Blue Ribbon Committee for the Rehabilitation of Clear Lake (Committee)

Meeting #20
1:00 pm-4:00 pm
June 22, 2022

Meeting Summary[1]

Attendees:

See Appendix A

Action Items:

1. Members of the Blue Ribbon Committee for the Rehabilitation of Clear Lake (Committee) unanimously approved the May 25th Committee meeting summary with modifications. California State University, Sacramento, Consensus and Collaboration Program (CCP) staff will post the summary as final to the Committee's website at https://resources.ca.gov/Initiatives/Blue-Ribbon-Committee-for-the-Rehabilitation-of-Clear-Lake.

2. All proposals for Committee consideration were unanimously approved by the 10 Committee members present.

Welcome and Introductions

Sam Magill, CCP, opened the meeting and reviewed the agenda. Eric Sklar, Committee Chair, thanked participants for their participation and commitment to finalizing 2022 proposals. The primary purpose of the meeting was to review project proposals from the May 25th meeting that needed further refinement and (if possible) reach Committee consensus on those projects. Committee approved projects will be transmitted to the California Natural Resources Agency (Resources) for recommended funding and implementation.

After opening comments, Committee members and presenters introduced themselves. A complete list of meeting attendees is listed in **Appendix A**. Mr. Magill noted that a quorum was reached. **Note that 10 of 15 total members were present.**

Meeting materials, including this summary and all presentations, are available for review on the Committee's website at https://resources.ca.gov/Initiatives/Blue-Ribbon-Committee-for-the-Rehabilitation-of-Clear-Lake.

[1] Except as specifically noted, all comments reflected in the summary were derived from Committee Member statements. Where applicable, specific responses are provided to individual comments/questions.

Items for Committee Approval

Mr. Magill asked for Committee approval of the May 25th Committee meeting summary. Scott Harter, Lake County Special Districts, asked that his name be corrected on page 8 of the summary. Additionally, Harry Lyons, Lake County Resource Conservation District, noted that the statements made by Mr. Magill made regarding the completion of the property acquisition and the designing phase are incorrect. CCP will make the requested modifications. Committee members present unanimously approved the summary with the corrections. CCP will post it as final to the Committee website (**see Action Item #1**).

Presentation and Approval of Revised Recommendations

Mr. Magill presented a recap of the of the proposals approved at the May 25, 2022 BRC meeting. He noted that the goal for the meeting is to finalize the proposals and submit any final comments to the Natural Resource Agency by July 1st. He reviewed the approval process and welcomed the first presenter.

Lake County AEM Survey of Lake County Groundwater Basins

William Fox, Lake County Water Resources Department, provided a presentation addressing the questions and concerns from the May 25th BRC meeting. The proposed project cost is: $300,000.

Following the presentation, no discussion was recorded.

The project was unanimously approved by attending members.

Scotts Valley Aquifer Conditions Evaluation

Cab Esposito, Luhdorff & Scalmanini, Consulting Engineers, provided a presentation addressing the questions and concerns from the May 25th BRC meeting. The proposal will characterize and evaluate aquifer conditions in Scotts Valley. The proposed project cost: $80,000. After the presentation, the following discussion was recorded:

- Terre Logsdon, Scotts Valley Band of Pomo Indians, thanked the committee members for their consideration of the proposal.
- Bob Schneider, Central Valley Regional Water Quality Control Board, asked if the intention is to analyze historical water levels in the basin and if there is subsidence in the basin and if so, how much. Mr. Esposito responded that the effort would incorporate the start date and groundwater levels that will also include precipitation. Regarding the subsidence, Mr. Esposito will have to follow-up.
- Sarah Ryan, Big Valley Band of Pomo Indians, asked how granular will the actual crop acreage be. Mr. Esposito responded that they will use a 250-meter scale and each one of those 250 by 250-meter cells will be a single type of crop.

- Charlie Alpers, USGS, noted that USGS would like to get crop data from Scotts Valley at the 250-meter scale to inform their modeling efforts. Additionally, he noted that regarding water balance, the SPF and sparrow models both incorporate water flow and storage.

The project was unanimously approved by all members present.

Hypolimnetic Oxygenation Pilot Project

Alicia Cortes, UC Davis Tahoe Environmental Research Center (TERC), provided a presentation addressing the questions from the Committee Members from the May 25th BRC meeting. The project will conduct a research project that consists of the design, construction, implementation, monitoring, water testing, and scenario testing of Hypolimnetic Oxygenation in the Oaks Arm of Clear Lake, CA. TERC estimates a total cost of $2,250,000 over a 2-year period. After the presentation, the following conversation was recorded:

- Ms. Ryan asked if they were measuring total or dissolved arsenic. Ms. Cortes responded that they are measuring dissolved arsenic.
- Mr. Magill clarified that the previously proposed budget was 2.2 million and is now 2.25 million for outreach and metals monitoring in situ monitoring once the facility is constructed.
- Mr. Harter asked how the potential dissolved oxygen levels will compare to the oxide period of the lake so that they never exceed nine milligrams per liter. Ms. Cortes responded that they have a threshold within the proposal of 3.5 as a minimum. She noted that she would like to increase the concentration of oxygen to nine, but it is highly unlikely due to the large surface area of Clear Lake and intermittent mixing periods.
- Eddie Crandell, Lake County Board of Supervisors, expressed support for the proposal after recent discussions with the TERC team, and requested regular updates at Committee and Subcommittee meetings. Mr. Magill noted that long-term sustainability is the biggest concern for the majority of the proposals and will have further discussions with the subcommittees and determine what the next steps should be.
- Karola Kennedy, Koi Nation of Northern California, asked who has ownership of the hypolimnetic oxygenation system. Mr. Schladow responded that if it follows normal state contracting processes then it will be owned by Resources.
- Mr. Sklar mentioned that there is a strong State commitment to long-term funding for the restoration of Clear Lake. He also agreed that a project-specific subcommittee is needed to focus on the sustainability of the project.
- Jay Lund, UC Davis, stated that the project focuses on fixing the problems in Clear Lake and is economically feasible.
- Mr. Schneider noted there are a lot of operational decisions to be made in the future. Ms. Cortes responded that the pilot project will give guidance on the operational strategies that need to be followed. Mr. Schneider responded that the research being done by Big Valley could be used to identify hot spots within the lake.
- Ms. Ryan asked if there will be some flexibility in the operations of the pilot project to be able to correct itself. Additionally, she thanked them for doing the base research and evaluating the

data regarding the release of metals and other causes that may lead to a clean water act violation. Ms. Cortes responded that based on data from an array of monitoring sites, when hypoxic conditions are detected, the system would be switched on. As Clear Lake mixes and oxygen levels increase to suitable levels, the system would be switched off.

The project was unanimously approved by all Committee members present at the meeting.

Presentation Updates and Discussion of Informational Items

Central Valley Regional Water Quality Control Board Environmental Drivers Updates

Jayme Smith and Dave Caron, Southern California Coastal Water Research Project provided an overview of the results from the environmental drivers of HABS and cyanotoxins study in Clear Lake (2020-2021). The presentation included an overview of the field studies that highlighted the environmental sampling. The goal of the project is to conduct field surveys to document and characterize the physical and chemical drivers of cyanobacterial blooms. Identify the environmental drivers leading to the production of cyanotoxins. Lastly, recommend approaches to manage and mitigate harmful cyanobacterial blooms in Clear Lake.

After the presentation was completed, the following discussion was recorded:

- Angela DePalma-Dow, Lake County Water Resources, asked how SCCWRP's data translates to potential management actions to address HABs. Mr. Caron responded SCCWRP is still trying to understand the overall drivers of HAB production. Regulatory mechanisms like the Water Board's Total Maximum Daily Loads (TMDL) could be revised based on the data and *could* be more stringent to address internal loading issues. However, he also noted that nutrients currently present in lakebed sediment are likely enough to drive HABs on their own, so solutions need to be developed for addressing those nutrient sources (as opposed to sources upstream/new nutrients entering the lake alone).
- Mr. Fox referenced the presentation and asked if the SCCWRP samples were primarily taken in the Narrows. Mr. Caron confirmed the sampling array was located in the Narrows, and that there was enough wave action to move the instrument most of the time. Additionally, he noted that there were periods of quiescence that were interesting. Mr. Fox then asked if they have the opportunity to review the new data from the Lower Arm and asked if they found different drivers at the three different arms. Mr. Caron responded that he believes each arm acts differently; even with this kind of instrumentation, there is a limit to the type of synoptic information you can analyze.
- Ms. Ryan referenced the data and asked if the target of 73 microgram of chlorophyll A should be lowered. Mr. Caron responded that the goal is to always shoot for lower numbers. He noted that chlorophyll is the only good/reliable biological parameter for phytoplankton but has its limitations. Ms. Smith agreed and suggested lower numbers could be useful; this is supported by forthcoming State biostimulatory policies. That said 73 microgram target has been in place for over a decade though, and still hasn't been reached and should be.

UC Davis Center for Regional Change (CRC) Updates

Bernadette Austin and Clare Cannon, Alyssa UC Davis CRC, provided an overview presentation of the UC Davis Clear Lake project updates. These projects have been approved and are in the final phases of contracting with NRCS. Ms. Cannon noted that the projects approach is rooted in respectful Tribal and lake-wide partnerships.

After the presentation was completed, the following discussion was recorded:

- Ms. Austin noted that as they embark on the environmental education and related work with citizen science, she encourages all individuals looking to collaborate with CRC to reach out via email.
- Alyssa Nelson, UC Davis, encouraged members to ask any question.

All presentations are available on the Committee website and upon request to Sam Magill at s.magill@csus.edu.

Public Comment

- Ms. DePalma-Dow shared an event called Water Quality Wednesday that will be held on July 6th, 2022, at 6 pm. The webinar can be accessed via Zoom Webinar, the Facebook of the County of Lake, and Peg TV. The presentations will be on Shoreline science and management.

- Geneva Thompson, Natural Resources Agency shared that the legislature adopted part of the governor's budget proposal which included the Clear Lake budget proposal for the $1.248 million that was submitted through the budget change proposal process. The funding is for the continuation of the Upper Watershed Modeling project and the End Lake Mercury Modeling project.

Next Steps

Mr. Magill noted that the Technical Subcommittee meeting will be held on June 23, 2022 at 1 pm and the Socioeconomic Subcommittee will be held on June 28, 2022 at 2:30 pm. He encouraged any interested members to contact him to be added to the mailing list.

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Committee Members Present			
First	**Last**	**Organization**	**Title**
Bob	Schneider	Central Valley Regional Water Quality Control Board	Executive Director
Eddie	Crandell	Lake County Board of Supervisors	Supervisor
Eric	Sklar	Blue Ribbon Committee for the Rehabilitation of Clear Lake	Chair
Harry	Lyons	Lake County Resource Conservation District	President
Jennifer	LaBay	Central Valley Regional Water Quality Control Board	Nonpoint Source Program Manager
Karola	Kennedy	Koi Nation of Northern California	Committee Representative
Mike	Shaver	Middletown Rancheria	Environmental Director
Jay	Lund	UC Davis	Associate Vice Chancellor
Sarah	Ryan	Big Valley Band of Pomo Indians	Environmental Director
Scott	Harter	Lake County Special Districts	Administrator
Temashio	Anderson	Robinson Rancheria	Environmental Director
Terre	Logsdon	Scotts Valley Band of Pomo Indians	Environmental Director
Wilda	Shock	Lake County Economic Development Corporation	Committee Representative

Members of the Public, Staff, and Presenters

Alexander Forest
Alicia Cortes
Alyssa Nelson
Amy Little
Angela DePalma-Dow
Anni Minuzzo
Beckye Stanton
Bernadette Austin
Bob Schneider (Committee Alternate)
Brandon Louie
Carter Jessop
Clare Cannon
Daniella Cazares
David Caron
Joe Domagalski
Donna Mackiewicz
Eliot Hurwitz
Fred Feyrer
Geneva Thompson
Geoff Schladow
Isadora Nogueira
Jayme Smith
Jonathan London
Kole Peterson
Marina Deligiannis
Meg Harper
Nina Hemphill
Peggy Harte
Rachel Kennard
Robert Larsen
Robert Minuzzo
Sam Magill
Susan Paulukonis
Tim Karas
Tony Havranek
William Fox