

**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 7, 2018
9:00 AM**

COMMISSIONERS PRESENT

Ellen Blake — *U.S. Environmental Protection Agency, Region 9*
Karen Mogus — *State Water Resources Control Board*
Renee Purdy — *Los Angeles Regional Water Quality Control Board*
Terri Reeder — *Santa Ana Regional Water Quality Control Board*
David Barker — *San Diego Regional Water Quality Control Board*
Hassan Rad — *City of Los Angeles*
Robert Ferrante — *Los Angeles County Sanitation Districts*
Jim Colston — *Orange County Sanitation District*
Peter Vroom — *City of San Diego*
Angela George — *Los Angeles County Department of Public Works*
Amanda Carr — *County of Orange*
Todd Snyder (Vice-Chair) — *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*
Marcus Beck — *Scientist*
Peter Chen — *Research Technician*
Jordan Golemo — *Research Technician*
Scott Martindale — *Communications Coordinator*
Shelly Moore — *Senior Scientist*
Joshua Steele — *Scientist*
Susanna Theroux — *Scientist*
David Wanless — *Senior Research Technician*
Ellie Wenger — *Research Technician*
Amy Zimmer-Faust — *Scientist*

OTHERS PRESENT

Jason Freshwater — *Santa Ana Regional Water Quality Control Board*
Janet Hashimoto — *U.S. Environmental Protection Agency, Region 9*
Nikos Melitas — *Los Angeles County Sanitation Districts*

Darrell Nolta — *Public*
Martha Tremblay — *Los Angeles County Sanitation Districts*
Josh Westfall — *Los Angeles County Sanitation Districts*

Commission Chair Robert Ferrante called the meeting to order at 9:05 AM.

Executive Director Weisberg introduced two one-time substitute Commissioners: Terri Reeder, representing the Santa Ana Regional Water Quality Control Board, and Hassan Rad, representing the City of Los Angeles.

CONSENT AGENDA

- 1. Minutes of Meetings Held June 1, 2018**
- 2. Quarterly Financial Statement for the Period Ended June 30, 2018**
- 3. Quarterly Statement of Investments at June 30, 2018**
- 4. Minutes of CTAG Meetings Held August 16, 2018**

Commissioner Carr motioned to approve the Consent Items with minor revisions to the June 1, 2018 minutes, and Commissioner Mogus seconded the motion. The Commission approved the motion unanimously, with Commissioner Herberg abstaining.

REGULAR AGENDA

5. CTAG Report

CTAG Representative Denise Li presented the CTAG report on behalf of CTAG Chair Phil Markle. Li stated that CTAG had two intersessional meetings in the last quarter, in addition to their regular meeting. The first was a meeting to explore detailed progress on SCCWRP's coupled physical-biogeochemical modeling project. The second was to revisit SCCWRP's Contaminants of Emerging Concern (CECs) research plan; she reported that SCCWRP staff and CTAG had reached strong consensus about CEC research priorities. CTAG plans to hold an October 2018 research planning workshop to develop a 10-year research vision for BMP effectiveness and discuss whether it should be adopted as SCCWRP's ninth research theme.

Li provided an update on the status of an ongoing CTAG effort to compile historical monitoring data collected by SCCWRP member agencies dating back to the 1970s. CTAG has been working to develop estimates of staff time necessary to keypunch, compile and synchronize data sets. She reported that about 500 person-days would be required to do this for data back to 1995, with recognition that those data are largely available electronically. She indicated that the labor estimate would be much greater for pre-1995 data and that CTAG needed guidance from the Commissioners since the additional effort would clearly be outside of the normal workload for their staff. One suggestion was to capture this effort as part of the special studies agencies conduct as part of their permit conditions. Several Commissioners requested more time to confer with their staff about these estimates and to chart a path forward. Commissioner Ferrante asked the member

agencies to provide that feedback to Weisberg, then asked Weisberg to suggest a plan for moving forward at the next Commission meeting with SCCWRP in a project facilitation role.

6. Personnel and Finance Committee Report

Commissioner Vroom, Chair of the Personnel and Finance Committee, reported that SCCWRP remains in strong financial health and is on track to reach its target full-time staff size of 45 by the end of 2018. SCCWRP's building lease was recently extended by 11 years, with SCCWRP's landlord committing to tenant improvements that will enable SCCWRP to renovate its laboratory facilities. Vroom said the Committee is recommending approval of Agenda Items 7 and 8.

7. Resolution Clarifying Purchasing Authority of the Executive Director

Executive Director Weisberg stated that, while SCCWRP's Joint Powers Agreement is clear about which incoming contracts require approval by the Commission, they are less clear about Executive Director authority regarding purchases. Following a recommendation by the Personnel and Finance Committee, the Commission agreed to delegate full purchasing authority to the Executive Director. Commissioner Vroom motioned to approve a resolution clarifying this purchasing authority, and Commissioner Carr seconded the motion. The Commission approved the motion unanimously.

8. Resolution to Adopt Fraud Policy

Executive Director Weisberg stated that, based on a recommendation by SCCWRP's auditor, SCCWRP has developed a policy related to the detection and reporting of fraud. Following a recommendation by the Personnel and Finance Committee, Commissioner Herberg motioned to approve adoption of the fraud policy, and Commissioner George seconded the motion. The Commission approved the motion unanimously.

9. Election of Commission Chair and Vice-Chair

Commission Chair Ferrante said that the Commission has traditionally nominated the current Commission Vice Chair to ascend to Commission Chair, but that Commission Vice Chair Halberstadt was unable to attend this meeting. Weisberg said he spoke with Halberstadt and she affirmed her interest in serving as Commission Chair, if elected. Commissioner Carr nominated Halberstadt as Commission Chair, and Commissioner Snyder as Commission Vice Chair. Commissioner Reeder seconded the motion. The Commission approved the motion unanimously.

Leadership of the meeting transitioned from Ferrante to Commission Vice Chair Snyder.

10. Future Meeting Dates

Executive Director Weisberg proposed the following dates for the 2019 Commission meetings:

- March 8, 2019
- June 21, 2019
- September 6, 2019
- December 13, 2019

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

11. Executive Director's Report

Executive Director Weisberg welcomed five individuals to the Commission: (1) Commissioner Ellen Blake from U.S. Environmental Protection Agency, Region 9, replacing Commissioner Nancy Woo, (2) Commissioner James Herberg from the Orange County Sanitation District, (3) Alternate Commissioner Renee Purdy from the Los Angeles Regional Water Quality Control Board, (4) Terri Reeder, a one-time substitute from the Santa Ana Regional Water Quality Control Board, and (5) Hassan Rad, a one-time substitute from the City of Los Angeles. Weisberg thanked Alternate Commissioner Janet Hashimoto for her 27 years of Commission service; Hashimoto will be relocating to Hawaii to take an Intergovernmental Personnel Act assignment with the Hawaii Department of Public Health. Hashimoto said that it was an honor to serve as a SCCWRP Commissioner and that she would miss the opportunity to be immersed in SCCWRP science.

Weisberg described two high-profile events: (1) The California Ocean Protection Council is helping to organize California's Global Climate Action Summit on September 12-14, which will prominently feature ocean acidification research and will help burnish California's reputation as an international leader on climate change, and (2) SCCWRP's 50th anniversary celebration, a one-day event to be held October 11, 2019 at the Aquarium of the Pacific in Long Beach. The Commission's Personnel and Finance Committee has established a 50th Anniversary Planning Committee that has begun planning the event.

Weisberg said that the downside of being a 50-year-old organization is that many of SCCWRP's former employees, Commissioners and other supporters have passed away. Weisberg announced three such recent deaths: (1) former Commissioner Janet Garber, one of the longest-serving Commissioners in SCCWRP history; Deputy Director Ken Schiff recently attended her funeral and said Garber considered serving on the Commission to be one of the highlights of her professional life; (2) Dr. M. James Allen, a fish biologist at SCCWRP for 22 years who served as Principal Investigator for the Fish Biology Department; and (3) Dr. Donald Reish, a former California State University, Long Beach professor and long-time SCCWRP collaborator who trained many scientists that work at SCCWRP and its member agencies.

Weisberg introduced four new SCCWRP employees: (1) David Wanless, a Senior Research Technician in the Microbiology Department; (2) Peter Chen, a Research Technician in the Microbiology Department; (3) Ellie Wenger, a Research Technician in the Chemistry Department; and (4) Jordan Golemo, a Research Technician for Cross-Departmental Technical Support.

Weisberg said SCCWRP is building a reputation as an international leader in incorporating genomics into aquatic monitoring. A recent example is SCCWRP Scientist Susanna Theroux, who has been asked to chair the Molecular Methods Workgroup. This newly formed California Water Quality Monitoring Council Workgroup aims to bring greater consistency and standardization to DNA-based collection and analysis methods.

12. 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 (\$510,000)
Clear Lake Cyanobacteria

Commissioner Ferrante motioned to approve the contract requiring Commission approval, and Commissioner Carr seconded the motion. The Commission approved the motion unanimously, with Commissioner Mogus abstaining.

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

- 2) County of Orange (\$70,000)
Wet Weather Nutrient Analysis
- 3) U.S. Department of Energy (through University of California, Irvine) (\$73,624)
Technical Support to Develop a Kelp Mariculture Model
- 4) Elsinore Valley Metropolitan Water District (through MBC Aquatic Sciences)
(\$6,180) Canyon Lake HABs
- 5) U.S. Navy (through University of Washington) (\$171,773)
Kelp Mitigation for Pteropods
- 6) NOAA (through University of Washington) (\$65,094)
Pteropods as Indicators for Ocean Acidification
- 7) Bureau of Ocean Energy Management (\$100,000)
City of Oceanside (\$24,059)
Oceanside Marine Centre (\$5,500)
Bight'18 Field and Laboratory Services
- 8) NASA (through InnovaPrep) (\$28,699)
NASA Rapid Detection
- 9) San Francisco Estuary Institute (SFEI) (\$10,000)
San Francisco Bay Nutrients Trend Analysis
- 10) Water Research Foundation (WRF) (\$32,000)
Detection of Low Molecular Weight Unknown Compounds

- 11) County of Orange (\$75,000)
Evaluate Sources of Human Fecal Contamination

The Commission did not raise any objections to the contracts.

13. Antibiotic Resistance Study Outcomes

Executive Director Weisberg introduced this presentation by noting that SCCWRP's ongoing study examining antibiotic-resistant bacteria within the wastewater treatment process is one of only two projects undertaken in Weisberg's 22 years at SCCWRP that was directly requested by the Commission. Principal Scientist John Griffith said the study involves examining whether viable antibiotic-resistant bacteria – and the genes that code for antibiotic resistance – are being discharged into the environment following the wastewater treatment process. Griffith indicated that ten POTWs are participating in the study, representing a range of advanced primary treatment, secondary treatment and tertiary treatment facilities. The study is only half done, but Griffith stated that preliminary results indicate that wastewater treatment processes play a critical role in reducing levels of antibiotic-resistant bacterial strains discharged into the environment. In no case was a treatment plant found to serve as an incubator of antibiotic-resistant bacteria. Griffith said the study involves about another nine months of sample collection and full results are expected to be available in about 18 months.

Asked by Commissioner Vroom if the study had identified differences among different geographic areas, Griffith said that inputs to the international treatment plant at the U.S.-Mexico border have disproportionately high levels of some antibiotic resistant bacteria. Asked by Commission Vice Chair Snyder what epidemiological conclusions could be drawn, Griffith stressed that this study is not examining what health risks, if any, are associated with the discharge of antibiotic-resistant bacterial material into the environment. Weisberg added that conducting a health risk modeling study could be considered after this study is completed if the Commissioners felt such a study would be valuable.

14. Newport Bay's Approach to attaining Microbiological Criteria for Shellfish Waters

Executive Director Weisberg began this presentation by explaining that Southern California's water-quality management community has done an exceptional job preventing bacterial levels in water bodies from exceeding thresholds for human recreational contact. However, bacterial levels in most water bodies exceed thresholds for the water quality criteria for shellfish consumption, and the shellfish bacterial standard applies not only to water bodies where shellfish occur, but also to where shellfish could occur. Numerous parties, including State and Regional Board staff, have expressed concern that the standard is both unattainable and based on a poor scientific foundation, being unchanged since the Porter-Cologne Act nearly 50 years ago. That issue will present itself first in Newport Bay, where a TMDL for the SHEL standard is due for implementation in 2022. Weisberg reported on the study design supported by dischargers, regulators and stakeholder groups to assess the scientific basis for the shellfish standard. Depending on the study's outcomes, project participants may recommend revisions to the shellfish bacterial standard, or perhaps develop a site-specific standard. The study will begin next spring and be

conducted in phases, starting with dry weather conditions and advancing to wet weather at a later time.

Commissioner Reeder expressed support for the study and said the Santa Ana Regional Board is examining whether beneficial uses for Newport Bay should be revised. Commissioner Carr echoed Reeder's sentiments, emphasizing that the shellfish bacterial standard will be much more difficult to meet than the human recreational standard.

15. New Genetic Profiling Approaches to Source Tracking for Human Fecal Material

Deputy Director Schiff opened the presentation by explaining that human specific microbial source tracking methods have been highly effective at helping water-quality managers trace fecal contamination to upstream sources during dry weather, and ultimately mitigate contamination sources. However, during wet weather, human-specific microbial source tracking signals are pervasive in Southern California waterways and the coastal ocean. As a result, the management question has evolved from whether there are human sources in stormwater discharges to which human sources are the biggest contributors to stormwater discharges. In response, SCCWRP is developing the next frontier in human fecal source tracking methods, which utilizes genetic profiling of entire microbial communities as opposed to one or two bacteria markers. In concept, the communities found in the sewage collection system are uniquely different than the microbial communities from other human sources such as septic systems or direct deposition from homeless populations. Based on preliminary data from San Diego presented by Schiff, initial results indicate that microbial communities are unique between sewer and storm drain systems using these advanced genetic profiling approaches. These differences in microbial community provide hope that the new tool will detect sewer system inputs if they occur in storm drain samples.

Asked by Commissioner Carr how this method could be used to analyze complex mixtures, Schiff said the approach will enable researchers to narrow the scope of follow-up source identification work. Asked by Commissioner Ferrante how the approach would account for the possibility that the microbial community composition could be altered by other factors, Schiff said researchers are currently working to confirm the consistency from place-to-place and time-to-time to specifically address this issue.

Ferrante commented that the composition of microbial communities would be expected to be very different in wet weather, when there is likely to be considerable mixing of fecal contamination sources. Commissioner Snyder said the new approaches being developed by SCCWRP could play a key role in helping agencies identify sources of fecal contamination that they have difficulty pinpointing now; Snyder also said he would be interested in a follow-up workshop on addressing source tracking in complex mixtures like stormwater. Commissioner Barker said this work is timely because he anticipates the San Diego Regional Board will soon issue an Investigative Order requiring human fecal source tracking in the San Diego River.

16. Toxicity Policy Update

Commissioner Mogus discussed planned revisions to the State's Inland Surface Water and Enclosed Bay Plan for consistent, statewide numeric water quality objectives for acute and

chronic toxicity. The revisions and associated implementation program are meant to create a comparable, yet flexible framework for monitoring toxicity and provide a statewide statistical approach to analyze test results. The Plan revisions are nearing finalization and are very similar to draft revisions presented to stakeholders in 2017-18. The finalized draft is scheduled to undergo a public comment period that closes December 7, 2018; the State Water Board could consider adopting the policy as early as April 2019.

Asked by Commissioner Carr if the Plan revisions would impact toxicity testing required under existing TMDLs (Total Maximum Daily Loads), Mogus said targets codified in existing TMDLs will not be changed. Asked by Commissioner Carr how the Plan revisions might affect efforts to get water bodies removed from the federal 303(d) impaired water-bodies list, Mogus said the issue has not been addressed yet, and guidance on this issue is not part of the Plan revisions. The Commission recognized Darrell Nolta, a member of the public, who asked if the Plan revisions would extend new protections to human health. Mogus said the Plan is designed to protect aquatic life, not human health.

17. Other Business and Communications

None

18. Future Meeting Agenda Items

Executive Director Weisberg said the December 2018 Commission meeting is scheduled to include three presentations that the Commission previously requested: (1) an update on a West Coast physical-biogeochemical ocean modeling program that aims to better understand drivers of ocean acidification and hypoxia in coastal waters, (2) an update on the state of microplastics research, and (3) an update on the future of the California Environmental Data Exchange Network (CEDEN). Commissioner Ferrante asked that Weisberg provide the Commission with an update on planning for the 50th Anniversary event.

19. Public Comments

Darrell Nolta, a member of the public, said he hopes SCCWRP will be involved in an upcoming study examining how to address contamination issues at the Palos Verdes Shelf Superfund Site. Nolta also said while the Commission meeting agenda was available on the SCCWRP web site, he was unable to obtain supporting documents either on the web site or through request at the front desk in advance of the meeting. Executive Director Weisberg said that the documents should have been available by request and that he would ensure such documents are made available in the future.

20. Adjournment

Commission Chair Snyder adjourned the meeting at 11:55 AM until the next Commission meeting on December 7, 2018 at 9:00 AM.

Attest:

Bryan Nece
Secretary