

**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**

**June 1, 2018
9:00 AM**

COMMISSIONERS PRESENT

Karen Mogus — *State Water Resources Control Board*
Jennifer Phillips (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*
Jim Colston — *Orange County Sanitation District*
Peter Vroom — *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*
Martha Sutula — *Principal Scientist*
Scott Martindale — *Communications Coordinator*
Kristine Taniguchi-Quan — *Scientist*
Raphael Mazor — *Supervising Scientist*
Susanna Theroux — *Scientist*
Amy Zimmer-Faust — *Scientist*

OTHERS PRESENT

Donald Baird — *Environment and Climate Change Canada*
Bob Ghirelli — *Orange County Sanitation District*
Lisa Haney — *Orange County Sanitation District*
Phil Markle — *Los Angeles County Sanitation Districts*
Nikos Melitas — *Los Angeles County Sanitation Districts*
Darrell Nolta — *Public*

Martha Tremblay — *Los Angeles County Sanitation Districts*

Commission Chair Robert Ferrante called the meeting to order at 9:07 AM.

CONSENT AGENDA

1. Minutes of Meetings Held March 2, 2018

2. Quarterly Financial Statement for the Period Ended March 31, 2018

3. Quarterly Statement of Investments at March 31, 2018

4. Minutes of CTAG Meetings Held February 8, 2018 and May 10, 2018

Commissioner Dojiri motioned to approve the Consent Items with minor revisions to the March 2, 2018 minutes, and Commissioner Colston 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 remains in strong financial health and is on track to hit its target size of 45 full-time staff by December. Vroom said SCCWRP has extended its building lease and will stay at its current facilities for 11 more years, which will enable SCCWRP to invest in updates and refurbishments, particularly to laboratories to ensure SCCWRP remains a first-class research facility. SCCWRP also will update the projectors in its conference rooms and install electric vehicle charging stations for visitors in the parking lot. Vroom said the committee reviewed the 2018-19 Research Plan Executive Summary and Budget, and recommends Commission approval (Agenda Item 9). Vroom also said the committee reviewed the 2018-19 salary resolution and recommends Commission approval (Agenda Item 10).

6. Executive Director's Report

Executive Director Weisberg welcomed the newest Commissioners: (1) Deborah Smith, Executive Officer for the Los Angeles Regional Water Quality Control Board, who assumed the full Commissioner position after serving as Alternate Commissioner for 19 years, making her SCCWRP's fifth longest-running Commissioner; (2) Ellen Blake, Assistant Director of the Water Division for the U.S. Environmental Protection Agency, Region 9, who assumed the role of Commissioner; and (3) Greg Gearheart, Deputy Director of the Office of Information Management and Analysis for the California State Water Resources Control Board, who replaced Darrin Polhemus as Alternate Commissioner. Weisberg thanked two outgoing Commissioners for their service: Polhemus and Bob Ghirelli, Assistant General Manager for the Orange County Sanitation District, who is the third longest-serving Commissioner. Weisberg noted that Ghirelli oversaw Weisberg's hiring more than 20 years

ago. Ghirelli thanked SCCWRP and the Commission for the opportunity to serve, and said he would remain active in planning for SCCWRP's 50th anniversary celebration in 2019.

Weisberg welcomed two new staff members: (1) Dr. Amy Zimmer-Faust, a Scientist in the Microbiology Department, who just completed her postdoctoral studies with the U.S. Environmental Protection Agency, and (2) Dr. Kristine Taniguchi-Quan, a Scientist in the Biology Department, who just completed her Ph.D. from San Diego State University and the University of California, Santa Barbara.

Weisberg provided two technical updates: (1) SCCWRP is moving forward with developing an environmental flows study in the Los Angeles River to provide the State Water Board with a technical foundation for determining how to review wastewater change petitions received under State Water Code Section 1211; SCCWRP member agencies have been invited to be part of an initial scoping meeting on June 18. (2) The State Water Board will hold a workshop on June 19 to discuss a proposed State policy that will require recycled water to be monitored using bioanalytical cell screening assays.

Weisberg provided three administrative updates: (1) SCCWRP is working on an update to its website. SCCWRP will not only upgrade the software, but also will reorganize and streamline the content, and seek to create better alignment with SCCWRP's thematic Research Plan and other communication products, including the Director's Report. Weisberg invited the Commission to preview the new site, which is accessible through a password-protected portal. (2) SCCWRP has begun planning for its 50th anniversary celebration in October 2019. The Commission's Personnel and Finance Committee has created a 50th anniversary planning committee that has begun meeting regularly to identify goals, a program, a venue and a budget for the event. The event is expected to include both a scientific component and a celebration. (3) SCCWRP recently was audited by fire inspectors for building safety, and separately for SCCWRP's workers' compensation insurance program. Neither audit identified any deficiencies.

Asked by Commissioner Colston for an update on an ongoing SCCWRP study examining antibiotic resistant bacteria in wastewater treatment plants, Weisberg said 11 facilities have signed onto the study. The study is one of only two studies that the Commission has requested that SCCWRP initiate. SCCWRP expects to begin analyzing preliminary results by the end of the summer.

7. CTAG Report

CTAG Chair Phil Markle reported that CTAG is planning three intersessional research planning workshops: (1) A workshop to review progress on an ocean acidification model being developed for the Southern California Bight, scheduled for June 26, (2) a reevaluation of SCCWRP's Contaminants of Emerging Concern research theme, scheduled for July 24, and (3) a workshop to flesh out a proposed SCCWRP research theme focusing on program effectiveness.

Commission Chair Ferrante encouraged fellow Commissioners to have their staffs attend the CTAG intersessional meetings, as important work gets done during the intersessionals that cannot be accomplished during the regular CTAG quarterly meetings.

Markle said CTAG reviewed SCCWRP's plan to eliminate the Information Management and Analysis Department, and feels comfortable that critical data-related needs will continue to be met. Markle said CTAG reviewed the contracts requiring Commission approval and recommends approval of both contracts (Agenda Item 8).

8. 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) Ocean Protection Council (\$475,000)
Climate Change Effects on Natural Sediment Transport to the Coast
- 2) Ocean Protection Council (\$425,500)
Screening and Identification of Contaminants of Emerging Concern in Bight'18

Commissioner Carr motioned to approve the two contracts requiring Commission approval, and Commissioner Smythe seconded the motion. The Commission approved the motion unanimously, with Commissioner Phillips abstaining on both contracts.

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 AMEC) (\$57,000)
Eucalyptus Hills Septic Study
- 4) County of San Diego (through Michael Baker International) (\$150,000)
Santa Margarita River Nutrient Management
- 5) County of San Diego (through Weston Solutions) (\$19,971)
Stable Isotope Techniques to Identify Sources in Non-Stormwater Flows
- 6) Fisheries and Oceans Canada (\$160,000)
Electron Microscope Analysis of Beaufort Sea Pteropod
- 7) Department of Fish and Wildlife (\$47,740)
Channel Assessment in Response to Oil Spills
- 8) UC Davis/SeaDoc (\$50,000)
OA Vulnerability in Calcifers in Salish Sea

- 9) NOAA (through University of Washington) (\$19,566)
Impacts on Dungeness Crabs
- 10) Orange County Sanitation District (\$20,000)
Bight'18 Regional Monitoring for Harmful Algal Blooms
- 11) San Francisco Estuary Institute (SFEI) (\$21,000)
Calibration of M-AMBI for SQO in San Francisco Bay
- 12) SFEI (\$5,000)
Review of Reference Beaches Report

The Commission did not raise any objections to the contracts.

9. Fiscal Year 2018/2019 Research Plan and Budget

Executive Director Weisberg introduced the 2018-19 Research Plan Executive Summary and explained that the projects that are planned for the coming year are in close alignment with the priorities of SCCWRP's member agencies. The Information Technology and Visualization research theme has been removed from the 2018-19 Research Plan because it consistently ranked near the bottom of member agency priorities. The Regional Monitoring research theme, which is consistently the No. 1-ranked theme, has a disproportionately small budget line item for the coming year, but only because spending on the Southern California Bight 2018 Regional Monitoring Program is unevenly distributed; 2018 will be devoted primarily to field sampling that is carried out by the member agencies, while subsequent analysis steps that SCCWRP typically leads will increase the size of the budget in subsequent years.

Commission Chair Ferrante recognized Darrell Nolta, a member of the public who wished to comment on this agenda item. Nolta asked whether Bight '18 and SCCWRP would be examining pollutant bioaccumulation in marine life such as great white sharks. Weisberg said Bight regional monitoring focuses on monitoring the condition of multiple types of marine life, particularly benthic invertebrates living in sediment. Sharks and other marine mammals are typically not the focus of biology-based condition monitoring because they are mobile and spend comparatively little time living in the Southern California Bight.

Commissioner George-Moody motioned to approve the research plan and budget, and Commissioner Colston seconded the motion. The Commission approved the motion unanimously.

10. Resolution Establishing Rules Governing Compensation, Benefits, and Personnel, Policies and Procedures

Executive Director Weisberg introduced the salary resolution by noting that it is almost identical to last year's, with salary ranges adjusted upward for cost of living, and an increase in the state minimum wage affecting some part-time employees.

Commissioner Dojiri motioned to approve the resolution, and Commissioner Anselm seconded the motion. The Commission approved the motion unanimously.

11. Science Behind California's Bioassessment/Biostimulatory Policy

Executive Director Weisberg introduced the next two agenda items by explaining that as the state increasingly moves toward biology-based condition assessments of water bodies, SCCWRP has been making significant progress in advancing bioassessment tools.

Supervising Scientist Raphael Mazor began the presentation by explaining that unlike traditional chemistry-based and toxicology-based monitoring, bioassessment tools evaluate the integrated effects of stressors on aquatic life. Although a scientific foundation has been largely developed for conducting California stream bioassessments, the translation of this science into policy is just beginning. A key tool for making this translation is quantitative scoring tools such as the benthic invertebrate-based California Stream Condition Index (CSCI). To develop policy around these scoring tools, managers can take two approaches: (1) setting percentile-based thresholds based on the range of scores, or (2) using an expert panel to set thresholds based on observed degradation of ecological condition. California has focused primarily on percentile-based thresholds, in a manner that is fairly consistent with what other states have done.

Commissioner Snyder stressed the importance of setting thresholds that reflect what is realistically achievable at a given site, and expressed concerns that this issue has not yet been fully addressed. Commissioner Barker said the San Diego Regional Water Quality Control Board is working through these issues right now as it prepares to incorporate biological objectives into basin plans; Barker added that creating transparency around how thresholds are set is of paramount importance. Asked by Commissioner Anselm about how chemistry-based condition assessments would factor into this approach, Barker said both biology and chemistry thresholds would need to be considered, but that multiple lines of evidence will be key to interpreting whether targets are being achieved. Asked by Commissioner Carr how the thresholds would balance aquatic-life biointegrity with the public's reliance on modified streams for flood control, Barker said it is an identified weakness that the San Diego Regional Board is still working to address. Commissioner Mogus echoed Barker's comments, noting that modified streams have slowed down statewide efforts to develop stream biointegrity policy. Asked by Commissioner Dojiri if a fish condition index also might be created, Mazor said too little data have been collected to date to develop such an index.

Principal Scientist Martha Sutula opened the second part of the presentation – focused around biostimulatory policy – by explaining that nutrients themselves are not a concern, but rather biological responses to nutrients. California has benefitted greatly from integrating biointegrity policy development with biostimulatory policy development. Because of strong bioassessment programs run by groups such as the Southern California Stormwater Monitoring Coalition, California already has achieved consensus on a conceptual model and has 10 years of data to investigate the basis for setting biostimulatory thresholds. About 80% of California wadeable streams are meeting preliminary recommended thresholds for indicators such as nitrogen, phosphorous and

organic matter. Through demonstration projects like the ongoing Santa Margarita River nutrient loading study, SCCWRP and its partners are developing a deeper understanding of what is driving biostimulatory impacts and how to properly balance management of these impacts with other human uses, such as the need for flood control. Asked by Commissioner Smythe whether seasonal targets could be appropriate, Sutula answered in the affirmative. Streams, for example, might be able to assimilate higher nutrient loading levels in wet weather than dry weather.

12. Advances in Molecular Biology Methods

Scientist Susanna Theroux began the presentation by explaining that while bioassessments are being increasingly used in management programs, a key challenge remains taxonomic identification. Trained taxonomists are dwindling in numbers, and traditional taxonomic identification under a microscope is labor-intensive and time-consuming. SCCWRP is part of a network of researchers worldwide exploring how DNA-based taxonomic identifications could be used in place of traditional morphological taxonomy to conduct bioassessment work. SCCWRP is developing protocols for DNA-based taxonomic identification, examining the reliability of these molecular taxonomic methods compared to traditional methods, and looking at whether different laboratories can obtain comparable results. Additionally, researchers are looking at the feasibility of using environmental DNA – or DNA from a water sample – to identify organisms, rather than sampling the organisms themselves.

Asked by Commissioner Smythe if molecular taxonomic identification could quantify the number of organisms present in a sample, Theroux said that absolute quantification is possible when examining individual species, but only relative quantification is possible when examining whole communities through use of eDNA. Asked by Commissioner Anselm if eDNA methods could provide insights on spatial extent, Theroux said researchers are working to quantify how quickly eDNA signals degrade.

13. Scientific Advances Regarding Flow Management in California

Principal Scientist Eric Stein began the presentation by explaining that while hydrologic flow patterns are highly managed in California, relatively little is known about the relationship between altered environmental flows and biological responses. Especially as climate change puts new pressures and demands on flow management practices in California, managers are turning to science to understand the ecological consequences of diversions, redirections, impoundments, and other actions that result in flow alterations. The California Water Quality Monitoring Council has established a workgroup of environmental flow technical experts that is focused on understanding what are the ecologically significant components of natural hydrographs; the goal is not to set flow targets by replicating hydrographs in their entirety. The workgroup, which includes participation by SCCWRP, has developed reference hydrographs for watersheds across California; these reference hydrographs will be used to conduct coarse, screening-level analyses and ultimately determine environmental flow targets. The workgroup also is developing a common set of tools and technical approaches that watershed managers will be able to use to conduct more intensive flow target analyses based on site-specific considerations.

Asked by Commissioner Carr how climate change may shift baseline expectations for reference hydrographs, Stein said SCCWRP is studying this issue for the Los Angeles Regional Board. Asked by Carr about how – after going through the process of setting environmental flow targets – managers could realistically alter flows that come from distributed sources, Stein said the first step is determining which ecological endpoints should be protected, then figuring out options for management actions. Commissioner Smith commented that environmental flow targets could have key regional policy and planning implications, as there is a link between flows and water quality.

14. Other Business and Communications

None

15. Future Meeting Agenda Items

Executive Director Weisberg suggested rearranging some of the agenda items that are currently scheduled for the September and December Commission meetings. The Commission agreed to schedule three items currently on the December meeting agenda – antibiotic resistance study outcomes, Newport Bay shellfish microbiological criteria, and novel genetic profiling approaches for human fecal source tracking – for the September meeting instead. Three of the items currently on the September meeting agenda – ocean acidification modeling, microplastics in wastewater effluent, and Quantitative Microbial Risk Assessment (QMRA) – will be moved to December. Weisberg said he would work with Commission leadership to also slot in an update on plans for SCCWRP’s 50th anniversary celebration and two State Water Board updates – toxicity policy and status of the California Environmental Data Exchange Network (CEDEN).

16. Public Comments

Darrell Nolta, who identified himself as a concerned citizen, commended SCCWRP for its work on water pollution issues, but urged SCCWRP – with support from member agencies – to focus on how to effectively remove legacy contaminants from seafloor sediment. Nolta said SCCWRP’s work to develop a technical framework for assessing the human health impacts of sediment contamination has come 40 years too late for people who have potentially been exposed to legacy sediment contaminants at places like the Palos Verdes Shelf Superfund site. Executive Director Weisberg responded by agreeing that earlier enhanced protections for human health would have been nice, but also pointed out that California is the first and only state in the nation that has sediment quality objectives.

17. Adjournment

Commission Chair Ferrante adjourned the meeting at 12:24 PM until the next Commission meeting on September 7, 2018 at 9:00 AM.

Attest:

Bryan Nece
Secretary

