount habitats though inclusion in the MBNMS. There continue to be discussions on which branch of NOAA would best be suited for regulating fisheries that might impact these corals. The draft MBNMS Management Plan and supporting Environmental Impact Statement is due for public comment in the fall of 2005 with a final determination scheduled for spring 2006. Consultation with stakeholders has been critical throughout this process, and will be described with an update on the sanctuary designation status for Davidson Seamount.

**John H. Dorsey*[1], Laura Peters[2].** Ridding California Beaches of Fecal Bacteria: An Assessment of Clean Beach Initiative Projects.

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