

**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., Costa Mesa, California 92626**

**September 9, 2022
9:00 AM**

COMMISSIONERS PRESENT

Ellen Blake — *U.S. Environmental Protection Agency, Region 9*
Kaitlyn Kalua — *California Ocean Protection Council*
Karen Mogus — *State Water Resources Control Board*
Renee Purdy (Chair) — *Los Angeles Regional Water Quality Control Board*
Eric Lindberg — *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 (Vice Chair) — *City of San Diego*
Arne Anselm — *Ventura County Watershed Protection District*
Keith Lilley — *Los Angeles County Department of Public Works*
Amanda Carr — *County of Orange*
Crystal Benham — *County of San Diego*

OTHER COMMISSIONERS PRESENT

Jo Ann Weber — *County of San Diego*
Martha Tremblay — *Los Angeles County Sanitation Districts*
Lan Wiborg — *Orange County Sanitation District*

STAFF PRESENT

Stephen Weisberg — *Executive Director*
Bryan Nece — *Administrative Officer*
Wes Beverlin — *Legal Counsel*
Ken Schiff — *Deputy Director*
John Griffith — *Department Head*
Eric Stein — *Department Head*
Martha Sutula — *Department Head*
Charles Wong — *Department Head*
Alvina Mehinto — *Department Head*
Elizabeth Fassman-Beck — *Principal Engineer*
Scott Martindale — *Communications Director*
Faycal Kessouri — *Senior Scientist*
Joshua Steele — *Senior Scientist*
Christina Frieder — *Senior Scientist*
Jayme Smith — *Senior Scientist*

Kris Taniguchi-Quan — *Senior Scientist*
Susanna Theroux — *Senior Scientist*
Leah Thornton Hampton — *Scientist*
Zachary Gold — *Scientist*
Jan Walker — *Scientist*
Zachary Gold — *Scientist*
Minna Ho — *Scientist*
Adriana Le Compte-Santiago — *Senior Research Technician*

SCCWRP displayed an opening slide that described the operating procedures for the remote meeting, which was conducted via Zoom. Audience members were invited to address the Commission by making a request via the Zoom Q&A box.

The Commission Chair called the meeting to order at 9:00 AM. It was announced that there would be two one-time replacements for Commissioners. Eric Lindberg is attending the meeting for Commissioner Joy and Kaitlyn Kalua for Commissioner Gold.

CONSENT AGENDA

- 1. Minutes of Meetings Held June 3, 2022**
- 2. Quarterly Financial Statement for the Period Ended June 30, 2022**
- 3. Quarterly Statement of Investments on June 30, 2022**
- 4. Minutes of CTAG Meetings Held August 11, 2022**
- 5. Resolution Authorizing a Remote Participation Meeting**

Commissioner Dojiri motioned to approve the five consent agenda items with minor edits to the minutes, and Commissioner Anselm seconded the motion. The Commission approved the motion by roll call with Blake abstaining on all five items.

REGULAR AGENDA

6. Personnel and Finance Committee Report

Commissioner Ferrante reported that he has been elected Chair of the Personnel and Finance Committee. He stated that SCCWRP remains in strong financial health, ending the most recent fiscal year about \$400,000 in the black with a strong future financial outlook. Following the Commission's decision to make changes to SCCWRP's salary structure in June 2022, SCCWRP employee recruiting has improved. Ferrante reported that the Committee discussed draft changes to SCCWRP's investment, purchasing and capitalization policies recommended by SCCWRP's auditor; these draft policy changes will be brought to the Commission for approval in December 2022. Ferrante said the Committee decided to retain its process for completing the Executive Director's performance review, which starts with a Committee discussion followed by a one-on-one meeting between the Director and the Committee Chair. Ferrante said the Committee has directed staff to develop an initial set of agency metrics that speak to diversity, equity and inclusion at SCCWRP, for discussion at

the Committee's December 2022 meeting. Ferrante said the Committee at its December 2022 meeting also will discuss if and how the Commission should return to in-person and/or hybrid Commission meetings.

7. Election of Commission Chair and Vice-Chair

Executive Director Weisberg explained that the Commission is required to elect a Chair and Vice Chair annually. While elections occur annually, the Commission Chair and Vice Chair typically serve two successive years. The current Chair and Vice Chair have served two years. Additionally, Weisberg noted that if the Chair comes from the regulatory sector, the Vice Chair typically comes from the regulated sector, and vice versa.

Commission Chair Benham nominated Renee Purdy as Commission Chair, and Peter Vroom as Commission Vice Chair. Commissioner Lilley seconded the motion. The Commission agreed to delay voting on this until later in the meeting, to combine this roll-call vote with Agenda Items 8 and 11.

8. Future Meeting Dates

Executive Director Weisberg proposed holding the 2023 Commission meetings on March 3, June 2, September 8, and December 1. Commissioners expressed support for these dates. After hearing this agenda item, the Commission agreed to delay voting on this item until later in the meeting, to combine this roll-call vote with Agenda Items 7 and 11.

9. Executive Director's Report

Executive Director Weisberg reported that SCCWRP operations have largely returned to a pre-COVID state, with about 60% of staff working in the building on any given day and most of the others working in the field or attending in-person meetings at other locations. SCCWRP is requiring that guests present proof of vaccination upon arrival, is making onsite COVID testing available to guests, and is encouraging all guests to wear face masks when in large group settings. Weisberg said that SCCWRP has resumed hosting large, high-profile meetings; Weisberg highlighted two such upcoming meetings: (1) a national scientific conference in September 2022 focusing on advancing management adoption of environmental DNA (eDNA)-based monitoring methods that is expected to attract about 100 in-person attendees; eDNA is the DNA that aquatic organisms shed into their environment, and (2) SCCWRP will host a planning kickoff meeting for the 2023 cycle of the Southern California Bight Regional Monitoring Program (Bight '23) in September 2022 that is expected to attract about 100 in-person attendees. The Bight '23 plenary talks will be webcast, although breakout sessions to plan for individual Bight '23 study elements will not be broadcast because of the difficulty engaging meaningfully with remote participants. Weisberg explained that SCCWRP's member agencies serve as the primary planning engine for Bight '23, and have a significant influence over which study elements are selected and how the elements are scoped and implemented. Weisberg said there already is strong interest in incorporating certain high-profile topics into Bight '23, including microplastics pollution, perfluorinated alkylated substances (PFAS) pollution, eDNA monitoring methods, contamination in shellfish, assessments of eelgrass bed health, and legacy DDT dumping sites.

Weisberg stated that one of the key ways that SCCWRP measures success is whether member agencies do something different as a result of SCCWRP's work. Weisberg highlighted two high-profile examples of SCCWRP's recent successes: (1) The County of San Diego recently decided to end reliance on bacteria culture methods for testing beach water quality in favor of a DNA-based method that SCCWRP played a leading role in vetting and optimizing; Weisberg said the Commission will hear a presentation today that includes five representatives discussing the County's experiences (Agenda Item 13), and (2) the State Water Resources Control Board recently adopted standardized methods for measuring microplastics pollution levels in aquatic environments, paving the way for California to develop a pathway for laboratories that produce microplastics measurement data to earn accreditation in the methods.

Weisberg provided updates on a mass stranding of marine mammals along Central and Southern California beaches that began in September 2022; Weisberg invited Senior Scientist Smith to provide a brief update on SCCWRP's work to explore a possible link between HABs and the mammal strandings document. He also described a fish mass mortality event in San Francisco Bay that and invited Department Head Sutula to explain how a computer model similar to the one that SCCWRP is building for Southern California's coastal ocean, is being used to help determine the relative contributions of HABs and hypoxia to this event. Weisberg finished by alerting the Commission to a coordinated effort underway to map watersheds from San Francisco Bay to the U.S.-Mexico border using LiDAR remote sensing technology; Weisberg invited Department Head Stein to discuss SCCWRP's involvement in this project and to invite the member agencies to get actively involved. Commissioner Carr commented that Orange County Public Works may already have completed similar work and would be in touch to coordinate data sharing.

10. CTAG Report

CTAG Chair Emily Duncan announced two new CTAG representatives: Grant Sharp from Orange County Public Works has replaced Chris Crompton, and Eric Dubinsky from U.S. Environmental Protection Agency, Region 9 has replaced Terry Fleming. Duncan said CTAG is coordinating closely with SCCWRP prior to the Bight '23 kickoff meeting in September 2022. CTAG also has been working closely with SCCWRP on development of two-page educational fact sheets about pressing issues in water-quality management that Commissioners will be able to hand to board members and other decision-makers (Agenda Item 14). CTAG also is in the process of prioritizing among multiple possible scientific investments intended to improve management confidence in computer models developed by SCCWRP that explain the influence of land-based nutrient discharges on coastal ocean health. CTAG also has begun planning for SCCWRP's biennial scientific symposium for member agencies, likely to take place in 2023.

Duncan said CTAG recommends approval of all contracts requiring Commission approval (Agenda Item 11).

11. 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 (\$450,000)
ELAP Training
- 2) Bureau of Ocean Energy Management (\$300,000)
Assessing the Condition of Soft Sediments Surrounding Oil Platforms in the Santa Barbara Channel

Asked by Commission Vice Chair Purdy about the scope of the tasks associated with the BOEM contract, Weisberg said that most of the work will focus on assessing effects of oil platforms, but a portion is allocated to support development of a West Coast ocean health report card.

Commissioner Anselm moved to approve the two contracts along with Agenda Items 7 and 8, with Commissioner Carr seconding the motion. The Commission approved the motion unanimously by roll-call vote, with Commissioner Mogus abstaining on the first contract, and Commissioner Blake abstaining on both contracts.

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

- 3) California Association of Sanitation Agencies (\$225,552)
Ceriodaphnia dubia Interlaboratory Toxicity Testing Study
- 4) EPA (through Ecosystem Planning & Restoration) (\$43,947)
Episodic CRAM Training
- 5) SeaWorld (through San Diego Regional Board SEP Fund) (\$6,000)
Bight Regional Monitoring Program

The Commission did not raise any objections to the contracts.

12. ROMS-BEC Nutrient Modeling Update

Department Head Sutula began this presentation by recapping her June 2022 presentation to the Commission, during which she shared that nutrients from land-based discharges are increasing algal productivity in coastal waters, which, in turn, is decreasing pH and oxygen levels and causing seasonal habitat compression for fish. Sutula explained that today's presentation will focus on how increased removal of nitrogen from coastal discharges – alone or in combination with increasing water recycling – will change the trajectory of effects on coastal ocean health. Based on preliminary work using the ROMS-BEC nutrient model, nitrogen reduction would reduce algal production, which would offset decreases in pH and oxygen levels and would offset reductions in habitat compression. The preliminary modeling results also indicate that increasing water recycling has no effect on total algal

productivity; however, more recycling leads to more intense algal blooms, plus more intense pH and oxygen losses within a smaller area closer to shore. Work is ongoing to compare these modeling results with a modeling scenario in which all local nutrient discharges are removed but natural climate conditions and global climate change remain. Sutula also emphasized that CTAG is playing a leading role in shaping how uncertainty in the models is quantified, which can help improve management confidence in the model's predictions as the basis for decision-making.

Asked by Commissioner Carr how increased water recycling practices are considered in the model, Sutula said an initial simulation has been completed that assumes that 50% as well as 90% of wastewater discharges are recycled, although different scenarios can be modeled, and the model also can be used to study the influence of just a single facility's discharges. Asked by Commissioner Kalua about more detailed data for the recycling scenarios, Sutula said the data are ready to be shared. Asked by Commissioner Ferrante about the influence of coastal upwelling vs. land-based nutrient discharges in influencing coastal ocean health, Sutula said that upwelling is a driving factor, but the modeling work indicates that the effects of land-based discharges are exacerbating the effects of natural upwelling events. Asked by Commissioner Lindberg if nutrient discharges other than nitrogen are being modeled, Sutula said nutrients like phosphorous could be modeled, but that these insights would be less managerially relevant because it is nitrogen that is the primary driver of coastal algal productivity.

Commissioner Mogus explained how the State Water Resources Control Board views SCCWRP's modeling work to date. Mogus said the State believes time is of the essence in making decisions based on the nutrient modeling work to date, even if the work is not considered by all stakeholders to be finished or perfect. She said that the agency is preparing to make significant investments to financially incentivize water recycling agencies to denitrify wastewater at the same time as these agencies are building capacity to recycle more wastewater. Mogus said taking a "carrot" approach is particularly important because the alternative "stick" approach – in which the State pursues development of nutrient criteria – is many years from being realized. Commissioner Barker commented that he supports the State Water Board's position.

Jared Voskuhl from the California Association of Sanitation Agencies (CASA) was invited to comment. Voskuhl congratulated the modeling team on progress to date and expressed support for ongoing efforts to quantify uncertainty in the modeling work. But Voskuhl expressed concern that the modeling work is being presented to regulatory agencies as a tool that is ready for use to inform management decision-making. Executive Director Weisberg responded by explaining that all SCCWRP's measurement and modeling tools contain some level of uncertainty; the key is understanding that potential error and making decisions in context of that uncertainty. For measurement tools, that uncertainty is usually easily quantified, as SCCWRP routinely does with its intercalibration exercises. Quantifying modeling uncertainty is more challenging, but something that SCCWRP is actively pursuing. In this particular case, the management decisions being considered are very costly, so placing the findings into context of uncertainty is crucial to supporting management decision making. Weisberg applauded CASA for showing potential interest in becoming a

funding partner for an external review panel that would help quantify model uncertainty. Amber Baylor from the South Orange County Wastewater Authority was invited to comment. Baylor said independent review of the modeling work is critical and that her agency has committed money to support an independent review of SCCWRP's modeling work. CTAG Representative Ryan Kempster echoed these sentiments, emphasizing that all parties have a vested interest in building confidence in the model's predictions to guide their decision-making.

13. Digital Droplet Case Study

Department Head Griffith began this presentation by explaining that adoption of DNA-based methods for testing beach water quality by the County of San Diego is the culmination of two decades of research, with SCCWRP at the forefront of this work. DNA-based methods can provide same-day results plus can provide insights into whether fecal contamination is from a human source or other animal sources. Griffith described the evolution of DNA-based methods, plus the research that went into ensuring a DNA method known as droplet digital polymerase chain reaction (ddPCR) can be used reliably and in place of traditional culturing testing methods in San Diego County. Griffith also explained that implementation of the new methods coincided with a series of south swell events that led to a larger number of warnings, as lightly treated sewage in Mexican waters traveled northward into southern San Diego County waters. In response to this issue, the County decided to adapt its management strategy by posting warning signs to alert beachgoers when ddPCR testing detects fecal contamination – instead of automatically closing beaches, as is done in the case of a verified sewage spill.

Asked by Commissioner Carr if DNA-based methods have been incorporated into bacterial TMDLs, Griffith said TMDL regulatory thresholds have not yet been developed for DNA-based fecal contamination indicators.

The presentation transitioned to a panel discussion about San Diego County's experiences implementing ddPCR-based beach water quality testing. The panel included three County leaders – Amy Harbert, the County's Director of Environmental Health and Quality; Heather Buonomo, Director of Environmental Health; and Jeremy Corrigan, Director of Agency Operations for the Public Health Laboratory – plus Eric Dubinsky, Life Scientist for the Environmental Protection Agency, Region 9, and Eric Trevena, Environmental Program Manager for the California Department of Public Health. The panelists said ddPCR testing is a more accurate, faster method that the County decided to pursue after receiving feedback from local communities. Shortly after the May 2022 rollout, the County added a third tier known as a warning to its tiered management response system; panelists said the third tier empowers beachgoers to make their own decisions about whether to enter the water during events such as south swells in southern San Diego County that can transport lightly treated sewage from Mexico.

Asked by Commissioner Dojiri how rapidly the County is getting ddPCR testing results, panelists said sampling is conducted from 5:30 a.m. to around 8 a.m., and results are typically reported later in the day between 3 p.m. and 5 p.m.

14. Two Page Fact Sheets

Communications Director Martindale began this presentation by explaining the Commission in June 2022 asked SCCWRP to resume production of two-page educational fact sheets that are intended for Commissioners to be able to hand to board members of their agencies and similar audiences. Martindale said SCCWRP is prioritizing keeping the topics narrowly focused on managerially urgent issues. One fact sheet will be produced per quarter, with each topic corresponding to a presentation that Commissioners will hear at that quarter's Commission meeting.

Commissioners discussed a draft of the first of these fact sheets – focusing on DNA-based methods for beach fecal contamination testing. Commissioners expressed support for the direction SCCWRP is taking and offered minor suggestions for improvement. Rather than approve the draft, the Commission agreed that SCCWRP should produce a draft of a second fact sheet for Commission review in December 2022, so that the Commission will have two draft fact sheets to review and consider.

15. Other Business and Communications

None

16. Future Meeting Agenda Items

Executive Director Weisberg said agenda items being considered for the Commission's December 2022 meeting include: (1) another update on SCCWRP's ongoing ROMS-BEC nutrient modeling work, with a focus on how the modeling is also being applied to other applications, including studying toxin-producing algal blooms, (2) an introduction to a West Coast ocean health report card that SCCWRP is helping to develop, and (3) an update requested by CTAG on an ongoing SCCWRP initiative to ensure toxicity testing using the *Ceriodaphnia dubia* water flea is capable of producing consistently high-quality, comparable results. Commissioner Kalua offered two updates related to the upcoming West Coast ocean health report card presentation: (1) the California Ocean Protection Council is planning to release a draft of the first decadal management review of California's Marine Protected Areas in early 2023, and (2) the OPC ocean health report card is expected to be released in 2025. Commission Chair Purdy requested a presentation in December 2022 on the upcoming September 2022 Bight '23 kickoff meeting.

17. Public Comments

None

18. Adjournment

Commission Chair Crystal Benham adjourned the meeting at 12:14 PM until the next Commission meeting on December 2, 2022 at 9:00 AM.

Attest:

Bryan Nece
Secretary