

**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**

**December 7, 2018  
9:00 AM**

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**COMMISSIONERS PRESENT**

David Smith — *U.S. Environmental Protection Agency, Region 9*  
Deborah Halberstadt (Chair) — *California Ocean Protection Council*  
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*  
Mas Dojiri — *City of Los Angeles*  
Robert Ferrante — *Los Angeles County Sanitation Districts*  
James Herberg — *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 (Vice-Chair) — *County of San Diego*

**STAFF PRESENT**

Stephen Weisberg — *Executive Director*  
Bryan Nece — *Administrative Officer*  
Wes Beverlin — *Legal Counsel*  
Steve Bay — *Principal Scientist*  
Keith Maruya — *Principal Scientist*  
Eric Stein — *Principal Scientist*  
Martha Sutula — *Principal Scientist*  
Nabiul Afrooz — *Scientist*  
Nina Bednarsek — *Scientist*  
Faycal Kessouri — *Scientist*  
Scott Martindale — *Communications Coordinator*  
Raphael Mazor — *Supervising Scientist*  
Karen McLaughlin — *Senior Scientist*  
Shelly Moore — *Senior Scientist*  
Susanna Theroux — *Scientist*  
Amy Zimmer-Faust — *Scientist*

**OTHERS PRESENT**

Clarissa Anderson — *Southern California Coastal Ocean Observing System*  
Jon Bishop — *State Water Resources Control Board*  
Joshua Calhoun — *Teaman, Ramirez & Smith, Inc.*

Chris Crompton — *County of Orange*  
Phil Markle — *Los Angeles County Sanitation Districts*  
Nikos Melitas — *Los Angeles County Sanitation Districts*  
Darrell Nolta — *Public*  
George Robertson — *Orange County Sanitation District*  
Martha Tremblay — *Los Angeles County Sanitation Districts*  
Josh Westfall — *Los Angeles County Sanitation Districts*  
Keith Yaeger — *San Diego Regional Water Quality Control Board*

Commission Chair Deborah Halberstadt called the meeting to order at 9:08 AM.

Executive Director Weisberg welcomed Alternate Commissioner David Smith, representing the U.S. Environmental Protection Agency, Region 9, to the Commission; Smith took over for Janet Hashimoto.

## **CONSENT AGENDA**

### **1. Minutes of Meetings Held September 7, 2018**

Commissioner Mogus recommended minor wording changes to the September 7, 2018 minutes. Commissioner Dojiri motioned to approve the minutes with the recommended changes, and Commissioner Carr seconded the motion. The Commission approved the motion unanimously, with Commissioner Anselm abstaining.

### **2. Quarterly Financial Statement for the Period Ended September 30, 2018**

### **3. Quarterly Statement of Investments at September 30, 2018**

### **4. Minutes of CTAG Meetings Held November 8, 2018**

Commissioner Mogus motioned to approve Consent Items 2-4, and Commissioner Dojiri seconded the motion. The Commission approved the motion unanimously.

## **REGULAR AGENDA**

### **5. Personnel and Finance Committee Report**

Commissioner Vroom, Chair of the Personnel and Finance Committee, reported that SCCWRP completed its annual financial audit with a new auditing firm and that the audit identified no significant issues. Because of a recent change in requirements for procurement policies, the auditor found that SCCWRP's procurement policy was no longer compliant – a relatively minor oversight that SCCWRP was remedying and would bring to the Commission for approval at their next meeting. Vroom also said SCCWRP has 44 full-time employees and is targeting reaching its optimal staffing size of 45 in 2019.

### **6. 2016 Financial Audit**

Commissioner Vroom motioned to receive the 2018 Financial Audit, and Commissioner Dojiri seconded the motion. The Commission approved the motion unanimously.

#### **7. Resolution Clarifying Purchasing Authority of the Executive Director**

Executive Director Weisberg introduced this item by explaining that the Commission, at its September 2018 meeting, was briefed that SCCWRP's Joint Powers Agreement is unclear on whether the Executive Director is authorized to make purchases of \$100,000 or more without Commission approval. In September, the Commission voted in favor of a resolution clarifying that the Executive Director has the authority to make purchase of \$100,000 or more in accordance with SCCWRP's procurement policy, but Commission counsel expressed concern that the resolution was passed without a written supporting document. As a result, the Commission was being asked to revote on the resolution to clarify the Executive Director's purchasing authority based on the accompanying written document. Commissioner Anselm motioned to approve the resolution and Commissioner Vroom seconded the motion. The Commission approved the motion unanimously.

#### **8. Executive Director's Report**

Executive Director Weisberg reported that SCCWRP has a new website with a fresh look and new infrastructure designed to improve the accessibility of SCCWRP publications and news articles.

Weisberg provided an update on the Southern California Bight 2018 Regional Monitoring Program (Bight '18). The Sediment Quality element completed sampling at 368 sites with a 98% success rate, and also completed 135 fish trawls with a 94% success rate; over 1,000 sportfish also were successfully collected to assess seafood safety. The Trash element is using data from the fish trawls for its analysis of trash on the Bight seafloor, as well as conducting a trash sampling program in coastal streams in partnership with the Southern California Stormwater Monitoring Coalition. The Harmful Algal Blooms element has begun a pilot test in which mussels are deployed at coastal river mouths as sentinels to assess whether freshwater cyanotoxins are reaching the coastal marine environment during wet weather. The Ocean Acidification (OA) element is preparing to take measurements of seawater chemistry using newly updated calibration procedures and also conduct pilot studies to prepare for the Bight program's first regional assessment of biological impact from OA. The National Oceanic and Atmospheric Administration has committed to following the Bight '18 assessment protocols when conducting its own West Coast-wide OA biological survey in 2020. The Microbiology element is in the process of training member agency labs and preparing an intercalibration exercise. The full study will focus on comparing beach water quality using an EPA-proposed coliphage-based method to the traditional *Enterococcus*-based method for assessing beach water quality.

Weisberg provided an update on a CTAG-led effort to compile historical Southern California Bight monitoring data dating back to the 1970s. Weisberg said that comprehensive data compilation has been a challenge because of the resources required, but that progress is being made after focusing historical data compilation on a topic-specific basis directly relevant to priority management questions. For example, Weisberg stated the first topic-

specific effort was focused on benthic invertebrate data. Weisberg offered to provide a detailed update on the success of this approach at a future Commission meeting.

Weisberg reported that former long-time SCCWRP scientist M. James Allen, a former Principal Scientist for the Fish Biology Department, passed away and a memorial service was held at SCCWRP on November 2018. The memorial was well-attended, with multiple former colleagues and friends of Allen traveling to SCCWRP for the event.

## **9. CTAG Report**

CTAG Chair Phil Markle provided an update on the status of SCCWRP research planning. At an all-day CTAG research planning workshop in October, CTAG helped SCCWRP flesh out a proposed Stormwater BMP research theme. CTAG will review SCCWRP's Microbial Water Quality research theme at an all-day research planning meeting in January 2019, to be followed by a review of SCCWRP's Bioassessment and Eutrophication research themes at a later date. Markle said that CTAG completed an annual prioritization exercise to understand the relative value that member agencies place on each of SCCWRP's research themes. Microbial Water Quality is the No. 1-ranked research priority, followed by Regional Monitoring. CTAG considered elevating Trash Pollution, which includes microplastics, to a SCCWRP research theme, but ultimately recommended that it not be elevated at this time.

Commissioner Dojiri said he was pleased that SCCWRP and CTAG are pursuing development of a Stormwater BMPs research theme, noting that stormwater BMPs are one of the highest-priority research areas of the Santa Monica Bay Restoration Commission.

Markle reported that CTAG recommended approval of four of the contracts requiring Commission approval that CTAG had an opportunity to review (Contacts 1, 2, 4, 5; see Agenda Item 10); the other contracts arrived at SCCWRP after the CTAG meeting.

## **10. Contract Review**

Weisberg requested that two recent contracts be added to the agenda.

- 7) Ocean Protection Council (\$475,000)  
Climate Change Effects on Natural Sediment Transport to the Coast
- 8) State Water Resources Control Board (\$350,000)  
Elkhorn Slough Nutrient TMDL Support

Commissioner Carr motioned to allow the two contracts to be added to the agenda, and Commissioner Dojiri seconded the motion. The Commission approved the motion unanimously.

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 (\$250,000)  
Developing Guidelines for Designing Alternative Compliance Pathway (ACP)  
Monitoring Programs
- 2) State Water Resources Control Board (\$248,000)  
Monitoring Program Review
- 3) State Water Resources Control Board (\$153,361)  
Copper Biotic Ligand Model (BLM) Database and Monitoring Plan
- 4) Bureau of Ocean Energy Management (\$400,000)  
West Coast Ocean Data Portal
- 5) EPA (through Ecosystem Planning & Restoration) (\$604,431)  
Stream Assessment
- 6) City of Los Angeles (\$913,600)  
County of Los Angeles (\$200,000)  
Los Angeles County Sanitation District (\$50,000)  
Los Angeles River Environmental Flow Study
- 7) Ocean Protection Council (\$475,000)  
Climate Change Effects on Natural Sediment Transport to the Coast
- 8) State Water Resources Control Board (\$350,000)  
Elkhorn Slough Nutrient TMDL Support

Asked by Commissioner Carr whether the alternative compliance project would have applicability beyond the Los Angeles region where it is centered, Commissioner Purdy said the intent of the project is to lay a foundation to look at alternative compliance in other regions of Southern California. Executive Director Weisberg said future presentations on the project will illustrate its relevance and applicability across wider geographies.

Commissioner Carr motioned to approve the contracts requiring Commission approval, and Commissioner Vroom seconded the motion. The Commission approved the motion unanimously, with the following abstentions:

Commissioner Mogus abstained on Contracts 1, 2, 3 and 8.

Commissioner Halberstadt abstained on Contract 7.

Commissioners Dojiri, Alva and Ferrante abstained on all contract items under Contract 6.

Commissioner Smith abstained on all contract items

Weisberg presented 15 contracts, all of which have values of \$250,000 or less and thus do not require Commission approval. All 15 contracts were presented to ensure consistency of the agency's directions with the Commission's intentions.

- 9) Orange County Sanitation District (\$248,000)  
Ocean Outfall Plume Modeling
- 10) County of Orange (\$30,330)  
County of Los Angeles (\$30,330)  
County of San Diego (\$30,330)  
County of Riverside (\$30,330)  
County of San Bernardino (\$19,005)  
County of Ventura (\$30,330)  
City of San Diego (\$30,330)  
City of Los Angeles (\$30,330)  
City of Long Beach (\$15,165)  
Caltrans (\$19,005)  
SMC 2018-2019 Regional Monitoring Technical Support
- 11) County of San Diego (through Wood) (\$66,687)  
Tijuana Valley Pathogen Testing
- 12) San Francisco Estuary Institute (SFEI) (\$15,000)  
American River Source Identification
- 13) County of Santa Cruz (\$5,000)  
Santa Cruz Fish Trends
- 14) County of Orange (through Tetra Tech) (\$9,678)  
Human Waste Source Reduction Strategy

The Commission did not raise any objections to the contracts.

#### **11. Ocean Acidification Action Plan**

Executive Director Weisberg explained that the State in October 2018 released California's Ocean Acidification Action Plan and the Commission had asked for a briefing focusing on the strategies most relevant to SCCWRP and its member agencies. Weisberg described the six strategies contained in the Plan and identified the most relevant strategy to member agencies was the call for reducing land-based pollution sources, which can potentially exacerbate coastal acidification. The California Ocean Acidification and Hypoxia Task Force recommended the development of computer models to shed light on what source reduction actions, and to what level of reduction, would be necessary to effectively mitigate OA's ecological impacts. Weisberg further stated that SCCWRP and its scientific partners are playing key roles in the development and validation of these models, which was the next item on the Commission agenda. He also stated that the Task Force appendix called for quantifying the linkage between OA-induced seawater chemistry changes and biological impacts. SCCWRP, through a project that will be described later in the Commission agenda, and the member agencies through their participation in Bight '18, have been working on exactly this issue.

## **12. Physical-Biogeochemical Modeling**

Scientist Faycal Kessouri described the ongoing modeling work that SCCWRP is doing to quantify the extent to which nutrient input reduction would affect acidification and hypoxia in coastal shelf waters. The coupled physical-biogeochemical model incorporates atmospheric forcing, ocean circulation patterns and ocean biogeochemistry cycling. The computationally intensive model includes a resolution of 300 meters in the Southern California Bight – far greater than the standard 4-kilometer resolution that oceanographers typically use farther offshore. He stated that there were three main phases of the project: Building the model, validating the model to ensure managers were comfortable with its predictive capacity, and applying the model to address potential management scenarios. The project is presently in the validation phase. Kessouri stated that SCCWRP member agencies have played an invaluable role in providing the field data that SCCWRP is using to validate the model, and that the model accurately predicting biogeochemical cycling in the Bight. A meeting is being planned for late spring 2019 to discuss preliminary modeling outputs with SCCWRP member agencies and other stakeholders.

## **13. Assessment Endpoints for Ocean Acidification**

Principal Scientist Martha Sutula described studies that SCCWRP is conducting to develop assessment endpoints for interpreting biological responses to ocean acidification. Sutula said scientists are using a range of biological indicators at different life stages and from different habitats to create managerially relevant graphical representations of stressor responses. The graphics will not provide a single biological threshold for OA, but rather paint a more comprehensive picture of the way that biological condition is affected by a host of co-occurring stressors, from ocean circulation patterns to water temperature to specific acidification and hypoxia exposure regimes. Sutula stated that the project involves bringing the leading scientists in the world to SCCWRP to develop scientific consensus on OA biological thresholds for various taxa so that managers will have the confidence necessary to use this information when considering potentially large-scale management actions.

Asked by Commissioner Ferrante how modelers are creating baseline conditions for the Southern California Bight that exclude all anthropogenic influences, Sutula said the modelers are pulling all anthropogenic nutrient influences out of the hindcast models and then running the models. Modelers are still working to define the range of natural variability that should be factored into the models.

## **14. Microplastics in Wastewater Effluent**

Senior Scientist Shelly Moore responded to a Commission request for a state of knowledge summary about the extent of microplastics discharged by wastewater treatment plants. She reported that there have been about 15 studies on this topic yielding an average of 13 microplastics/liter of treated effluent. This is much less than wastewater treatment plant influent since primary treatment alone removes about 98% of microplastics. She also stressed that the estimate is highly variable; up to six orders of magnitude variation in effluent concentrations was reported among the different studies. This variation in effluent concentrations results from differences in treatment processes, input sources, and measurement methods used to quantify microplastics. Studies using light microscopy

methods tend to overestimate microplastics because they don't adequately distinguish them from natural particles (i.e., plant fragments). Meanwhile, more sophisticated measurement techniques, such as fourier-transform infrared spectroscopy (FTIR) and raman spectroscopy, are more precise but comparatively more expensive and labor-intensive. In part because of these methods inconsistencies, scientists do not yet know what portion of the overall microplastic pollution in the environment is originating from treated wastewater effluent discharges vs. other sources. Moore finished by stating that SCCWRP is hosting a workshop in spring 2019 that will bring together microplastics experts from around the world to discuss how to standardize microplastic monitoring methods, which is particularly relevant since there were two recently enacted State laws requiring California to develop standardized methods for monitoring microplastics.

Asked by Commissioner Vroom what portion of microplastics is sinking vs. floating, Moore explained that different manufacturers use many different formulations for different plastics, each of which have different buoyancy characteristics. This is one focus of SCCWRP's future research.

#### **15. SCCWRP's 50<sup>th</sup> Anniversary Celebration**

Executive Director Weisberg said that SCCWRP was formed in 1969 in response to California's Porter-Cologne Water Quality Control Act and that SCCWRP staff is preparing a 50<sup>th</sup> Anniversary event to look back at its history and recognize the people who contributed to its success. Weisberg indicated that he was working with an Anniversary Planning Committee formed by the Commission's Personnel and Finance Committee and that they now had a date for the event: October 11, 2019 at the soon-to-be-opened new wing of the Aquarium of the Pacific in Long Beach. The event will include a daytime program focused on scientific accomplishments, to be followed by an evening reception focused on SCCWRP's greatest success stories and recognizing the individuals responsible for those successes. Staff generated a list of invitees that includes all Commissioners, CTAG Representatives and scientific collaborators – both past and present. Invitees already have been asked to RSVP to an initial interest form. In addition, each Commissioner will be able to invite six guests of their choosing, such as their Board members.

#### **16. Other Business and Communications**

None

#### **17. Future Meeting Agenda Items**

Executive Director Weisberg said that Commissioners were asked to suggest scientific topics for upcoming 2019 Commission meetings, as well as vote on proposed topics. Based on the voting and suggestions, Weisberg presented a suggested breakdown of topics to present at all four 2019 Commission meetings. The March 2019 meeting will have a management effectiveness theme, the June 2019 meeting will have a modeling theme, the September 2019 meeting will have a microbiology theme, and the December 2019 meeting will have a CEC theme.

Commission Chair Halberstadt said the California Ocean Protection Council is beginning to work on aquaculture in the coastal ocean and asked Weisberg to explore how he might do a

presentation about water quality issues associated with aquaculture, especially its link to discharge permit requirements. Commissioner Purdy suggested reporting out on the Bight '18 Microbiology coliphage study; Weisberg said results of the laboratory intercalibration that precedes the full study, as well as some preliminary information from the Bight'18 study should be available by the September Commission meeting slated for a microbiology focus.

**18. Public Comments**

None

**19. Adjournment**

Commission Chair Halberstadt adjourned the meeting at 11:47 AM until the next Commission meeting on March 8, 2019 at 9:00 AM.

Attest:

Bryan Nece  
Secretary