

**Minutes of the
ASBS Natural Water Quality Committee**
November 21, 2008
at the Southern California Coastal Water Research Project

Members in attendance:

Rich Gossett - CRG Marine Laboratories
Dominic Gregorio - State Water Resources Control Board
Burt Jones - University of Southern California
Steve Murray - California State University Fullerton
Bruce Posthumus - San Diego Regional Water Quality Control Board
Kenneth Schiff - Southern California Coastal Water Research Project (telephone)

Members absent:

Andrew Dickson - Scripps Institution of Oceanography

Others in attendance:

John Locke - US Navy SW NAVFAC
Kimberly O'Connell - UC San Diego /Scripps Institution of Oceanography
Kathy Hubbard - Justice and Associates for SCICO and CP
Nora Jans - RBF Consulting for Caltrans
Will Holoman - City of Laguna Beach

(note: Thomas Quattlebaum of Pebble Beach Co. attempted to attend by phone but there was some difficulty with the phone line)

Dominic Gregorio began the meeting at 1:10 PM. There were five items on the day's agenda 1) approval of the previous meeting minutes; 2) various ASBS related updates including contract status, general exception status, report on the SD Regional Board meeting, recent SIO monitoring results, Prop 84 monitoring, and the status of the Raimondi biological study assessment; 3) review and approval of ASBS Monitoring for 2008-09 storm season; 4) potential interaction of the Southern California Coastal Ocean Observing System (SCCOOS) and ASBS regional monitoring; 5) set next meeting dates. Ken was unable to attend in person due to illness, but called in to present agenda item 3. Item 3 was moved up on the agenda after the report on the SD Regional Board meeting. The minutes from June 5, 2008 were approved.

Dominic reported on the status of the contract. A stop work order had been issued to SCCWRP from the State Water Board in August due to State budget difficulties. Therefore the September meeting had been cancelled. Since then the State Board had notified SCCWRP to re-initiate work. Ken reminded the members that it is OK to submit their travel invoices. Dominic also reported on the status of the general exception relative to storm water and nonpoint source discharges to ASBS. State Board staff is working on the general exception and has been having stakeholder meetings. Staff is working toward completion of the CEQA initial study, mitigated neg dec, and next draft of the Special Protections conditions for the general exception by the end of the year.

Ken reported on his presentation to the San Diego Regional Board on Nov. 12. At that meeting the Regional Board decided to alter the SIO monitoring and reporting program, among other things facilitating SIO participation in regional ASBS monitoring.

Ken then provided a brief update on the regional monitoring workplan and pointed out that the “pre-post” design of the targeted reference and direct discharge sites was included in the plan based on the committee’s earlier recommendation. He then presented two study designs for the winter 2008-2009 study for the question: How does the extent of natural quality compare among ASBS with or without discharges? The basic study design is a random sampling approach with 30 ASBS areas with direct discharge and 30 ASBS areas without direct discharges. Non-discharge areas are defined as being greater than 500 meters wide without direct discharges, and being at least 250 meters or greater from the nearest discharges equal to or greater than 0.30 meters in width/diameter. Discharge areas are those with direct discharges including a 250 meter buffer of the furthest up-coast and down-coast direct discharges. The 250 meter buffer was roughly based on the Scott Jenkins modeling study done for Scripps. Based on this criteria 87% of ASBS were “non-discharge.”

Two sample designs were presented for Committee consideration: 1) sample locations randomly allocated into coastal regions (north, central, south and southern islands), and 2) sample locations randomly selected but allocated at least one discharge and non-discharge in each ASBS (except that a few ASBS did not have non-discharge areas due to small coastal length and many discharges). Steve Murray mentioned that there were clear biological differences in the different regions of the state, referencing the work done in the MLPA process, so that it is important to include some regional approach; however, since ASBS are distributed somewhat regularly along the coast, except for a gap from Ventura to Big Sur, Design 2 still allow good regional representation. The group discussed the pros and cons of each design, including logistical concerns regarding remote sites especially on the islands. The Committee approved the regional monitoring work plan and agreed to accept Design 2 as the approved design for the random sampling effort, with the caveat that the uninhabited island sites be re-allocated to the mainland sites.

Next Kimberly O’Connell of SIO gave an update on monitoring data. She provided handouts showing monthly copper results for outfall 001 (aquarium discharge, plus storm water runoff during wet weather), wet weather monitoring results (Table 1) for all outfalls (001, 002, 003, 004b), receiving ocean water, and intake ocean water from January 5-6, 2008, and wet weather monitoring results for outfall 002 (Table 2, storm water) from 2005 through 2008.

For monthly copper measurements from outfall 001, all measurements were in compliance with effluent limits when dilution was accounted for using Ocean Plan equation 1. However, relatively high levels in the effluent did occur a few times in 2005 and 2006, the highest being 10.4 on Aug. 4, 2005. There has generally been a reduction in copper concentrations over the last year (Oct. 2007 – Sept. 2008) compared with

previous periods, with all measurements below the Ocean Plan 6 month median objective of 3µg/L.

Relative to chronic toxicity in samples from a storm event on Nov.30-Dec.1, 2007, Toxicity Identification Evaluations (TIEs) were conducted, with the results indicating that copper and zinc were the likely cause of toxicity to sea urchin fertilization and giant kelp growth. The cause of toxicity to giant kelp germination was not determined.

Copper, lead, zinc, PAH, TCDD and DDT exceeded permit effluent limits for certain outfalls in the January 5-6, 2008 storm samples. Total residual chlorine also exceeded effluent permit limits, as well as receiving water objectives, but the issue remains regarding test methods and possible matrix interferences. Steve suggested adding a footnote to Table 1 regarding possibility of matrix interferences for chlorine measurements (similar to footnote in Table 2). Dominic and Rich agreed to meet offline on chlorine methods and interferences and report back to the group.

Table 2 was provided to evaluate whether BMP implementation was resulting in improved storm runoff quality. While several BMPs have been implemented since 2005, certain pollutants (copper, chlorine, TCDD) remain elevated in the January 2008 sample, although lower than some of the earlier measurements. DDT has only recently been measured above detection limits (Nov 2007 and January 2008). The severe wildfires in October 2007 may have contributed loadings of constituents. Bruce suggested the use of a different term for Table 2 than narrative effluent limits, because narrative objectives have a different meaning in water quality control plans, and because the limits presented seem to be benchmarks or targets based on Ocean Plan numerics.

Dominic reported on the Prop 84 grants effectiveness monitoring. He reminded the group of the recommendations made to the Prop 84 ASBS Task Force. At a Nov. 14 Task Force teleconference Task Force was in basic agreement with the Committee's recommendations. The Task Force agreed that effectiveness monitoring should be comparable to the ongoing regional monitoring, and also suggested that the State Board consider focused demonstration projects for effectiveness of BMPs. The Task Force also suggested that a combined subcommittee of the Task Force and the Natural Water Quality Committee be formed to provide peer review of ASBS effectiveness monitoring. After a brief discussion the Committee agreed with this approach.

Dominic then reported on the status of review of biological data from the ASBS storm water general exception applications being performed by Pete Raimondi. The first phase of that work is nearly complete, with a draft being submitted to the SWRCB in November. The second phase will involve the convening of an expert panel to consider specific recommendations for intertidal monitoring in the regional programs. Steve also gave an update to the group on the status of the effort, with SCCWRP, to attempt to develop an index for intertidal health based on a review of data by a group of intertidal biology experts.

Burt gave a presentation on some potential tools that SCCOOS could potentially apply to the issue of pollution transport into ASBS. These tools included CDP wave meters, HF radar for current movement, and satellite imagery. Salinity, turbidity and bacteria were discussed as potential indicators of plumes. Burt agreed to work with Eric Terrill of SIO to investigate this further, including how existing tools can be used and if particle tracking models would be sufficiently developed in the timeframe of Bight 08 ASBS regional monitoring in 2009, and report back to the group.

Burt stated that he will be unavailable during the month of February 2009. It was decided to set the next meeting by email. The meeting adjourned at approximately 4:00 PM.