

**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 1, 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*
Deborah Smith — *Los Angeles Regional Water Quality Control Board*
Hope Smythe — *Santa Ana Regional Water Quality Control Board*
David Barker — *San Diego Regional Water Quality Control Board*
Mas Dojiri — *City of Los Angeles*
Robert Ferrante (Chair) — *Los Angeles County Sanitation Districts*
Bob Ghirelli — *Orange County Sanitation District*
Vic Bienes — *City of San Diego*
Arne Anselm — *Ventura County Watershed Protection District*
Angela George — *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*
Marcus Beck — *Scientist*
Scott Martindale — *Communications Coordinator*

OTHERS PRESENT

Paul Alva — *Los Angeles County Department of Public Works*
Rebecca Fitzgerald — *State Water Resources Control Board*
Jennifer Phillips — *State Water Resources Control Board*
Hassan Rad — *City of Los Angeles*
George Robertson — *Orange County Sanitation District*
Peter Vroom — *City of San Diego*

Commission Chair Robert Ferrante called the meeting to order at 9:04 AM.

CONSENT AGENDA

1. Minutes of Meeting Held September 8, 2017

Commissioner Mas Dojiri requested clarification regarding Commissioner Sam Unger's comments at the Commission's September 8 meeting about a recently completed San Diego cost-benefit analysis examining various potential management actions to reduce fecal contamination loading to San Diego rivers and coastal waters in wet weather. Because Commissioner Unger was not present to clarify his remarks, Commission Chair Robert Ferrante requested that Executive Director Weisberg contact Unger to ensure that the minutes accurately reflect Unger's September 8 comments.

Commissioner Dojiri motioned to table approval of the September minutes, and Commissioner Carr seconded the motion. The Commission approved the motion unanimously.

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

3. Quarterly Statement of Investments at September 30, 2017

Commissioner Ghirelli motioned to approve the Consent Items 2-3, and Commissioner Larsen seconded the motion. The Commission approved the motion unanimously.

4. Minutes of CTAG Meetings Held November 2, 2017

Executive Director Weisberg said that CTAG's November 2, 2017 minutes were not available for approval, and recommended pulling the item from the consent agenda. The Commission agreed to remove the CTAG minutes from the consent agenda.

REGULAR AGENDA

5. Personnel and Finance Committee Report

Commissioner Peter Vroom, Chair of the Personnel and Finance Committee, reported that SCCWRP's 2016-17 financial audit had come back exceptionally clean. Because SCCWRP has used the same auditor for more than a decade, the Committee directed staff to issue a Request for Proposals (RFP) for next year's financial audit; the RFP will include an option to renew after the first year for a total five-year contract. Vroom stated that the Executive Director's performance review would proceed in the same manner as in past years. Vroom said that the committee heard an initial presentation on planning for SCCWRP's 50th anniversary celebration in 2019, and requested that SCCWRP put together a proposal containing multiple options, at which point the committee will help staff make decisions regarding cost, invitees and desired outcomes. Vroom also reported that negotiations to renew SCCWRP's building lease were ongoing, with SCCWRP awaiting feedback on a recently submitted proposal to its landlord.

6. 2017 Financial Audit

The 2017 Financial Audit was received and filed by the Commission.

7. Executive Director's Report

Executive Director Weisberg welcomed Vic Bienes, Director of Public Utilities for the City of San Diego, as SCCWRP's newest Commissioner. Commissioner Bienes is replacing Commissioner Halla Razak, who recently left the City for a new job. Commissioner Bienes, who has more than 30 years of experience working on wastewater issues, said he was looking forward to serving on the SCCWRP Commission.

Weisberg introduced Marcus Beck, a Scientist in the Biology Department who started in September 2017. Beck, who earned his Ph.D. at the University of Minnesota, previously was a postdoctoral researcher with the U.S. Environmental Protection Agency in Florida.

Weisberg said that SCCWRP doesn't measure its success only in terms of scientific accomplishments, but also whether the agency is developing a dialogue around science and bringing researchers together to work toward scientific consensus. The Southern California Bight 2018 Regional Monitoring Program (Bight '18), which SCCWRP's member agencies and other partners have initiated planning for, is a strong example of how agencies with diverse priorities and interests come together to develop and answer key questions about regional ecosystem health. Weisberg said Bight '18 planning is going exceptionally well, and there has been strong participation from member agency staff in recent months. All proposed Bight '18 study elements will be presented at the Commission's March 2018 meeting.

Weisberg said that SCCWRP continues to be successful at bringing regulatory and regulated parties together to solve complex problems. As an example, he invited Deputy Director Ken Schiff to provide an update on SCCWRP's efforts to improve reasonable assurance analysis for stormwater planning. Schiff said that SCCWRP in early December 2017 brought together leading stormwater modelers, regulated parties, regional boards and NGOs from across the state to develop recommendations for enhancing confidence in and reducing uncertainty for reasonable assurance analysis. This collaborative approach is the most effective way to improve reasonable assurance analysis for stormwater planning.

Weisberg announced two key upcoming presentations to the State Water Board that highlight the leading role SCCWRP has taken in providing a technical foundation for State policies. First, SCCWRP on December 5 will present a draft assessment framework for implementing the human health regulatory target codified in the State's Sediment Quality Objectives; the framework has been under development for about 10 years, and California is poised to become the only state in the nation and one of the few entities in the world to have this framework in place to protect the health of humans who consume seafood caught in enclosed bays and estuaries. Second, SCCWRP on December 15 will report on the recommendations of a State expert review panel that was recently reconvened by SCCWRP to develop updated recommendations for monitoring emerging contaminants in recycled water.

8. CTAG Report

CTAG Chair Paul Alva reported that Warner Chabot, Executive Director of the San Francisco Estuary Institute, attended the November CTAG meeting and provided insightful

perspective on his organization and how it interacts with SCCWRP. He said CTAG has reviewed and recommends approval of both contracts (Agenda Item 9).

9. 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 (\$307,000)
Nutrient Numeric Endpoint Support
- 2) State Water Resources Control Board (\$150,000)
ELAP Laboratory Intercalibration

Commissioner Anselm motioned to approve the two contracts, and Commissioner Dojiri seconded the motion. The Commission approved the motion unanimously, with Commissioner Larsen abstaining.

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

- 3) County of San Diego (through Geosyntec Consultants) (\$157,500)
Evaluate Sources of Human Fecal Contamination
- 4) City of Ventura (\$50,000)
Santa Clara River Estuary Scientific Review Panel
- 5) San Gabriel River Regional Monitoring Program (\$43,122)
San Gabriel River Regional Monitoring Landscape Modeling
- 6) U.S. EPA (\$45,811)
Green Infrastructure Assessment
- 7) City of San Diego (through Tetra Tech) (\$200,000)
Development of Casual Assessment Tools

The Commission did not raise any objections to the contracts.

10. Climate Change Research

Executive Director Weisberg introduced this item by discussing how far climate change research has come. A decade ago, SCCWRP began working with the Commission to build a climate change program focused around anticipated impacts to water quality. At the time, most climate change research focused around terrestrial issues like wildfires and energy use. Today, SCCWRP has an articulated, multi-faceted research program built around

increasing the number of management options for effectively responding to the local impacts of climate change – namely, the pressures of ocean acidification, sea level rise, changes in hydrography patterns, and changes in water temperature. SCCWRP intentionally focuses on assessing the effects of climate change and the effectiveness of potential management actions, rather than on predictive modeling of the physical drivers, such as atmospheric CO₂. Regarding ocean acidification, SCCWRP is working to establish a scientific foundation for potential nutrient management and carbon sequestration strategies. Regarding sea level rise, SCCWRP is working to understand how best to manage vulnerable coastal wetlands. Regarding hydrographical changes, SCCWRP is working to develop the science that allows optimally balancing environmental flows with other competing demands for flows. Regarding water temperature changes, SCCWRP is working to improve the management foundation for harmful algal blooms.

11. Acidification

Principal Scientist Martha Sutula discussed SCCWRP's efforts to understand the drivers and consequences of ocean acidification and hypoxia on West Coast ecosystems. Through modeling, SCCWRP and its partners are working to understand the effects of human influences (i.e., wastewater discharges, runoff and atmospheric deposition) on coastal waters. SCCWRP member agencies have compiled high-quality field data sets that allow modelers to validate the accuracy of the model's predictions. The models have the potential to inform effective management strategies, especially for nutrient loading. Researchers will interpret the models' outputs by developing biological thresholds of response – a research area that SCCWRP has initiated by working to develop thresholds for pteropods, or sea snails. Furthermore, the models are expected to evolve over time and become more sophisticated and powerful. Finally, SCCWRP is exploring whether kelp culture has the ability to sequester dissolved carbon dioxide; if the kelp can meaningfully alleviate acidification, it could be placed strategically in coastal waters to help buffer against acidification.

12. Ecohydrology

Principal Scientist Eric Stein discussed how climate change is one of many pressures that will impact stream flows and the flow-dependent species that inhabit these streams. Although researchers do not know precisely how weather and rainfall patterns will change, temperatures for both air and water are expected to rise, and there will be a general decrease in precipitation, with more extreme and short-lived wet-weather events. Urban development over the past century has altered flows in Southern California streams, but climate change, along with stormwater best management practices (BMPs), are expected to further alter these systems. Through computer modeling, SCCWRP and its partners are estimating how hydrological flows in Southern California will be impacted by climate change, and how these impacts will alter species distributions.

Commissioner Carr commented that stormwater BMPs generally are not designed to be dialed up and down to meet any particular set of in-stream habitat needs, which could make it challenging for stormwater managers to use BMPs to optimize environmental flow regimes. Stein agreed that this situation would be challenging, but expressed optimism that

understanding environmental flow needs now – and how they will change over time – will help inform the design of future BMPs, as well as inform retrofits for existing BMPs.

13. Sea Level Rise

Principal Scientist Eric Stein discussed the challenges that coastal wetlands will face as sea levels rise and storm surge becomes more frequent. Extreme ocean conditions during the 2015 El Nino season offered a preview of the ecological impacts of sea level rise, including closure of the mouth of estuaries, which can cause estuary water to become hypoxic and triggered massive fish die-offs. Similarly, bird nests were drowned by extreme high tides. Wetlands managers have four main options for responding to sea level rise. They can (1) facilitate migration to higher ground, (2) manage water levels via tide gates and levies, (3) promote accretion through sediment management, or (4) facilitate conversion to deep-water habitat. SCCWRP and its partners have begun developing models to understand what potential combinations of these solutions would preserve maximum wetland acreage in Southern California; researchers also are examining how to help managers make informed decisions about when, where and how to move forward.

Asked by Commissioner Snyder about what types of management scenarios were being modeled, Stein said that researchers are considering changes to both water and sediment management practices, including upstream watershed management practices that fall outside the boundaries of wetlands themselves.

14. Climate Resiliency and Adaptation for City of Los Angeles

Hassan Rad, Regulatory Affairs Division Manager for the City of Los Angeles Bureau of Sanitation, provided an overview of how a sanitation agency is assessing the public safety risks to its infrastructure as a result of climate change. The City of Los Angeles considered multiple scenarios, including more extreme and frequent flooding, risks to landfills from erosion, and damage to coastal infrastructure from tsunamis. The City also projected the costs associated with renovating and retrofitting infrastructure and facilities to be more climate-resilient. Based on the cost analysis, the City's capital replacement costs could be reduced by nearly nine-fold if the City invests in adapting its sanitation infrastructure for climate change.

Commissioner Smith commented that her agency is working to develop improved predictions of flooding risk across the Los Angeles region, which could improve the precision of the City's infrastructure risk analyses. Smith asked whether the City is pursuing outside funding sources to adapt to climate change. Rad answered in the affirmative, but also emphasized that this work will need to be completed regardless. Asked by Commissioner Bienes about public outreach efforts, Rad said his agency is working closely with the Mayor's office.

Commissioner Barker thanked SCCWRP for the presentations and said he especially appreciated the emphasis on the conceptual model for climate change research. He said SCCWRP has been invited to be part of an upcoming San Diego Regional Board planning meeting on climate change research.

Commissioner Dojiri said he appreciated all of the climate change presentations, especially the fact that they revolved around a single overarching topic. Dojiri said Hassan Rad would be happy to send a copy of his written report on climate change adaptation planning to anyone upon request.

Commission Chair Ferrante said he appreciated the climate change presentations and suggested that SCCWRP end each presentation with a managerially relevant question to prompt a discussion.

15. Other Business and Communications

Commissioner Hashimoto announced that Commissioner Nancy Woo will retire in January 2018; Hashimoto will continue to serve as Alternate Commissioner. Executive Director Weisberg commented that Hashimoto is the longest-serving Commissioner, having served as Alternate Commissioner for nearly 28 years.

16. Future Meeting Agenda Items

Executive Director Weisberg reported that Commission agendas traditionally have been developed with the Commission Chair about two weeks before each meeting, which led to the creation of meeting agendas that tended to be more reactive and focused on CTAG priorities. Over the past year, Commissioners have turned agenda planning into a more proactive process, where Commissioners suggest and vote on topics they want to see SCCWRP present.

Weisberg said CTAG generated a preliminary list of proposed agenda topics for 2018, and then SCCWRP invited Commissioners via email to vote and provide feedback on this list. During Commission voting, all of the CTAG-generated topics received numerous votes and strong cross-sector support. Commissioners also proposed additional agenda topics during voting: efficiency studies for stormwater best management practices (BMPs), outcomes of a SCCWRP-led study tracking antibiotic-resistant bacteria and genes in wastewater effluent discharges, an update on advances in Quantitative Microbial Risk Assessment (QMRA), and the state of SCCWRP research on ecohydrology and sea level rise. Also during voting, Commissioners requested that harmful algal blooms be discussed at the Commission meeting focusing on nutrient management, and that regional monitoring be discussed in March 2018 instead of December 2018 to provide opportunities for input before Bight '18 study designs are finalized.

Weisberg presented an initial recommendation for slotting all of the suggested agenda topics into the four 2018 Commission meetings. The March meeting would focus on contaminants of emerging concern, the June meeting would focus on stream biology, the September meeting would focus on nutrients, and the December meeting would focus on microbiology. Weisberg recommended that the Commission meetings for 2018 start at 9 a.m. to accommodate four to five topics per meeting.

Commissioners expressed support for the way that Weisberg organized the 2018 agenda topics. Per the Commission's request, Weisberg said it should be possible to squeeze regional monitoring into the March meeting.

17. Public Comments

No public comments were raised.

18. Adjournment

Commission Chair Ferrante adjourned the meeting at 11:55 AM until the next Commission meeting on March 2, 2018 at 9:00 AM.

Attest:

Bryan Nece
Secretary