Blue Ribbon Committee for the Rehabilitation of Clear Lake

Technical Subcommittee
1:00 – 3:00 pm
March 25, 2021

Meeting Summary #15

Attendees:

Attendees are listed In Attachment A.

Action Items:

1. Subcommittee members should send any edits for the January 28 summary to CCP by close of business March 26.
2. Ms. DePalma-Dow to circulate video of Quagga Mussels presentation to Subcommittee by close of business on March 25 (COMPLETE).
3. Ms. Palma-Dow and Mr. Schladow to discuss how respective data collection may be beneficial to one another.
4. The Facilitator will add long-term monitoring funding to next Technical Subcommittee agenda.
5. Mr. Steele to provide future presentation regarding new lab update to Technical Subcommittee and potentially Blue Ribbon Committee.
6. Ms. Ryan to present on water quality at private drinking water intakes in future Technical Subcommittee meeting.
7. Ms. Ryan to report back on conversations with Noble Resources and Carbon Based Solutions on next steps testing their products.
8. The Facilitator will coordinate a meeting between UC Davis, US Geological Survey, and the Natural Resources Agency to discuss the Prop 68 contracting process.

Welcome and Introductions

Sam Magill (Facilitator), Sacramento State Consensus and Collaboration Program (CCP), convened by webinar the fifteenth meeting of the Technical Subcommittee (Subcommittee) of the Blue Ribbon Committee for the Rehabilitation of Clear Lake (Committee). A full list of participants is included in Attachment A. The Facilitator reviewed the meeting agenda and invited subcommittee members to add issues to the agenda, which would be provided during

the Housekeeping Items and Local Updates agenda item, using the chat feature. He then convened a round of introductions.

Confirm Meeting Summary from January 29 Technical Subcommittee Meeting

The Facilitator asked the Subcommittee if they had any proposed edits to the January 28 Subcommittee summary. The Subcommittee did not indicate any edits. He asked the Subcommittee to send any final edits to the CCP team by 5pm on Match 26 (**Action Item #1**), after which CCP will finalize and post the summary.

Lake County Water Quality Monitoring Update

Angela DePalma-Dow, Lake County Water Resources Department (WRD), presented on The County's involvement in ongoing water quality monitoring in Clear Lake. These efforts have recently shifted due to withdrawal of involvement from several lead agencies. The five major monitoring programs and the lead agencies involved in these efforts are listed below. Strikeout text reflects lead agencies who have recently withdrawn their involvement from the activities. Bold text indicates added involvement.

- Ambient Lake WQ: ~~DWR &~~ County
- TMDL / impaired Water Body Chl-A: ~~CRWQCB &~~ County
- Quagga Mussel Monitoring –Veliger Tows & Select WQ: ~~CDFW~~ **CDFW Lab only** & County
    - Learn more about the importance of quagga mussel monitoring at https://youtu.be/Atp9kLqkSwk
- Nutrient Sediment Core Sampling: County & **UC Davis**
- Aquatic Species Monitoring: County

Ms. DePalma-Dow outlined each of these programs and what is needed for the County to continue the programs with reduced support and investment from the lead agencies who have withdrawn involvement.

Due to the Department of Water Resources' (DWR) discontinuing of sampling efforts, the County has established a reduced ambient lake water quality monitoring program based on the most important sites and parameters for sampling. Funding for this program is coming from the internal County cannabis tax grant, the US EPA National Environmental Information Exchange Network Grant, the County's Water Resources Department budget, and reduced-cost analysis provided by the AmeriCorps Civic Spark Fellowship Program. This new sampling scheme does not include any dissolved nutrients, which requires additional lab space, nor does it test at all the depths that the DWR program had sampled at. Ms. DePalma Dow provided a historical review of what the previous data had looked like and why continuing to gather such data is important to making accurate management decisions in the lake. The overall cost of this reduced monitoring is $100,000 per year.

Due to the California Department of Fish and Wildlife's (CDFW) discontinuing of quagga and zebra mussel monitoring sampling, the County must use staff resources to complete the sampling, while CDFW still provides the lab space for analysis. This monitoring and prevention of quagga and zebra mussels in the lake is required for grant funding, making it a high priority for the County. The staff time for this sampling is $11,000 per year and overall cost including the necessary water quality monitoring is $60,000 per year.

The County has gained support from UC Davis and the Blue Ribbon Committee (BRC) for nutrient sediment sampling for the remainder of the fiscal year. However, the County will need to ensure that future funding is procured for the $50,000 per year cost.

In addition to the aforementioned costs, the County is expanding stream and urban storm water monitoring networks in order to gather biological data to improve Hitch habitat and understand how urban storm water is impacting the water networks in the County. This program will cost the County $125,000 per year.

The County does not have a general fund to cover the cost of these programs. It is reliant on grants, which are not guaranteed into the future. The Facilitator reminded participants that some of the costs mentioned in this presentation are part of the ongoing Prop 68 funding discussions (**Action Item #4)**.

Participants made the following comments:

- Geoff Schladow, UC Davis, proposed a discussion to establish how the County and UC Davis' respective data collection may be mutually beneficial. (**Action Item #3**)
- Is slide 23 correct that the phosphorus sediment is declining over time? This seems like an important point.
    - Ms. DePalma-Dow responded that yes there is a slight decline, but overall there is significantly more variation over time.

Local Update: Water Quality Lab in Partnership with Local Universities

Jim Steele, Lake County Resident, provided an update to participants regarding the development of a water quality laboratory in Lake County that would serve the water quality analysis needs within the County. The building where this laboratory would be built, would also serve as an education center where universities could send students for hands-on experience conducting water quality analysis. The group pursing this project is currently seeking donors and partnerships with public and private universities in Northern California. Mr. Steele agreed to provide a detailed presentation in a future Subcommittee meeting and potentially get members of the BRC involved in the process (**Action Item #5)**.

Participants made the following comments:

- Who is "we" in this effort?

    - Mr. Steele responded that it is a group of private people looking for nonprofit ways to improve the world. Some are local (4-5), others are from other regions (3-4).
- Demand in Lake County may not be sufficient to support a water quality lab, however partnering with a university could compensate for the lack of demand.

Local Update: Division of Drinking Water Monitoring Mandate

Karola Kennedy, Koi Nation of Northern California, informed participants that the Division of Drinking Water, which regulates the 18 public water systems that use Clear Lake as source water, issued a cyanobacteria related monitoring order. The order mandates systems to monitor for microcystin in both raw and finished water, on either a weekly or bi-weekly basis during the summer months, and to conduct triggered monitoring in the winter months. This was previously a voluntary program.

Local Update: Cyanotoxin Monitoring

Sarah Ryan, Big Valley Band of Pomo Indians, provided results of February water sampling of microcystins, which included microcystis in the Lower Arm and Oaks Arm, and at Red Bud. There was a warning level at the Shady site. Monitoring will be ongoing in the winter months. She also informed participants that through a grant program with the Department of Public Health, they are also looking at private drinking water intakes' water quality, which will be presented at in a future meeting (**Action Item #6**).

Local Update: Dilapidated Structure Abatement
William Fox discussed the ongoing efforts to inventory dilapidated shoreline structures and failing seawall abatement. Costs for abating dilapidated structures is only $500-$5,000, whereas replacing seawalls with natural shoreline could cost upwards of $100,000. Mr. Fox does not have particular projects proposed at this time, but this issue should be considered for BRC project funding.

Participants made the following comments:

- Is the County looking at other sources of funding for those projects at the state or non-profit level?
    - Mr. Fox responded that the County is prioritizing the Highway 20 corridor because it is the biggest visual barrier, but it would like to expand the efforts with additional funding from other sources.
    - Ms. DePalma-Dow commented that there was a Prop 68 grant application for living shorelines that was not granted. There are not grants for dilapidated structures, but there are plans to apply for shoreline restoration funds
- The natural shoreline issue has been around for decades and people recognize it is the right thing to do for habitat and reverse energy issues for vegetation.

Local Update: Kelsey Creek Fish Barrier Passage Project

Ms. Ryan updated the group that this project has been submitted for Prop 1 funding. A potential deterrent is that if the grant is won, CEQA will need to be completed by May in order to be eligible for the funds. The County is trying to get the CEQA done, but it is a short turn-around, so it is unclear if it will be possible. Ms. Ryan will provide an update on this grant application in the future.

Local Update: Scotts Creek Project

Charlie Alpers, US Geological Survey, informed participants that the Bureau of Land Management (BLM) applied to the State Off Highway Motor Vehicle (OHV) fund for a grant that would fund watershed modeling, which is pending with State Parks. BLM is including Clear Lake in this year's budget for planned studies, which includes sediment fingerprinting.

Prop 68 Project Discussion

The Facilitator provided an overview of the $3.3 million in funding approved by the Department of Finance for planning projects. Immediate Prop 68 funding was approved for the Distributed Upper Watershed Model, Basin-wide Monitoring, Bathymetric Survey, and UC Davis TERC In-lake Monitoring and Modeling. The contracting process is ongoing. Lizzy Williamson, Natural Resources Agency, will provide an update to the full BRC on April 1. The original request was $5.6 million, and it is the intention of Assembly member Aguilar Curry to make that initial ask available by backfilling the Prop 68 funds with the general fund. This would allow the full amount to once again be available for on-the-ground projects. In the meantime, the committee is moving forward with the approved items. On-the-ground projects will be discussed at the April 1 BRC meeting.

Participants made the following comments:

- The reason that the funding ask was reduced was due to UC Davis taking zero overhead for the Prop 68 funding. However, if funding comes from elsewhere, UC Davis will need to charge overhead.
    - The Facilitator ensured that the funding received by UC Davis will still be directly from Prop 68.

Biochar Nutrient Mitigation Presentation

Dan Noble, Noble Resources, and Mike Holecek, Carbon Based Solutions (CBS) provided a presentation regarding Noble Resources and CBS's ideas around improving Clear Lake's nutrient issues with engineered application of bio-based carbon products. CBS converts source-verified biomass (from feedstocks) into value-added biocarbon products. These products absorb and remove nutrients and solids (including metals) from runoff water. These products can be used in ditches or stormwater systems. Bio-carbon socks may be used for in-lake remediation, which

has proven effective in small bodies of water, and is believed to be scaleable to larger bodies to reduce algae blooms.

Participants made the following comments:

- Have you spoken with the State on this? It would be great to have a presentation at the California Cyanobacteria Harmful Algal Bloom Network's Mitigation Subcommittee on this information. Ms. Ryan will reach out after the meeting.
- What is your business model? What exactly are you selling?
    - Mr. Holecek explained that they manufacture the biochar and build the products that house it. CBS aims to be a clearinghouse for all biochar manufacturing for transparency around production. CBS provides customer-by-customer solutions rather than a one-size-fits all.
- The Scotts Valley Band of Pomo Indians has a tribal biochar facility business and separate company processing the biochar. We have wanted to create the boons and swales to incorporate into those products. We can reach out for a deeper conversation.
    - Mr. Holecek says that customized arrangements are available and looks forward to discussing
- When you say pellets, you are referring to applications outside of the water, correct? I would assume any applications to the water would need to be approved by SWRCB prior to application.
    - Mr. Noble responded that yes, this is correct.
- The County is working on monitoring plan and would be interesting in a pilot project to install these techniques in a few sites to demonstrate reduction.
    - Yes, CBS needs to make such demonstrations anyway, so resources could be pooled to illustrate the effects.

The Facilitator asked what next steps look like for partnering with CBS. Ms. Ryan said that next steps include talking more about options with CBS and ensuring environmental requirements are met. Big Valley may be interested in testing this out and reporting back to the Subcommittee. Noble Resources and CBS will reach out to Ms. Ryan to schedule that discussion (**Action Item #7**).

Adjourn

There were no additional comments from the public. Mr. Alpers asked about next steps in the Prop 68 contracting discussion and the Facilitator informed participants that the conversation amongst UC Davis, USGS, and The Natural Resources Agency would be scheduled soon and an update would be provided at the next Subcommittee meeting (**Action Item #8**). CCP reviewed the action items (provided on page 1). Ms. Kennedy thanked Noble Resources and CBS for their interesting presentation as well as the Facilitator for the funding update. Ms. Ryan concurred with these sentiments. The Facilitator thanked the Subcommittee and adjourned the meeting.

ATTACHMENT A: Roster of Participants

Subcommittee Members & Staff		
First	**Last**	**Organization**
Charlie	Alpers	United States Geological Survey
Alicia	Cortes Cortes	UC Davis, Tahoe Environmental Research Center
Angela	DePalma-Dow	Lake County Water Resources Department
Alex	Forrest	UC Davis, Tahoe Environmental Research Center
Karola	Kennedy	Koi Nation of Northern California
Sarah	Ryan	Big Valley Band of Pomo Indians
Geoff	Schladow	UC Davis, Tahoe Environmental Research Center
Jim	Steele	Lake County resident
Broc	Zoller	Lake County Farm Bureau
Sam	Magill	California State University, Sacramento
Danaka	DeBow	California State University, Sacramento

Guests & Members of the Public		
First	**Last**	**Organization**
Terre	Logsdon	Scotts Valley Band of Pomo Indians
Dan	Noble	Noble Resources
David	Miles	Noble Resources
Mike	Holecek	Carbon Based Solutions
Patrick	Browne	Carbon Based Solutions
William	Fox	Lake County