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May 27, 2014

Ms. Joann Lim
Executive Office
San Diego Regional Water Quality Control Board
2375 Northside Drive, Suite 100
San Diego, CA 92108

Re: U.S. Section of the International and Boundary Water Commission South Bay
International Waste Water Treatment Plant Tentative Order No. R9-2014-0009 NPDES
No. CA 0108928

Dear Ms. Lim,

Please accept this letter of comment to the San Diego Regional Water Quality Control Board (the Board) regarding Tentative Order No. R-9-2014-0009 for the South Bay International Wastewater Treatment Plant (IWTP).

I strongly urge the Board to delay the adoption date currently scheduled for June 26, 2014 in order to consider inclusion of a real-time prediction model for the NPDES tentative order.

The new monitoring requirements for the United States International Boundary and Water Commission (IBWC), South Bay International Wastewater Treatment Plant (IWTP) are an opportunity for the San Diego Region Regional Water Quality Control Board to update and modernize the ocean monitoring as the current monitoring programs are woefully out of date. The monitoring plan could be improved to represent current oceanographic knowledge of the region and state of the art tools. We suggest the implementation of a **real-time prediction model** for the South San Diego ocean region including the Tijuana River Estuary and the coastline from Pt. Loma down to near Baja Malibu (Mexico), to help improve monitoring efforts, plan for future changes in outfall capacity, and respond to potential spills or other events.

The Southern California Coastal Ocean Observing System (SCOOS) already operates a plume tracker model. Unfortunately, this model has several shortcomings that a real-time prediction model could remedy.

It would be a mammoth improvement over the SCOOS particle-based plume tracker, which does not account for the following:

- (1) Surface current observations are used to drive the plume-tracker. Yet, no current observations are available within 1.5 miles of the shoreline, and surfzone and offshore currents can be extremely different.
- (2) The plume tracker only does surface tracking. However, coastal currents often have vertical structure with say offshore flow at the surface and onshore flow near the bottom (or vice versa).

A state of the art real-time predictive model for the region could be relatively easily built using existing realistic parameters including: oceanic boundary conditions from the larger scale Southern California Bight model run, river flow (Tijuana River Estuary, San Diego River) and ocean outfall data (South Bay Ocean Outfall from IBWC data), and even the Pt. Loma Ocean Outfall).

The model could then be validated using hindcasts compared to existing datasets of currents, salinity, temperature, and pressure throughout the region from SCCWRP, IB09, and new mooring data from the city of San Diego (Tim Stebbins).

A South San Diego ocean region model would reveal similar patterns and quantify plume transport and dilution rates.

A tool of this nature could significantly improve IWTP and SBOO management, for example:

1. This model could predict locations at risk for potential spills, including spills from trans-boundary flows, flow exceeding the IWTP capacity, or effluent through the SBOO exceeding required standards.
2. This model can differentiate sources of contamination. For example, when a beach becomes contaminated, a near real-time model can help determine whether the source for that contamination was trans-boundary flows, IWTP overflow, the SBOO, or transport from plumes off of the Mexican coastline. This would be valuable in helping to prevent further contamination, and mitigating contamination events.
3. Future changes in outfall capacity or concentrations on plume dispersion could be examined with the model. Increased outfall capacity could be tested directly using the model. Furthermore, the City of San Diego has plans to eventually implement an extensive recycled water program which would increase the brine concentrations in the effluent, thus changing its density and potentially greatly changing the plume's dispersion and ultimate location. Model runs with the anticipated future concentrations and capacity could be run in advance to help understand the potential impacts of this program on the coastal ocean.

In summary, we urge the board to delay the adoption date and include a real-time prediction model for the NPDES permit renewal for the SBIWTP. This would greatly strengthen the ability of the discharger to determine SBOO plume behavior and other potential stressors to the South San Diego Bay and Shoreline.

We thank you and the Board for your ongoing efforts to ensure surface waters are safe for drinking, fishing, swimming, and supporting healthy ecosystems and; that water quality is comprehensively measured to evaluate its protection and restoration.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Lorena', with a large, stylized initial 'L'.

LORENA GONZALEZ
Assemblywoman, 80th District