

**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**

**March 4, 2022  
9:00 AM**

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**COMMISSIONERS PRESENT**

Ellen Blake — *U.S. Environmental Protection Agency, Region 9*  
Mark Gold — *California Ocean Protection Council*  
Karen Mogus — *State Water Resources Control Board*  
Renee Purdy (Vice Chair) — *Los Angeles Regional Water Quality Control Board*  
Jayne Joy — *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*  
Keith Lilley — *Los Angeles County Department of Public Works*  
Amanda Carr — *County of Orange*  
Crystal Benham (Chair) — *County of San Diego*

**OTHER COMMISSIONERS PRESENT**

Chris Crompton — *County of Orange*  
Martha Tremblay — *Los Angeles County Sanitation Districts*  
Jo Ann Weber — *County of San Diego*  
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*  
Alvina Mehinto — *Department Head*  
Martha Sutula — *Department Head*  
Charles Wong — *Department Head*  
Scott Martindale — *Communications Director*  
Sydney Dial — *Research Technician*  
Karen McLaughlin — *Principal Scientist*  
Elizabeth Fassman-Beck — *Principal Engineer*  
Christina Frieder — *Scientist*  
Jayme Smith — *Senior Scientist*

Joshua Steele — *Senior Scientist*  
Kris Taniguchi-Quan — *Scientist*  
Susanna Theroux — *Senior Scientist*  
Leah Thornton Hampton — *Scientist*  
Jan Walker — *Scientist*

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.

Commission Chair Crystal Benham recommended that the Vice Chair lead the meeting because it was Benham's first meeting as a Commissioner. Commission Vice Chair Renee Purdy called the meeting to order at 9:00 AM.

## **CONSENT AGENDA**

- 1. Minutes of Meetings Held December 10, 2021**
- 2. Quarterly Financial Statement for the Period Ended December 31, 2021**
- 3. Quarterly Statement of Investments on December 31, 2021**
- 4. Minutes of CTAG Meetings Held February 19, 2022**
- 5. Resolution Authorizing a Remote Participation Meeting**

Commissioner Ferrante motioned to approve the five consent agenda items, with Commissioner Carr seconding the motion. The Commission approved the motion by roll call with Commissioner Lilley abstaining on Agenda Item 1, and Commissioners Blake and Benham abstaining on all five items.

## **REGULAR AGENDA**

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

Commissioner Peter Vroom, Chair of the Personnel and Finance Committee, reported that SCCWRP remains in strong financial health with high staff productivity, but is facing challenges recruiting new staff. The Committee discussed a proposal to revise and expand SCCWRP's job classifications, including adding a career track for computer programmers who differ in job duties than other SCCWRP scientists, and utilizing a salary survey to adjust some salary ranges; the Commission will be asked to approve the Committee's recommendations when SCCWRP's annual salary resolution comes before the Commission in June 2022. SCCWRP switches auditors about every five years to get a fresh perspective and a request for proposals will be issued this year for a new financial auditing firm. About half of SCCWRP staff are working remotely due to COVID-19 related limitations. SCCWRP began reopening its facility to more visitors at the start of the new year, including hosting the 12<sup>th</sup> International Conference on Urban Drainage Modeling in January 2022 utilizing a hybrid in person-remote format.

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

Executive Director Weisberg welcomed two new Commissioners: Crystal Benham, who replaced Todd Snyder with the County of San Diego Watershed Protection Program and will serve out the remainder of Snyder's Chair term, and Keith Lilley, who has replaced Daniel Lafferty with the Los Angeles County Flood Control District. Weisberg also announced that Chris Crompton, Alternate Commissioner for Orange County Public Works, is retiring after a 37-year career, including serving as the founding CTAG Representative from his agency for the past 17 years and as an Alternate Commissioner for 14 years.

Weisberg announced that SCCWRP published its 2021 Annual Report and encouraged Commissioners to request extra copies to hand out to Executive staff, governing Boards, and others.

Weisberg provided an update on an ongoing national effort to monitor COVID-19 infections in sewersheds by measuring virus levels in wastewater influent. As monitoring capacity has been built to support routine monitoring of wastewater influent, including by SCCWRP's POTW member agencies, the U.S. Centers for Disease Control and Prevention (CDC) has made wastewater-based epidemiology data a focal point of its efforts to track COVID-19 infections and understand how COVID-19 variants are spreading (or contracting). The California Department of Public Health was building statewide capacity to conduct wastewater-based epidemiology utilizing wastewater influent monitoring at multiple treatment plants statewide. In support of this objective, SCCWRP is leading a CDPH laboratory intercalibration exercise to ensure consistent, high-quality data are being generated, and lab-to-lab comparability is sufficient to combine data streams across the state.

Weisberg said the State of Oregon has asked SCCWRP to be a scientific adviser in its ongoing efforts to develop an integrated report impairment assessment approach for ocean acidification and hypoxia. Commission Vice Chair Purdy asked Weisberg to provide an update to the Commission on the Oregon effort at a future meeting.

## **8. CTAG Report**

CTAG Past Chair Sam Choi announced that Emily Duncan from the Los Angeles Regional Water Quality Control Board has been elected CTAG Chair, and David Laak from the Ventura County Watershed Protection District has been elected Vice Chair. Choi and Laak will lead CTAG while Duncan is on parental leave. Choi said CTAG has not reached a decision yet about when to resume in-person meetings. Choi stated CTAG is planning an intersessional CTAG planning meeting to focus on SCCWRP's Regional Monitoring thematic area, including strategizing for the upcoming 2023 cycle of the Southern California Bight Regional Monitoring Program. Choi added that CTAG recommends that the Commission hear an update on SCCWRP's ongoing ocean acidification and hypoxia modeling initiative using a coupled ROMS-BEC model (Regional Ocean Modeling System-Biogeochemical Elemental Cycling).

Choi commented that CTAG had no recommendation for contract approvals (Agenda Item 9) because no pending contracts requiring Commission approval were active at the time of CTAG's February 2022 meeting.

## **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) Ocean Protection Council (\$499,945)  
Multi-stressor Tools to Interpret Effects of Acidification, Hypoxia, and Warming on Southern California Current Marine Calcifiers

Weisberg noted that while this contract is an addendum to an existing Commission-approved contract and thus technically does not require Commission approval, SCCWRP is requesting a Commission vote to ensure consistency of SCCWRP's directions with the Commission's intentions. Commissioner Dojiri motioned to approve the contract, and Commissioner Carr seconded the motion. The Commission approved the motion by roll call, with Commissioners Mogus, Blake and Gold abstaining.

Weisberg presented the remaining four 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.

- 2) San Diego County (through Wood) (\$189,981)  
Rainbow Creek Source Identification
- 3) Los Angeles County (\$50,000)  
Facilitating Review Panel
- 4) NOAA (through CSS, Inc.) (\$3,800)  
Bioanalytical Screening of Sediment Samples
- 5) University of Washington (through Puget Sound Restoration Fund) (\$21,000)  
Scanning Electron Microscopy for Pteropod and Megalopae Dissolution

The Commission did not raise any questions about, or objections to, the contracts.

## **10. Microplastics Management**

Executive Director Weisberg began by noting his presentation was requested by the Commission as a description of how microplastics management is evolving in California, rather than a presentation focused on research SCCWRP. He stated that California has become an international leader in microplastics management because of two legislative mandates: (1) SB 1422, which requires routine monitoring of microplastics in drinking water, and (2) SB 1263, which requires the creation of a microplastics management

strategy for the California ocean. In response to SB 1263, the California Ocean Protection Council developed and adopted a Statewide Microplastics Strategy – the first of its kind in the world – that outlines solutions and other actions that the State can take now to curb microplastics pollution, as well as a roadmap for advancing science to inform future management actions.

Dr. Weisberg then described the role SCCWRP has played in advancing microplastics science. First, SCCWRP is building the scientific foundation for California to adopt methods that will bring consistency and standardization to microplastics measurements. Following an internationally-recognized microplastics laboratory intercalibration study, SCCWRP has been working with the California Environmental Laboratory Accreditation Program (ELAP) to develop protocols for assessing laboratory performance and accreditation for these new methods. Moreover, SCCWRP is working with the SWRCB to develop a microplastics analytical workflow integrating quick and inexpensive screening methods with more labor intensive and quantitative confirmatory methods. Second, SCCWRP is working with other scientists to quantify health risks associated with microplastics exposure by developing a multi-step framework for management decision making based on likelihood of aquatic organisms to be adversely affected by microplastic exposure. Third, the SWRCB has asked SCCWRP to implement the first year of drinking-water monitoring, which will be an opportunity for SCCWRP to test-drive a range of potential monitoring methods. Fourth, SCCWRP is continuing to characterize microplastics occurrence and fate in the environment, including exploring how to integrate microplastics monitoring into the Southern California Bight 2023 Regional Monitoring Program.

Commissioner Gold stressed the OPC's microplastics strategy represents the first comprehensive management strategy for microplastics nationally and internationally. He added the OPC is taking a precautionary approach to microplastics management, recognizing that while more science is needed, it is more difficult to remove microplastics from the environment than to prevent them from being introduced. Thus, solutions like installing microplastics filters in washers and dryers are part of the OPC's management strategy. Gold said the OPC is investing at least \$2 million over the next two years on microplastics issues. Commissioner Ferrante commended the OPC for developing a management strategy that focuses on source control, noting that managers are struggling to deal with contaminants like PFAS (per- and polyfluoroalkyl substances) now because of a lack of a historical source-control strategy. Commissioner Vroom said his staff is excited by SCCWRP's microplastics research and has budgeted purchases of instruments for measuring microplastics. Asked by Commissioner Lilley about stormwater BMPs' efficacy in removing microplastics, Principal Engineer Fassman-Beck replied little data exist, but what data do exist indicates enormous quantities of microplastic in stormwater. Responding to Commissioner Gold's suggestion that stormwater management agencies move aggressively on microplastics before regulations are developed, Commissioner Carr noted stormwater managers are in favor of source control rather than the more expensive option of treating stormwater. Commission Vice-Chair Purdy suggested replicating SCCWRP's early 2000's runoff investigations documenting which land-use types in Southern California are responsible for various runoff pollutants – this time with a focus on microplastics.

## **11. Bight '18 Progress Report and Bight '23 Planning Process**

Deputy Director Schiff began this series of presentations on the 2018 cycle of the Southern California Bight Regional Monitoring Program by explaining that the program is an integrated, coordinated initiative that runs in five-year cycles since the early 1990's. The grassroots, bottom-up approach to designing and implementing the program has ensured its long-term viability, and today it has become an international model. With Bight '23 field sampling scheduled to begin in 15 months, SCCWRP has begun working with its member agencies to develop consensus on which Bight study elements to pursue and who to recruit as participants. This was the second of a two-part presentation that carried over from the last Commission meeting in December 2021 that included findings on regional monitoring of trash, bioaccumulation, and harmful algal blooms.

Principal Scientist McLaughlin presented on the Sediment Quality study element of the Bight program, the foundational element of the Bight program. The Sediment Quality element addresses questions about extent and magnitude of contaminant impacts throughout southern California, and trends in these impacts. The findings were that 98% of the coastal seafloor are unimpacted or likely unimpacted by sediment contamination, but not all habitats are in equally good condition. Specific habitats such as estuaries and marinas are disproportionately impacted by sediment contamination with over half of their area classified as impacted or likely impacted. The Sediment Quality element has expanded over time to investigate new habitats and new types of contaminants, providing a platform for investigating issues before final decisions are made about incorporating prescriptive monitoring requirements into discharge permits when they are unnecessary. Looking ahead, the Bight '23 program is considering moving sediment quality investigations into deeper waters, doing causal assessments to understand the reasons for high toxicity, and examining additional constituents of emerging concern (CECs) such as PFAS and other current-use pesticides.

Commissioner Gold commented that moving sediment quality investigations into deeper coastal waters could provide insights into ecological impacts from numerous dump sites, including munitions, oil and petroleum waste, and recently discovered barrels of DDT manufacturing waste. Commissioner Blake said numerous conversations are underway at the federal level to decide how to respond to the barrels found in deep water and other historical dumping practices in federal waters. Asked by Commissioner Carr about the possibility of finding additional Bight program partners to study sediment quality impacts in coastal waters, Schiff said SCCWRP is willing to find these partners if Commissioners agree that moving into deeper waters is valuable to the member agencies.

Department Head Griffith began the second Bight '18 presentation, which described the microbiology component, explaining that the U.S. Environmental Protection Agency has been working toward developing coliphage as a new beach water quality indicator. Coliphage is a viral indicator of fecal contamination, which is thought to be more similar in survival to the viral pathogens that sicken beachgoers compared to the traditional bacterial indicators currently in use. Bight '18 compared the performance of the EPA coliphage method to traditional bacterial methods using *Enterococcus* for monitoring fecal

contamination at Southern California beaches. Twelve laboratories that participated in the Bight'18 monitoring were trained to conduct the coliphage assay, and intercalibration studies demonstrated their proficiency using the EPA coliphage method. Results indicated *Enterococcus* and coliphage methods produced similar outcomes, with nearly every problematic beach identified by *Enterococcus* also having high coliphage values, and vice versa. The rare exception were two beaches that receive river discharges containing chlorinated/dechlorinated treated wastewater – a condition where bacteria were killed but viruses survived.

Looking ahead to Bight '23, Griffith suggested that the Bight program consider a study to validate the utility of a rapid, DNA-based method known as ddPCR (droplet digital polymerase chain reaction) to measure fecal contamination in beach water. San Diego County recently received regulatory approval to replace its traditional but slow culture-based methods with ddPCR after going through a rigorous comparison study. Scaling up this comparison study into a regional survey could pave the way for gaining regulatory approvals to use ddPCR for fecal contamination monitoring at beach sites across Southern California.

Asked by Commissioner Gold how quickly ddPCR yields results, Griffith said about two hours from when samples arrive in the laboratory, compared to 24 hours or more for growth-based methods currently used. Several Commissioners indicated that would be especially useful during events like sewage spills when managers need to rapidly understand how far contamination has spread, or to rapidly identify beaches that are clean and safe to reopen.

Principal Scientist McLaughlin introduced the third Bight '18 presentation, which was on ocean acidification (OA). The previous Bight survey focused on seawater carbon chemistry and found that Southern California Bight waters were becoming acidic. The Bight'18 focus was on assessing whether biological effects of acidification were occurring, with a two-part process. The first part was to determine which sentinel species are found in sufficient abundance in Southern California waters for routine monitoring and how to best assess potential damage to these biota from OA. The conclusion from this is there are two vulnerable planktonic organisms – pteropods and crab larvae – that make excellent sentinels of OA impacts by measuring the dissolution of their shells under a scanning electron microscope. The second part was to obtain preliminary data about the extent of shell dissolution in these organisms, which is still ongoing. SCCWRP will continue this second part in Bight'23, collaborating with three other West Coast monitoring programs including NOAA, CalCOFI and a central coast regional cooperative. The goal is to jointly use comparable methods and indicators developed in Bight'18 to quantify the extent and magnitude of OA impacts from Alaska to Mexico.

Commissioner Vroom asked about the consistency of shell dissolution within species, to which McLaughlin replied that crabs show more variability than pteropods. Commissioner Blake commented that EPA might be in a position to partner with the Bight program on future OA monitoring.

## **12. Other Business and Communications**

Commissioner Gold provided an update on OPC's ongoing work that is relevant to other SCCWRP member agencies. He announced that the OPC recently funded two major ocean acidification projects – including one to SCCWRP and its collaborators - to help provide data the State Water Resources Control Board needs to develop informed management actions around OA. Gold said the OPC has also developed a sea level rise management plan for California and noted the public comment period for the plan is still open.

## **13. Future Meeting Agenda Items**

Executive Director Weisberg said CTAG recommended the Commission hear an update at its June 2022 meeting on modeling simulations being conducted by SCCWRP to understand the biological effects of ocean acidification and hypoxia (OAH) in Southern California coastal waters. An update will also be provided on the State of Oregon's ongoing efforts to develop OAH criteria. Weisberg said the Commission at its June 2022 meeting also will review the 2022-2023 SCCWRP Research Plan Executive Summary and annual budget. Weisberg suggested that he work with CTAG to flesh out the remainder of the June 2022 agenda. Commissioners expressed support for all of these recommendations.

## **14. Public Comments**

None

## **15. Adjournment**

Commission Chair Renee Purdy adjourned the meeting at 11:40 AM until the next Commission meeting on June 3, 2022 at 9:00 AM.

Attest:

Bryan Nece  
Secretary