

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

Meeting #5
1:00 pm-5:00 pm
June 5, 2019

Meeting Summary¹

Attendees:

See Appendix A

Action Items:

1. Committee Members will send comments on the Socioeconomic and Cultural Resources Proposal by July 5th.
2. Committee members will provide feedback on the Technical Subcommittee initial recommendations and assumptions (outlined below and captured in the Technical Subcommittee presentation to the Committee) to CCP by July 5th.
3. Carter Jessop, US EPA, will follow up to ensure that there is a copy of the EPA public documents at the Clearlake library.
4. Mr. Jessop will follow up with Sarah Ryan and the Blue Ribbon Committee about the effect of contaminants other than mercury and their build up in aquatic organisms in Clear Lake.
5. Mr. Jessop will look into if US EPA is required to test fish for mercury levels every 10 years.
6. Resources will contact the California Department of Public Health (CDPH) and the Office of Environmental Health Hazard Assessment (OEHHA) about dissemination of the fish advisory and about demographic public health information to inform the Committee's recommendations.
7. Geoff Schladow, UC Davis, will provide the TERC data AWS link to CCP to distribute to the Committee.
8. Dr. Schladow will follow up with Mike Shaver, Middletown Rancheria, and other interested tribal environmental departments, about opportunities to join UC Davis researchers in data collection in the field.
9. Tribal representatives on the Committee will contact Noli Brazil, UC Davis, to groundtruth demographic information provided in his Lake County Socioeconomics presentation.
10. Paul Dodd, UC Davis, will look into the possibility of NASA Ames and JPL ability to do LiDAR scans of the Clear Lake watershed.

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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.

Welcome and Introductions

Sam Magill (Facilitator), Senior Facilitator, Sacramento State Consensus and Collaboration Program (CCP), opened the meeting by thanking US Environmental Protection Agency (EPA) for hosting a tour of the Sulphur Bank Mercury Mine that morning. He reviewed the agenda and logistics for the day and introduced Caroline Godkin. Ms. Godkin introduced herself as the Deputy Secretary for Legislation at the California Natural Resources Agency (Resources), and the Resources Secretary's designee to chair the Blue Ribbon



Ms. Godkin opens the Mercury Mine Tour, introducing Secretary Crowfoot and Assemblymember Aguiar-Curry

Committee. She asked the Committee members to introduce themselves. With thirteen out of fifteen committee members, a quorum was present. Ms. Godkin thanked US Environmental Protection Agency (EPA) and everyone who joined the morning tour and opened the floor for Assembly member Cecilia Aguiar-Curry and Resources Secretary Wade Crowfoot to make remarks.

Assemblymember Aguiar-Curry thanked the Committee for their dedication and their time. She expressed pride to see the large number of people who attended the Sulphur Bank Mine tour in the morning, showing care for the health of the lake and the health of Lake County. She committed to continuing to work hard for Lake County and to implementing the recommendations the Committee makes in their January 1, 2019 report to the legislature. The Assemblymember lauded Secretary Crowfoot's commitment to the Rehabilitation of Clear Lake, sharing that his first week in office he came to see her, asking how he can help to move the Committee forward.

Next, Secretary Crowfoot thanked the Committee for the opportunity to speak. He acknowledged Ms. Godkin for taking on the leadership of the Committee and thanked the Committee members for their willingness to serve. He applauded Assemblymember Aguiar-Curry for passing Assembly Bill (AB) 707, which formed the Committee and secured funding for capital projects to improve Clear Lake, in her first term in the state Assembly. He expressed gratitude that the morning tour was open to the public, and to members of the Elem Tribe for sharing the impacts the Sulphur Bank Mercury Mine contamination has had on them and their community. He reiterated the charge of AB 707, which empowers this Committee to use the best available science, hear from a broad range of stakeholders, and develop a roadmap of actions to recommend to Resources and the State, including investments to rehabilitate Clear Lake. Secretary Crowfoot committed to beginning formal consultations with tribal leaders, hopefully in the next month, regarding the technical Subcommittee's suggestions to the greater Committee.



Local and Committee Member Updates

The Facilitator thanked the Assemblymember and the Resources Secretary for their presence and transitioned to the local updates.

EPA Sulphur Bank Mine Site Overview

Carter Jessop, Sulphur Bank Mercury Mine Project Manager, US EPA, thanked everyone who attended the morning tour, and the Committee for the opportunity to talk about Sulphur Bank and EPA's path forward for remediation. He introduced EPA staff in the room, his Section Chief Kelly Manheimer and Margot Perez-Sullivan from EPA Public Affairs, who was standing in for Alejandro Diaz, the Community Involvement Coordinator.

Mr. Jessop's presentation can be found [here](#) on the Committee website. In his presentation he reviewed the major mine site features, the Superfund process, the site remediation process, actions taken to reduce exposure for human health and for Clear Lake, water quality concerns, and the process of tribal consultations with the Elem tribe and others. He explained that the remediation for Sulphur Bank is extremely complicated and EPA is still exploring options, including three alternatives proposed by the Elem tribe, but hope to finalize their feasibility study this year.

The primary source of continued contamination to the lake comes from the Herman Impoundment, the flooded former mine pit. The Impoundment is fed by a natural mineral spring at its base and separated from Clear Lake by the Waste Rock Dam. Water from the Impoundment flows through the dam, leaching mercury from the waste rock into Clear Lake. Testing indicates safe levels of mercury in drinking water from the lake, but the primary danger to human health is the presence of mercury in fish tissue. Mercury is a neurotoxin and the California Office of Environmental Health Hazard Assessment (OEHHA) has issued an advisory guide for the amounts of fish recommended to eat from Clear Lake to avoid health hazards from mercury.

EPA has performed a number of clean up actions at the site to reduce urgent risks. They are currently working closely with Elem Indian Colony, California Department of Toxic Substances Control (DTSC), and the State Water Resources Control Board (SWRCB). Mr. Jessop expressed an interest in working with all Lake County Tribes, because Elem is not the only group affected by the mercury contamination.

Committee members posed the following questions:

- As long as the Herman Impoundment has a constant water feed, it will always be pushing toward the lake and leaching mercury. This is a problem introduced because of the mine. How does EPA plan to enhance the barrier?

Response: Hopefully over time as water input slows, the flow will also be reduced. We are looking into a potential cut off wall or potential excavation. The focused feasibility study mentions a number of options and when it's final, we will have public meetings to talk about decided upon clean up actions. Elem will talk about one final route in a moment. We will also

consider a number of potential options for intercepting contaminated water moving north towards the North Wetlands.

- EPA has a responsibility to provide public notices in the county and around the lake. You said that EPA will build its own fish advisory warning, which is confusing because funding is given to OEHHA to do that, but it's not being used to educate the public.

Response: Not enough has been done to make sure that the public knows about the fish advisory. OEHHA develops the advisory and California Department of Public Health (CDPH) shares it. Until we have a final decision document for how to remediate, EPA's role is opaque. We hope we can partner with OEHHA and CDPH to help them to provide the outreach, but you're right, EPA doesn't have expertise on public behavior and outreach; OEHHA and CDPH do. Last year we started to explore if EPA can do the outreach ourselves. We aren't the experts in that area, but there may be things we can do to help the experts to perform that work on a larger scale.

- EPA is responsible for having an updated file of all of their documents available to the public. It's not available at the local library, they don't even know about it. Do you plan on providing that public access?

Response: There should be a hardcopy administrative file at the library. I'll talk to the library and EPA about it (see **Action Item 3**). Also, we are reformatting our website (found [here](#)). The Sulphur Bank site only has old documents right now.

- Can you speak about other contaminants in groundwater and in the lake, such as elevated arsenic? Are they elevated because of the mining? Do you have sense of where the plume is, in terms of groundwater? There are residents who have wells in the area, as well as those who get water from lake. What are the solutions to controlling those contaminants?

Response: The water that enters Clear Lake contains elevated other metals including aluminum, selenium, and arsenic. John Lucero, E2 Consulting, might be able to talk a little more about relative contributions of contaminants in the lake. We have tested residential drinking water intakes nearest to the mine site and levels of site-related contaminants were not high enough for risk to human health. That is another component in the human health risk assessment; we will look at water consumption rates and see if there is a risk in drinking a certain quantity of the water, but to date we don't believe there is.

John Lucero: Mercury, antimony, and arsenic are in the soil. It's primarily mercury within the groundwater plume. That plume sits within an area impacted by geothermal screens, so it has a salt content above any potable drinking water or municipal use and is not usable water that someone can put a well in. Migration of groundwater from the Herman Impoundment to the lake picks up mercury and acid as it passes through the northwest Rockwall. The Herman Impoundment itself has a very low concentration of mercury.

- Is build-up of contaminants such as aluminum in aquatic organisms part of the health risk assessment?

Response: That's an ecological risk assessment, which is not currently underway, though there is one planned for the Oaks Arm of Clear Lake. The human health risk assessment will look at the whole range of contaminants, with mercury being the lion's share. Levels of other metals as a result of the site are very limited to date and not considered a major contributor to water quality. Aluminum is harmful to fish; it blocks their ability to breathe through their gills. When the Herman Impoundment would overflow into the Lake, an aluminum flock would form over Clear Lake. Aluminum levels have dropped by 88% since 2000, but it's not clear if there is any aluminum flock being formed on clear lake. I will look more into the effects of other contaminants and their build up in aquatic organisms and get back to you **(see Action Item 4)**.

- When you fill the northwest pit with waste rock, what's the plan to stop groundwater or surface runoff from flowing through that waste rock and depositing leached mercury into the wetlands? This was previously a concern.

Response: There will be clean fill under the mine waste to separate it from water underneath, as per Water Board regulations that apply to that remediation action.

- Is anyone doing additional research on how to cook and prepare the fish or what to eat or not eat? Previously it was discovered that DDD and PCB pesticides were in the skin and fat of the fish and there were ways to prepare fish to eat that mitigated the risk. Are there ways to do that for mercury? I don't see that in the OEHHA fish advisory.



Sulphur Bank Mercury Mine Herman Impoundment

Response: The fish advisory is based on a statewide format and has recommendations about which parts of the fish to eat. Those are seen as protective against PCBs, but don't help with mercury because it resides in the flesh. OEHHA revised the fish advisory in August 2018, but the updates were to protect fish populations. I don't believe more research is being done.

- EPA is supposed to do fish tissue testing every 10 years. If an entity out there is doing mercury or methylmercury testing in the fish, OEHHA would bring that back for their review. In 2015 there were elevated methylmercury levels from many species.

Response: I'm not aware of that requirement (see Action Item 5), but the research we plan to do with USGS will include fish tissue.

After the question and answer period, Ms. Godkin committed to the Resources Agency contacting OEHHA and CDPH to respond to questions that arose pertaining to those agencies (see Action Item 6).

Elem Alternative 8 for Sulphur Bank

Fred Kirschner, AESE, Inc, introduced himself as a consultant to the Elem Indian Colony. His presentation can be found [here](#) on the Committee webpage. He and his organization specialize in advising tribes on Superfund and Manhattan Project test sites and have been working with Elem on the Sulphur Bank Mercury Mine site since 1982. Dr. Kirschner presented about a number of tribal lands he has worked on that have been substantially impacted by contamination from Superfund sites.

Dr. Kirschner explained that Reservations are "lands set aside or reserved by the U.S. for the benefit of the tribe and are designed to provide all the necessary sustenance for the subject tribe," and are the only places where tribes can practice self-governance. The Elem Indian Colony is only 50 acres, and he argued that contamination from the mercury mine inhibits the ability of the Tribe to safely practice their traditional sustenance lifestyle.

Dr. Kirschner argued that EPA needs to clean up the mine site to conditions cleaner than pre-contamination, and that "EPA's reliance on perpetual or long-term institutional controls [fencing and providing warning signage] in remedies on tribal lands is tantamount to expropriation." He described Elem's preferred EPA remediation response, Alternative 8, in which the Herman Impoundment would be pumped and backfilled so that its water level would be lower than that of the lake, causing lake water to flow into and dilute the impoundment, rather than impoundment water flowing out and contaminating Clear Lake. This would require perpetual pumping. He shared the example of the Midnite Uranium Mine within the Spokane Reservation in Washington State that has chosen to pump and backfill.

He argued that another of EPA's proposed solutions, to cap and cover mine waste piles, may comply with EPA's Applicable or Relevant and Appropriate Requirements (ARARs), but those requirements are not protective of tribal uses. Elem Colony also has federally reserved rights not under jurisdiction of the State.

Alix Tyler, Environmental Director for Elem Indian Colony, thanked the public for their attendance, particularly EPA and Kelly Manheimer, and Hiram Campbell the Elem Tribal Administrator. She thanked Caroline Godkin, the State of California, and the public for hearing both Elem's perspective and US EPA's perspective on the Mercury Mine.

Committee members posed the following questions:

- Do you foresee Alternative 8 reducing contaminants other than mercury? Does this alternative address the shoreline plume?

Response: All of the waste piles have big slag deposits under them in the unsaturated zone, above the water table. There is a bunch of bad stuff in there, probably the entire periodic table, but we don't know exactly what. We are trying to create a cone of depression to bring water into the Herman Impoundment. There will be a cap and cover smaller in size than the EPA recommendation, which would break communication with the lake.

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- I'd be concerned with the benefit of trying to fill the mine. The other mine sites you've mentioned don't have the geothermal influence that Sulphur Bank does. If you fill the impoundment you have to somehow monitor where the groundwater is interacting with the waste rock. I would feel more comfortable seeing the geothermal activity and knowing that we are keeping below it than covering it.

Response: The wells will always have to be pumped. You can even depress the pressurehead in the springs themselves if you were to target those. Technically there would not be any water entering into the base of the pit.

Jennifer LaBay, Central Valley Regional Water Quality Control Board (CVRWQCB), clarified that in 2016 the State Water Resources Control Board (SWRCB) passed [Cultural and Tribal Subsistence beneficial uses](#). The CVRWQCB is in the process of working with tribes and other stakeholders on how to incorporate those into the basin plan.

UC Davis Tahoe Environmental Research Center (TERC)

Dr. Geoff Schladow, UC Davis, summarized the current TERC research on Clear Lake. His presentation can be found [here](#), on the Committee webpage. He acknowledged the grad students, researchers, and technicians performing most of the work. TERC is conducting science upon which to base a recovery plan for Clear Lake, to equip the community and agencies with tools they can use, based on scientific understanding, to investigate if solutions are resilient for things like climate change or how they are impacted by future watershed uses. TERC seeks to understand the role of external nutrient loads, internal nutrient loads, and legacy contaminants in influencing cyanobacteria blooms. They hypothesize that addressing internal nutrient loads will be more impactful to the health of the lake than addressing external nutrient loads. TERC is currently establishing a monitoring network around the lake and collecting data from local sources including the County Water Resources Department (WRD) and the local tribes. Dr. Schladow reviewed some of the data collected and expressed appreciation for "the data sharing and spirit of collaboration from the County, DWR, the Tribes, USGS, past Clear Lake researchers, and private citizens."

Committee members presented the following questions:

- In your monitoring plan you mentioned data will be stored on an Amazon Web Services (AWS) account. Where can the public find that?

Response: We have lots of streams of data. Meteorological data is being fed into that. Researchers will go out to download data from the moorings in a week and we will add that data

at that time, though it is not processed data. We can show anybody where that goes (**see Action Item 7**). The chemistry data will take longer to process.

- Is there an update to the monitoring and sampling plan?

Response: The only thing that has changed is that we were going to use an e. coli/coliform counter, but there were so few coarse particles in the lake that we decided not to use it.



Tour attendees join Mr. Jessop on the Waste Rock Dam

- If you have the opportunity to let the local tribal environmental staff join you, it would help for consistency and we would like to get out of the office. Many tribes have federal funding, maybe we can help with your research.

Response: Thank you for the offer, we will take you up on that (**see Action Item 8**). We hoped to go out on Friday but the winds will be too high.

UC Davis Center for Regional Change (CRC)

Dr. Noli Brazil, UC Davis, summarized the socioeconomic research being conducted in Lake County by CRC. His presentation can be found [here](#), on the Committee webpage. He described CRC's research objective to identify strategies to improve social and economic outcomes and community vitality through three tasks: socio-economic analysis, a community economic development strategy, and a community engagement strategy. CRC has found, and is studying, a large number of assessments already conducted on the socioeconomics surrounding Lake County and the communities adjacent to Clear Lake. Dr. Brazil shared some preliminary economic and demographic analysis taken from the American Communities Survey. Because there is such a breadth of information and research done on Lake County CRC intends to ultimately do a deeper, more sophisticated analysis. They hope their results will inform other project tasks and contribute to other local initiatives.

Committee members posed the following questions and comments:

- On the slide for education, is that data from the census blocks around the lake?

Response: No, that slide refers to Lake County. What we are calling "Clear Lake" is the census blocks around the lake, while "Lake County" is the entire county.

- Where did the data for rentals come from? This says rent has decreased, but those numbers do not seem accurate. There was a 6% loss in housing stock due to fires.

Response: The data comes from The American Communities survey, which is updated every year. This represents gross rent that includes utilities and so forth. We recognizing there are different ways to cut the data.

- In 2017 did they use the 2010 Census tract? Are we looking at 2010 numbers?

Response: You're right, the geographies are updated every 10 years.

- Tribes and other minorities historically don't participate in the Census, though there's been a lot of outreach. To what extent do you think that might account for jumps in the increases in populations in your data?

Response: Yes, underserved populations have lower rates in response. I can't speak to Native response rates, but the third task for our team will have us engage with the local tribes and try to develop a data system to connect with them to look into that issue. Most data we have relied on has been state or federal level data. Even county level data has been difficult to get.

- The unemployment map is a little misleading. There are seven disadvantaged communities along the northern area of lake, but then that whole northern part of Lake County that is identified as extremely high unemployment is Forest Service land with very few residents. I'd like to see something that actually represents Lake County populations, including Tribes and disadvantaged communities, to see what that relative difference is. I'd like to know if they are unemployed because they have been pushed out of the market because of education or because they have aged out. That would be much more specific to what we need to get out of this cycle we are in than just generalities. We have seen a lot of unemployment and haven't been able to come up with answers, except for the Broadband access from Aguiar-Curry, which is part of a solution. The more definitive and more current data we can have is better.

The Facilitator asked if the Committee tribal representatives would be willing to contact Dr. Brazil to groundtruth CRC's data, and several representatives nodded agreement (**see Action Item 9**). Jan Coppinger, Lake County Special Districts, underscored the importance of the community leaders represented on the Committee encouraging Lake County residents to participate in the Census. She said that the people who don't participate cost Lake County substantial grant moneys that could be used to improve the communities.

Technical Subcommittee Progress & Initial Recommendations

Ms. Godkin expressed gratitude to everyone involved in the Technical Subcommittee for the tremendous work they have done so far. She shared the [Resources Agency Grants & Loans Opportunities spreadsheet](#), saying that AB 707 provides some local and state funding sources for capital projects, but part of the charge of the Committee is to find other funding sources, such as these.

Presentation

The Facilitator introduced Karola Kennedy, Koi Nation, and Jim Steele, Robinson Rancheria, to present on the Technical Subcommittee's progress, and acknowledged Sarah Ryan, Big Valley Band of Pomo Indians, who also sits on the Subcommittee. Their presentation is available on the Committee website, [here](#). Mr. Steele acknowledged the Subcommittee as a passionate group of volunteers, describing them all as "heavy lifters." In their first two meetings the group has familiarized themselves with the charge of the Subcommittee and the knowledge and resources available in its membership. In their second meeting they identified data gaps and a list of very preliminary recommendations for research that could fill those data gaps. To date, the group has received presentations on cyanotoxins, sediment and nutrient deposition, impacts to public water systems, and the Clear Lake Total Maximum Daily Load (TMDL) requirements.

The technical Subcommittee's preliminary recommendations are to do a robust review of the upper watershed to determine specific sediment sources and nutrient load rates. Specifically, a LiDAR scan of the upper watershed could be compared to 2017 LiDAR data and identify hotspots for erosion/nutrient input from the upper watershed. That information can inform where to monitor, to aid in identifying nutrient sources to enforce the TMDL and find ways to reduce nutrient loading.

Ms. Kennedy reiterated that with two meetings they are only beginning to understand the lake data and knowledge available from the members in the group. There is still more to know, and she specifically expressed a desire to hear more about mercury from USGS in future Subcommittee meetings. Mr. Steele also lamented that there is no data to compare the difference between nutrient levels in the lake before and after the cities of Lakeport and Clearlake began pumping sewer waste to The Geysers.

The following questions about the work of the Subcommittee were posed by the Committee:

- Who provided the satellite images?

Response: Blue Water Satellite. They were taken over by another group that now has more capability and a new satellite. Clear Lake was a great study site for them and they are eager to return. Their data, coupled with data from UC Davis on the water column and information from the Tribes and the County would provide an in-depth look at what is happening in Clear Lake. The Subcommittee is also requesting a presentation from the San Francisco Estuary Institute, which has more recent satellite information.

- Has windborn soil been looked at as a contributor to nutrient loading?

Response: No, but that it could be added to the list. It is a relatively very small input compared to erosion, though some areas high in phosphorous do get very dry.

- *Directed to Technical Subcommittee member Charlie Alpers, US Geological Survey (USGS): Do you think it is possible to determine sources for sediments and for mercury?*

Response: Sediment fingerprinting identifies sediments by what is unique about their places of origin and proportion. It has been used in the Chesapeake Bay and currently at a small site in the Sierra Nevada. It could be useful in Clear Lake if it's feasible.

- *Directed to Technical Subcommittee member Dr. Schladow:* How might LiDAR complement the TERC research? Previous satellite data was found to not be useful because it could not be compared to on the ground data.

Response: The lake bottom is too murky to accurately survey with LiDAR. The Subcommittee would like to use LiDAR to understand erosion surrounding the lake, particularly after the 2018 fires. However, mapping of the bottom of the lake was discussed by the Subcommittee, is feasible, and in my opinion would be very valuable.

- *Directed to Dr. Schladow:* Would it be possible to use LiDAR data to estimate phosphate levels and then do nutrient modeling based on bathymetry of the lake?

Response: LiDAR can provide information on erosion amounts based on topographic surveys and changes to landmass over time. It does not show bathymetric contours for submerged area but can be used to estimate erosion into streams. This information must be confirmed with on-the-ground monitoring.

Discussion

The Facilitator asked the Committee for their thoughts on the assumptions identified by the Subcommittee and for any direction on the preliminary recommendations provided. He reiterated the Committee's charge to develop a series of recommendations every year in a report to the legislature and governor, with the purpose of ultimately funding large-scale projects to improve lake health and bring about regional change. The recommendations in the first year's report are not expected to outline capital projects, and substantial research is being done already by UC Davis.

Ms. Ryan directed interested parties to the [Big Valley Clear Lake Water Quality Dashboard](#) that houses all publicly available water quality data from 1951-2015. She underscored the importance of assessing the scope and scale of erosive activities, and that in 2011 the Clear Lake Advisory Committee recommended that hotspots for sediment loading in the watershed be identified. While the Water Board's TMDL identifies who the responsible parties are for external nutrient loading, there has been no post-project monitoring or assessment of the efficacy of Best Management Practices (BMPs), such as the grading ordinance. Dr. Alpers reemphasized that determining where flow monitoring in the upper watershed is accurate and where it needs to be increased and improved is crucial, particularly in determining the efficacy of the TMDL. Ms. LaBay agreed that that is a high priority and has been a substantial challenge from the perspective of the TMDL.

Ms. Sullivan recommended the group rank some of the Subcommittee's recommendations in order of priority, saying that monitoring in the upper watershed could be "low hanging fruit." Dr. Dodd offered that UC Davis has research relationships with NASA Ames Research Center and Jet Propulsion Laboratory (JPL) that use LiDAR to monitor environmental aspects of California. They might be

interested in this work and could measure the same places at a consistent time of year. He will look into that possibility (**see Action Item 9**). UC Davis Bodega Marine Lab is also involved in remediation work at Tomales Bay, which is utilizing sediment fingerprinting.

Ms. LaBay asked if funding for a study, such as an erosion assessment, could be recommended in the annual report. Ms. Godkin confirmed, though if funding was requested in January, it would not be available until the following fiscal year. She encouraged the Committee to include in the report anything they would like to bring to the attention of the legislature for statutory or legislative changes, as the reporting will be an iterative process.

Ms. Ryan asserted that the responsible parties named in the nutrient TMDL should be responsible to take flow measurements. Harry Lyons, Lake County Resource Conservation District, agreed with Ms. Ryan but highlighted the lack of funding for those responsible parties and asked where money might come from. Ms. Godkin explained that the \$5 million set aside last year by Proposition 68 has two sets of requirements for expenditure, that it must improve Clear Lake (per the Proposition) and that it must fund 10-20 year capital projects (per General Obligation Bond law). There is some allowance for administrative needs such as preparing planning documents and CEQA review, but not for preliminary studies nor post-project monitoring. However, she said that there are many other funding opportunities, and if another means is not found, it would be appropriate to make a recommendation in the annual report that the state provide funding from a source other than the Proposition 68 bond.

Mr. Alpers informed the Committee that capital costs for monitoring can be \$100,000 and annual operation and maintenance costs can be anywhere from \$10,000 to \$50,000. Ms. LaBay highlighted an existing challenge with stream gauges that they do not help to differentiate the origin and responsible party for the nutrients they identify.

Ms. Ryan expects the Subcommittee will gain more information in the next couple of meetings and will continue to refine their recommendations. Ms. Logsdon requested Committee members be allowed to provide input to the Subcommittee after having time to think about the Subcommittee's assumptions and recommendations (**see Action Item 2**). The Facilitator suggested that an interim meeting be held before the next quarterly meeting on September 25, so the Committee may provide further guidance to the Subcommittee on their assumptions and recommendations.

Dr. Dodd requested that the Committee be provided with demographic public health data (**see Action Item 5**) and recommended that the priorities be identified working backwards from the human health impacts. Ms. Ryan expressed strong support for that methodology. Wilda Shock, Lake County Economic Development Corporation, voiced support for the Subcommittee receiving as many presentations as they can to inform their recommendations. She said that it will help the socioeconomic efforts to know that the technical science has been thoroughly explored.



Items for Committee Approval

In the interest of time, the Facilitator briefly reviewed the Items for Committee Approval: The March 13th Meeting Minutes, the Committee Charter, and the Socioeconomic and Cultural Resources proposal. The Committee approved the March 13th Meeting Minutes.

The Facilitator explained changes to the Committee Charter since the previous meeting. The preamble was revised to comment less on the state of the lake and more on the purpose of the Committee. The section on alternates was changed to allow for represented entities to identify alternate Committee members, with the acknowledgement that the Committee process relies on continuity of knowledge through consistency of attendance. If a Committee member anticipates missing more than one meeting in a calendar year, they should contact Resources and the facilitation team to identify a suitable, permanent replacement. The Committee will begin to discuss 2020 scheduling at the September quarterly meeting and finalize the schedule at the December meeting to ensure that availability of all Committee members is considered. Because of time limitations, the Charter will be voted on at a yet-to-be scheduled interim meeting between July and September.

The Facilitator introduced the Socioeconomic and Cultural Resources proposal. At the March meeting, the committee discussed the charge for a proposed socioeconomic Subcommittee, and a cultural and natural resources Subcommittee was suggested. Since the charge of the Committee is to improve the quality of the lake, the Facilitator drafted a proposal to ensure socioeconomic and cultural impacts are considered in the report to the legislature. The proposal suggests using ad hoc groups of local experts to screen the draft report to the legislature to ensure that recommendations do not negatively impact, and ideally benefit, the socioeconomic and cultural resources of Lake County and the Clear Lake community. Committee members posed the following questions about the proposal:

- What will be the membership? Can any group of people come together to make decisions about the Committee's recommendations?

Response: Membership would be ad hoc and recommended by Committee members. If that needs to be fleshed out before interim meeting, we can do that.

- Is the intention to have ad hoc groups as a response to recommendations, or could you set the priorities based on socioeconomic or other needs?

Response: We started by creating groups that addressed specific socioeconomic concerns, and it became too broad in scope. AB 707 directs the Committee to address the physical health of the lake, and so the concept now is to develop screening mechanisms to improve, and at minimum not negatively impact, the community.

The Facilitator requested Committee members provide comments on the Proposal, which will be revisited at the Interim Meeting (**see Action Item 1**).



Public Comment & Adjournment

The Facilitator opened the floor for Public Comment, but all attendees who submitted comment cards had left the meeting or withdrew their request to comment. Ms. Godkin thanked everyone for attending and for putting huge amounts of energy and work into the Committee. She adjourned the meeting.

ADJOURN

DRAFT



Committee Members Present			
First	Last	Organization	Title
Caroline	Godkin	California Natural Resources Agency	Deputy Secretary for Legislation
Janet	Coppinger	Lake County	Special Districts Administrator
Paul	Dodd	UC Davis	Associate Vice Chancellor
Karola	Kennedy	Koi Nation of Northern California	Committee Designee
Jennifer	LaBay	Central Valley Regional Water Quality Control Board	Nonpoint Source Program Manager
Terre	Logsdon	Scotts Valley Band of Pomo Indians	Environmental Director
Harry	Lyons	Lake County Resources Conservation District	President
Sarah	Ryan	Big Valley Band of Pomo Indians	Environmental Director
Mike	Shaver	Middletown Rancheria of Pomo Indians	Environmental Director
Wilda	Shock	Lake County Economic Development Corporation	President
Jim	Steele	Robinson Rancheria	Committee Designee
Brenna	Sullivan	Lake County Farm Bureau	Executive Director
Alix	Tyler	Elem Indian Colony	Environmental Director

Committee Members Absent			
First	Last	Organization	Title
Eddie	Crandell	Lake County Board of Supervisors	Supervisor
Linda	Rosas-Bill	Habematolel Pomo of Upper Lake	Environmental Director



Public Attendants and Staff			
Name	Organization	Name	Organization
Agustin Garcia	Elem Indian Colony	Jonathan London	UC Davis
Alan Flora	City of Clearlake	Jonathon Howard	Office of Assembly-member Aguiar-Curry
Alex Forrest	UC Davis	Jordin Simons	UC Davis/Upper Lake Community Member
Angela DePalma-Dow	Lake County WRD	Katherine Ramon Schrade	Community member
Anthony Gallego	Public	Kelly Manheimer	US EPA Region 9
Bernadette Austin	UC Davis	Margot Perez-Sullivan	US EPA
Brad Chatten	Kelseyville Resident	Merry Jo Velasquez	Resource Conservation District
Brenda Pier	citizen	Micaiah Palmer	CSUS Consensus and Collaboration Program
Carlos Becerra	UC Davis	Pedro Miguel	Public
Carolyn Ruttan	Clear Lake Environmental Research Center	Peggie King	CLERC
Carter Jessop	US EPA	Rick Orwig	LEDC BARC
Cecilia Aguiar-Curry	California State Assembly	Sam Magill	CSUS Consensus and Collaboration Program
Fred Krischner	Elem Indian Colony	Sophie Carrillo-Mandel	CSUS Consensus and Collaboration Program
Geoff Schladow	UC Davis	Victoria Brandon	Sierra Club
George Spurr	City of Lakeport	Vikram Koundinya	UC Davis
Hiram Campbell	Elem Indian Colony	Wade Crowfoot	California Natural Resources Agency
Jessica Pyska	Cobb Area Council	Youngblood	Robinson Rancheria
John Lucero	E2 Consulting		

Deleted: on