

**Minutes of the Regular Commission Meeting of the
Southern California Coastal Water Research Project Authority (SCCWRP)**

**Held at the offices of the Authority:
3535 Harbor Blvd. Suite 110, Costa Mesa, California 92626**

**September 8, 2017
9:00 AM**

COMMISSIONERS PRESENT

Janet Hashimoto — *U.S. Environmental Protection Agency, Region IX*
Karen Larsen — *State Water Resources Control Board*
Deborah Halberstadt (Vice-Chair) — *California Ocean Protection Council*
Sam Unger — *Los Angeles Regional Water Quality Control Board*
Hope Smythe — *Santa Ana Regional Water Quality Control Board*
Brandi Outwin-Beals — *San Diego Regional Water Quality Control Board*
Mas Dojiri — *City of Los Angeles*
Robert Ferrante (Chair) — *Los Angeles County Sanitation Districts*
Jim Colston — *Orange County Sanitation District*
Peter Vroom — *City of San Diego*
Arne Anselm — *Ventura County Watershed Protection District*
Paul Alva — *Los Angeles County Department of Public Works*
Amanda Carr — *County of Orange*
Todd Snyder — *County of San Diego*

STAFF PRESENT

Stephen Weisberg — *Executive Director*
Bryan Nece — *Administrative Officer*
Wes Beverlin — *Legal Counsel*
Ken Schiff — *Deputy Director*
Steve Bay — *Principal Scientist*
John Griffith — *Principal Scientist*
Keith Maruya — *Principal Scientist*
Eric Stein — *Principal Scientist*
Steve Steinberg — *Principal Scientist*
Martha Sutula — *Principal Scientist*
Nina Bednarsek — *Scientist*
Bowen Du — *Scientist*
Scott Martindale — *Communications Coordinator*
Alvina Mehinto — *Senior Scientist*
Joshua Steele — *Scientist*
Jennifer Taylor — *Senior Research Technician*

OTHERS PRESENT

Jeff Armstrong — *Orange County Sanitation District*
Hassan Rad — *City of Los Angeles*

George Robertson — *Orange County Sanitation District*
Grant Sharp — *County of Orange*

Commission Chair Robert Ferrante called the meeting to order at 9:11 AM.

Commission Chair Ferrante introduced two one-time substitute Commissioners. Paul Alva representing the County of Los Angeles and Brandi Outwin-Beals representing the San Diego Regional Water Quality Control Board.

CONSENT AGENDA

1. Minutes of Meeting Held June 2, 2017

2. Quarterly Financial Statement for the Period Ended June 30, 2017

3. Quarterly Statement of Investments at June 30, 2017

4. Minutes of CTAG Meetings Held August 3, 2017

Commissioner Dojiri motioned to approve the Consent Items, and Commissioner Larsen seconded the motion. The Commission approved the motion unanimously.

REGULAR AGENDA

5. Personnel and Finance Committee Report

Commissioner Ferrante reported that Commissioner Vroom was elected the new Chair of the Personnel and Finance Committee. Vroom reported that SCCWRP finances are in strong health and that the agency will regrow the staff size to 45 over the next two years. He said that SCCWRP's 12-year building lease is up in two years and that SCCWRP is in talks with the landlord about potential lease renewal.

6. Election of Commission Chair and Vice-Chair

Executive Director Weisberg said that the Commission Chair and Vice-Chair nominally serve one-year terms, but traditionally are re-elected for a second term. The present leadership has served for one year. Commission Chair Ferrante and Vice-Chair Halberstadt both expressed interest in a second term. Commission Chair Ferrante requested nominations for Chair and Vice-Chair. Commissioner Vroom nominated Commissioner Ferrante for Chair and Commissioner Halberstadt for Vice-Chair, and Commissioner Anselm seconded the nomination. The Commission approved the nominations unanimously.

7. Future Meeting Dates

Executive Director Weisberg proposed the following dates for the 2018 Commission meetings:

- March 2
- June 1

- September 7
- December 7

Commissioner Dojiri motioned to approve the meeting dates, and Commissioner Carr seconded the motion. The Commission approved the motion unanimously.

8. Executive Director's Report

Executive Director Weisberg reported that SCCWRP recently hired three new staff as it works to return staff size to 45 full-time employees: (1) Dr. Bowen Du, an environmental chemist who recently completed post-doctoral studies with the University of Washington, (2) Dr. Nina Bednarsek, a biological oceanographer who recently completed post-doctoral work with the National Oceanic and Atmospheric Administration, and (3) Jennifer Taylor, a UCLA doctoral student who will complete her graduate studies while working full time at SCCWRP. Weisberg noted that Taylor beat out several candidates who already had Ph.D.s for the position.

Weisberg discussed three major upcoming and recent meetings at SCCWRP that are illustrative of the central role SCCWRP plays in bringing researchers and managers together to build scientific consensus: (1) the Bight '18 kickoff meeting on September 14, (2) a meeting of international pteropod experts on September 27-29 that will work toward consensus on key thresholds at which ocean acidification affects the health of these calcifying marine organisms; and (3) a meeting of a CEC recycled water expert panel that was reconvened by SCCWRP in August at the behest of the State Water Board to develop recommendations for monitoring CECs in recycled water.

Weisberg chronicled SCCWRP's pioneering efforts to adapt unmanned aerial systems (i.e., drones) for use as a rigorous scientific tool for environmental monitoring applications, including diagnosing hydromodification in stream channels, conducting surveys of trash in waterways, tracking changes in vegetation patterns, and monitoring harmful algal blooms in lakes. Weisberg reported that SCCWRP and its partners recently conducted UAS test flights over Lake Elsinore to measure surface chlorophyll-a concentrations using a digital camera and a multispectral sensor, and compared these findings to satellite data, as well as ground-truthed water sampling data collected at the lake surface and via an underwater glider.

9. CTAG Report

CTAG Chair Paul Alva reported that CTAG reviewed and endorses the presentations the Commission will hear today. He further indicated that CTAG reviewed the State Water Board SWAMP contract and recommends approval; the EPA contract to be considered for approval by the Commission today was not yet available for review by CTAG at the time of their meeting.

10. Contract Review

SCCWRP's Joint Powers Agreement requires Commission approval of contracts of more than \$250,000, and the State of California requests a resolution of acceptance for contracts exceeding \$100,000 offered by the State or Regional Water Boards. Weisberg recommended approval of the following contracts:

- 1) State Water Resources Control Board (\$2,663,039)
SWAMP Special Studies
- 2) EPA (\$470,594)
Developing and Validating Assessments Tools for Ephemeral (dry) Streams

Commissioner Halberstadt motioned to approve the two contracts requiring Commission approval, and Commissioner Alva seconded the motion. The Commission approved the motion unanimously, with Commissioner Larsen abstaining.

Weisberg presented six contracts, all of which have values of \$250,000 or less and thus do not require Commission approval. All six contracts were presented to ensure consistency of the agency's directions with the Commission's intentions.

- 3) EPA (\$199,809)
Developing the Capacity to Assess Stream Function using DNA-based Tools
- 4) EPA (\$10,000)
Update of CRAM Technical Guidance
- 5) NOAA (through Woods Hole Oceanographic Institution) (\$14,350)
Domoic Acid Event Response
- 6) County of Orange (through Aquatic Bioassay Labs) (\$1,833)
CSCI Calculations
- 7) County of San Diego (through Weston Solutions) (\$10,075)
San Diego River Dry Weather Monitoring
- 8) City of San Diego (through AMEC) (\$5,000)
Human Marker Decay Study

The Commission did not raise any objections to the contracts.

11. Microbiological Updates to the California Ocean Plan and Enclosed Bays Plan

Executive Director Weisberg described proposed updates to the State's microbial contamination monitoring requirements that are outlined in recently released draft amendments to the California Ocean Plan. These changes are motivated by EPA's 2012 revised guidance and would replace the existing geometric mean standard of 35 cfu/100 ml with a geometric mean of 30. It would also replace the instantaneous standard of 104 with a requirement that no more than 10% of samples could be above 110. These changes would become part of regulatory requirements, but would not necessarily affect routine beach monitoring efforts, which are driven by the requirements of AB411 legislation. Weisberg also reported that the revised U.S. EPA guidance also endorsed adoption of rapid molecular methods for microbial monitoring and the use of quantitative microbial risk assessment as

a tool for setting site-specific microbial water quality objectives, but draft Ocean Plan amendments are silent on these issues.

12. Quantitative Microbial Risk Assessment

Deputy Director Schiff explained that the U.S. EPA recently issued guidance on using a risk assessment method known as Quantitative Microbial Risk Assessment (QMRA) to set alternative, site-specific objectives for fecal indicator bacteria. However, QMRA has not yet been used to successfully set objectives at a marine beach. SCCWRP has initiated three QMRAs in recent years. Two of the QMRAs were halted after human contamination signatures were detected (Ventura County's Hobie/Kiddie Beaches and Los Angeles County's Inner Cabrillo Beach), and the third QMRA (San Diego's Ocean/Tourmaline Beaches) has entered its final stage, in which managers are evaluating the appropriateness of setting alternative objectives based on site-specific risk assessment analyses.

Commissioner Outwin-Beals commented that the San Diego Regional Board has been actively working to eliminate sources of human contamination identified by SCCWRP's recent source identification work. Commissioner Hashimoto commented that human source tracking with the HF183 marker is vital for setting management priorities, in addition to the key role that HF183 plays in conducting QMRAs.

13. San Diego Cost-Benefit Analysis

Deputy Director Schiff reported on the draft findings of an analysis examining the costs and benefits of various management actions to reduce fecal contamination loading to San Diego coastal waters in wet weather. Schiff stated that SCCWRP was not involved in the economic analysis, but that much of the data used in the economic analysis was derived from SCCWRP's epidemiology studies. Schiff indicated he felt comfortable briefing the Commission about the study as he Chaired a five-member team that served as a scientific review body for the study.

The analysis considered 14 scenarios targeting human sources, stormwater sources, changes to regulatory compliance deadlines, and implementation of stream restorations. The analysis determined that costs are greater than benefits by 10- to 1,000-fold for all 14 scenarios, with the greatest cost-efficiencies achieved by focusing on reduction of human fecal sources. Uncertainty analyses did not significantly change outcomes. Regulated and regulatory parties are now discussing potential modifications to the region's basin plan, and regulated parties are actively working to remediate human contamination sources.

Commissioner Outwin-Beals applauded the efforts of the City and County of San Diego on its remediation efforts to date, and said that Regional Board staff agree on the underlying finding about costs outweighing benefits, but explained that the exact ratios are uncertain as many of the engineering costs used in the analysis are just preliminary estimates. Commissioner Snyder commented that focusing on human sources offers the biggest bang for the buck, and that it remains unclear whether private lateral lines, septic systems and homeless populations also are contributing factors.

Commissioner Unger stated that SCCWRP should limit its activities to those that are consistent with SCCWRP's mission statement: "To enhance the scientific foundation for management of Southern California's ocean and coastal watersheds." Unger continued that Item 8 concerned cost estimation of potential regulatory requirements, which are both in the realm of social science, not science. He expressed concern that SCCWRP has little experience and expertise in social sciences, and relied on outside experts for providing much of the work. Unger stated that delving into issues in which SCCWRP does not have expertise and is reliant solely on contracted expertise undermines the value and relevance of the scientific work that SCCWRP undertakes. Three Commissioners indicated they were not concerned, noting that the Technical Review Committee included two nationally recognized economists and that SCCWRP's role as committee Chair was to facilitate deliberations, which SCCWRP staff excel at. Executive Director Weisberg said the committee's work has concluded, but he will consider Unger's concern when evaluating future Chair opportunities.

14. EPA's Consideration of Coliphage as a Potential New Rec 1 Criteria

Weisberg introduced the topic reminding the Commission that they asked for an update about EPA's plans to consider adopting coliphage as a new Rec 1 criteria and that Principal Scientist Griffith was well-positioned to provide the update as he was one of multiple national experts asked to review EPA's 2016 coliphage report on which the potential criteria will be based, and that SCCWRP's epidemiology studies were foundational to that report. Griffith stated that EPA is considering coliphage as indicators because they are non-pathogenic viruses and their survival in wastewater treatment processes is more comparable to human viruses than are the presently used bacterial indicators, such as Enterococcus. Griffith indicated the draft criteria are scheduled to be released in 2018 for public review, but at the present time EPA has not yet decided whether coliphage monitoring will be recommended as a substitute or as an addition to the presently required Enterococcus monitoring. SCCWRP has begun incorporating coliphage monitoring into several studies that will help determine how many southern California beaches would be affected by any potential change in indicator requirements.

15. Acceptability of rapid Microbiological Measurement methods for use in Southern California

Principal Scientist Griffith discussed SCCWRP's efforts to assess the applicability of rapid, DNA-based methods for microbial contamination monitoring at southern California Beaches. The U.S. EPA approved use of quantitative polymerase chain reaction (qPCR) for measuring Enterococcus on beaches in their 2012 criteria recommendations, but followed that more recently with a guidance manual that required demonstration of equivalency between qPCR and culture-based method before adoption at any beach. SCCWRP and its member agencies collected nearly 3,900 samples from 36 of the region's most historically contaminated beaches. In that study, only a few beaches met the EPA equivalency requirement. The study concluded that biggest impediment was that most of the beaches tested were too clean to have a discernable enough Enterococcus signal to demonstrate equivalency. SCCWRP is in discussions with the EPA about ways to refine the equivalency testing to make it more appropriate for Southern California beaches.

16. Enhancing the Quality and Access to member Agency Long-Term Monitoring Data Sets

CTAG Representative Jeff Armstrong started by reminding the Commission that they had asked CTAG to provide an assessment of what are the costs and benefits of digitizing and archiving four decades of Southern California Bight monitoring data that are collected by the SCCWRP member agencies as part of their routine monitoring programs. CTAG had reported to the Commission in March that they support the idea of making monitoring data more accessible, with the Clean Water Act report having demonstrated the need to bring monitoring data from different agencies/entities into a single repository. Since that March report to the Commission, CTAG has made good progress. They have prioritized four data types: Fish communities, invertebrate communities, sediment chemistry, and fish tissue contaminants. They are starting with data collected from 1995 to 2015, as that material is already electronically available and just needs synchronization. Once those data are completed, CTAG will move to digitize older data after assessing how much effort and staff time were required to get the initial data sets into comparable formats. Armstrong volunteered to return again in six months with an additional progress report. Weisberg commented that SCCWRP is already working with the member agencies to analyze the historical benthic infauna data, which is the farthest ahead in data availability, and the insights gained from this analysis will underscore the value of compiling the long-term data sets. Weisberg volunteered to show these results when CTAG returns with their next progress report in six months.

17. Other Business and Communications

None

18. Future Meeting Agenda Items

Commission Chair Ferrante said that he and Executive Director Weisberg are recommending that the Commission plan their 2018 agendas at the next meeting. Commissioners should submit ideas for 2018 agenda items via email to Weisberg, who will then create an intersessional poll of Commissioners for preferences among the suggested topics. Weisberg and Ferrante will use the results of that poll to slot potential agenda items into the four 2018 Commission meetings, which will be presented to the Commission at its next meeting on December 1.

Weisberg said the past few Commission meetings have had a 9 a.m. start time instead of the traditional 9:30 a.m. start time, and invited Commission feedback on the start time for 2018 meetings. Several Commissioners indicated that the 9:00 start was acceptable.

Weisberg said that the Commission had previously asked to focus the December 2017 meeting around climate change. Commissioner Dojiri reminded the Commission that a member of his staff will give a brief presentation at the next Commission meeting on the City of Los Angeles Bureau of Sanitation's climate resiliency planning efforts. Weisberg indicated that there were four topics that had been discussed as possible agenda items for the December meeting that he recommended delaying or eliminating: 1) A review of EPA's draft cyanotoxin criteria, if they have not yet been released prior to the December Commission meeting, 2) California's CEC recycled water expert panel recommendations, as

the panel's report will not be released until the week after the December Commission meeting, 3) The State's new approach to scientific collection permits, as that had been presented to CTAG, which felt it was too in-the-weeds to be of Commission interest, and 4) the Stormwater Monitoring Coalition's toxicity comparability studies, as the SMC has delayed these studies. Commissioners agreed with these recommendations.

19. Public Comments

No public comments were raised.

20. Adjournment

Commission Chair Ferrante adjourned the meeting at 12:11 PM until the next Commission meeting on December 1, 2017 at 9:00 AM.

Attest:

Bryan Nece
Secretary