

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

Meeting #19

1:00 pm-5:00 pm

MAY 25, 2022

Meeting Summary¹

Attendees:

See Appendix A

Action Items:

1. Members of the Blue Ribbon Committee for the Rehabilitation of Clear Lake (Committee) unanimously approved the March 10th Committee meeting summary. 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. Mr. Magill will upload a list of projects being conducted by the Blue Ribbon Committee for the Rehabilitation of Clear Lake and the status of those projects to the [Natural Resources Agency Committee website](#).
3. In reference to the [Hypolimnetic Oxygenation Pilot Project](#), a focused discussion with Committee members expressing concern about a potential Clean Water Act violation should be scheduled as soon as possible to discuss the issue.

Welcome and Introductions

Sam Magill, CCP, opened the meeting and reviewed the agenda. Eric Sklar, Committee Chair, thanked participants for attending and explained the goals of the meeting. The primary purpose of the meeting is to review and potentially approve all projects provided by the Committee's Technical and Socioeconomic Subcommittees. Committee approved projects will be transmitted to the California Natural Resources Agency (Resources) for recommended funding and implementation.

After opening comments, Committee members introduced themselves. A complete list of meeting attendees is listed in **Appendix A**. He noted that a quorum of the Committee was reached. Finally, he commented that public comment would be solicited at the end of the discussion.

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.

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>.

Local Updates

Mr. Magill noted that he received one local update that Terry Logsdon, Scotts Valley Ban of Pomo Indiana, has requested for the Committee's consideration of a letter of support for the U.S. Department of Agriculture- National Resources Conservation Service (USDA-NRCS) grant.

*The presentation and discussion can be found on page 13 of the summary.

Items for Committee Approval

Prior to the approval of the March 10th summary, Mike Shaver, Middletown Rancheria asked that his name be corrected on page 5 of the summary and Mr. Magill assured him that the correction will be made. Mr. Magill then asked for Committee approval of the March 10th Committee meeting summary. Committee members present unanimously approved the summary. CCP will post it as final to the Committee website (see Action Item #1).

Committee Discussion and Potential Approval of 2022 Project Proposals

Mr. Magill noted that the goal is to get as many recommendations approved for BRC to begin work with the Natural Resources Agency on securing funding for the next year. He noted that there is another (as needed) meeting scheduled for June 22, 2022 for any refinements of the proposals. He then asked if there were any questions about the overall approval process. There were no questions.

Mr. Magill introduced projects for approval by the Committee. These projects were developed through conversations with Committee members, the Technical Subcommittee, and the Socioeconomic Subcommittee. Abstracts of all projects for consideration are available on the Committee's website under "Meeting #19". Each project is listed below, including Committee discussion and subsequent votes.

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

Before introducing the first project, Committee members provided the following remarks:

- Mike Shaver, Middletown Rancheria, noted that all the proposals have positive aspects, but expressed concern that the proposals are heavily focused on research rather than restoration. He requests that the committee evaluate how much money is being allocated to the types of projects. Mr. Sklar thanked Mike Shaver for his comments and noted that a possible future goal is to see an 80% increase for on-the-ground work with a residual of 20% for ongoing research.

Jay Lund, UC Davis stated that research will help give the foundation for restoration. But he does agree that there is a need to see the research in action.

- Mr. Sklar noted that unlike bond funded grant programs, funds for Committee projects will take the form of a budget change proposal (BCP) proposed to the Governor and Legislature by the California Natural Resources Agency (Resources). As such, there is no set budget; approval of funds is contingent upon approval of the BCP as part of the next California State Budget.

EcoCultural Tule Restoration of Clear Lake

Margaret Finch, Tribal EcoRestoration Alliance (TERA), provided a presentation that proposes to build collaborative intertribal capacity to revitalize the health of Clear Lake through supporting traditional ecological management of Clear Lake via cultural burning. The proposed project cost is \$404,600. After the presentation, the following discussion was recorded.:

- Dr. Lund asked how many acres or yards of shoreline will be used for the burns. Terre Logsdon, Scotts Valley Band of Pomo Indians, responded that there won't be an exact amount of acreage until all the partners are identified, but it will be less than 1,000 acres.
- Mr. Shaver stated that he was interested in how to identify the areas that might be for future planting and was curious to know if there are any invasive weeds.
- Ms. Logsdon mentioned that after the Pomo fire, experts were able to see how the fire helped the Tule leaves regrow. She expressed that she is excited to be able to test and expand the project across the Clear Lake.
- Sarah Ryan, Big Valley Band of Pomo Indians, mentioned that they have conducted cultural burnings on the Valley shoreline and there have been positive outcomes from the burnings.
- Karola Kennedy, Koi Nation of Northern California, highly supports the project and has great confidence in the individuals working on the project based on their previous experience.
- Eddie Crandell, Lake County Board of Supervisors, expressed that he appreciates the historical element and consideration that is incorporated into the proposal.
- Bob Schneider, Central Valley Regional Water Quality Control Board, mentioned Frank Aebly, U.S. District Ranger for the Upper District in the Mendocino National Forest, has worked with some of the groups and thinks highly of the work that is being conducted so far.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 13 members
- Approve with modification: 0 members
- Do not approve: 0 members
- Abstain/did not vote: 1 member

This project was approved by the majority for seeking funding and implementation.

Lake County AEM Survey of Lake County Groundwater Basins

Eddy Teasdale, Lake County Water Resources Department, provided an overview presentation of Lake County's proposal for a AEM Survey of Lake County Groundwater Basins. The proposed project cost is: \$300,000. After the presentation, the following conversation was recorded:

- Mr. Magill noted that there were specific questions about the applicability of this project to the Committee's work, and noted the presentation and proposal have been modified to strengthen the connection between AEM and the health of Clear Lake.
- Dr. Lund asked who will receive the data collected. Eddy Teasdale, Lake County Water Resources Department, responded and said that the data will be publicly available.
- Ms. Ryan asked what the expectations are regarding the basins are identified in terms of the interferences "bad data" In terms of data, what is being estimated. Eddy Teasdale, Lake County Water Resources Department, responded and stated that he was unsure because it is just a proposal currently.
- Mr. Shaver asked the committee if there is a concern with the current groundwater studies for basins that are currently experiencing declining groundwater levels. Mr. Sklar responded although some groundwater basins are outside of the Clear Lake basin, all of the data is useful and will help improve the understanding of groundwater supplies throughout the region. Ms. Ryan also responded that the indirect costs should be covered by Lake County.
- Ms. Logsdon commented that the project gives a good foundation for identifying the problems.
- Dr. Frederick Kirschner, Elem Indian Colony, stated that the issues presented in the proposals are not an immediate need; as such he was not able to support the proposal.
- Brock Zoller, Lake County Farm Bureau, noted that it is relatively an inexpensive project.
- Ms. Kennedy noted that it is a great project in order to move forward and it evaluates what groundwater is available for the surface water and public water systems around the lake.
- Mr. Schneider noted that that the 'audience' for this proposal is also the legislatures and this project addresses the questions being asked. He also noted his support for the project.
- Mr. Sklar mentioned that he would like to develop a public database for new research so that individuals conducting environmental work can have access to relevant information.
- Additional details were requested to strengthen the linkage between AEM and Clear Lake health.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 11 members
- Approve with modification: 1 member
- Do not approve: 1 member
- Abstain/did not vote: 1 member

This project was approved by the majority for seeking funding and implementation.

Scotts Valley Aquifer Conditions Evaluation

Eddie Teasdale, Scotts Valley provided an overview of the proposal to characterize and evaluate aquifer conditions in Scotts Valley. The proposed project cost is: \$80,000. After the presentation, the following discussion was recorded:

- Ms. Logsdon mentioned that the drinking water wells located in Scotts Creek are 85 foot deep and are considered surface water and the monitoring of aquifers will increase the available information.
- Mr. Sklar asked how many wells are covered by the \$50,000 dollars requested. Additionally, he would like to know how much data can be collected. Mr. Teasdale responded that there will be three wells and the initial part of the project is to put three wells in close proximity to the shoreline that will actively monitor the conditions.
- Dr. Lund asked if the data from the helicopter can be useful. Mr. Teasdale responded that the data from the helicopters will supplement.
- Ms. Ryan asked if this project would address the flooding in certain areas. Mr. Teasdale responded that the flooding could perhaps divert the water into the system which can be evaluated.
- Ms. Ryan noted that the issues identified in the proposal were previously moved from a mid-priority to a low-priority by the request of the county. She expressed disappointment with that decision.
- Mr. Shaver asked what the “active areas” are in reference to the presentation. Mr. Teasdale responded that it was the exposed rock.
- Mr. Zoller asked why is there a need for more wells. Mr. Teasdale responded that there was not a good dataset from prior studies.
- Mr. Schneider asked if the public would have access to the data of the SCADA system on an ongoing basis. Mr. Teasdale responded that the public would have access.
- Dr. Kirshner stated the study will not provide information required by the lake models and requested that the proposal be revised.
- Ms. Ryan stated that additional information is needed linking aquifer conditions to lake health.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 12 members
- Approve with modification: 1 member
- Do not approve: 1 member
- Abstain/did not vote: 0 member

This project was approved by the majority for seeking funding and implementation.

Environmental Education Pathway Proposal

Mr. Magill presented the proposal on behalf of Tim Karas, Mendocino College.

He provided a presentation to develop an applied science pathway focused on environmental/conservation technician using the natural resources of Lake and Mendocino Counties for field/laboratory research. The proposed project cost is: \$72,000. After the presentation, the following conversation was recorded:

- Mr. Sklar mentioned that this is a small project with a broad public benefit and public support.
- Mr. Magill noted the proposal relies on existing programs in infrastructure, so it essentially is the expansion of true methods. The funds requested in the proposal will cover the additional curriculum and materials that will ultimately lead to workforce training based on environmental education.
- Ms. Kennedy mentioned that she likes that it is a local entity.
- Wilda Shock, Lake County Economic Development Corporation, noted that it is a good foundation for potential local programs.
- Dr. Lund suggested that a public set of lectures provided to K-12 would be a nice addition to the proposal.
- Ms. Ryan noted that curriculum development is a great idea regarding natural resources and the conservation work. Additionally, she hopes that they work with the tribes on this project.
- Mr. Shaver would like to volunteer to work on the project if approved.
- Ms. Logsdon stressed the need to include tribal engagement in curriculum development.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 13 members
- Approve with modification: 0 members
- Do not approve: 0 members

This project was approved unanimously for seeking funding and implementation.

Integrated Pest Management for Sustainable Shorelines (Primrose Removal and Tule Restoration)

Angela DePalma-Dow, Lake County Water Resources Department, provided a presentation on using integrated pest management methods to create strong and sustainable shorelines on Clear Lake, CA. The proposed project cost is: \$351,953. After the presentation, the following discussion was recorded:

- Remediation of primrose on Rodman Slough is important, but beyond the scope of this pilot project. Future invasive vegetation proposals should include the Slough.
- Ms. Ryan asked if the proposal would move the County's invasive aquatic vegetation management program away from chemical herbicides. Ms. DePalma-Dow responded that some vegetation management grants require the application of herbicides. The County is moving towards a comprehensive integrated pest management (IPM) strategy which utilizes all available means to address aquatic invasive plants.

- Ms. Kennedy asked if they will coincide with the cultural burns. Ms. DePalma-Dow responded that they just signed a MOU with Terra County's Board District which includes cultural burning for shorelines.
- Ms. Logsdon asked if the grants funds could be used to broaden the Rodman Slough. Mr. Sklar noted that in September, a proposal can be developed that will specifically focus on the Rodman Slough.
- Mr. Zoller asked which herbicides are currently used in Clear Lake. Ms. DePalma-Dow responded that approved herbicides for use in Clear Lake include copper based herbicides, diquat, fluridone, endothall, glyphosate, 2,4-D, imazamox, penoxsulam, sodium carbonate peroxyhydrate, imazapyr, and triclopyr.
- Mr. Magill noted that aquatic pesticide application is currently not a part of this proposal.
- Scott Harter, Lake County Special Districts, as a drinking water operator, clarified that Special Districts and public water suppliers are notified where there are herbicide applications.
- Ms. Ryan mentioned that in a recent pilot study, fluoridone was found in public water systems.
- Dr. Lund mentioned that as the projects move to on the ground applications, it would be great to see components of evaluation on how well the methods work and how long it works. It is important to have assessments that have the potential to develop an inherent set of investments over time.
- Mr. Magill noted that the County has applied for a Department of Pesticide Regulation grant. If the grant is approved, this proposal will not be included in the final package for Resources' consideration. Mr. Magill suggested that additional discussions regarding aquatic pesticides would be a great topic for Technical Subcommittee meetings.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 14 members
- Approve with modification: 0 members
- Do not approve: 0 members

This project was unanimously approved for seeking funding and implementation.

Adobe Creek Hydrology & Groundwater Monitoring

Anthony Falzone, FlowWest Engineering, presented the Adobe Creek Hydrology and Groundwater Monitoring proposal on behalf of the Big Valley Band of Pomo Indians. The purpose of this project is to better understand discharge in Adobe Creek, which contributes nutrients and sediment that decreases water quality in Clear Lake and provides habitat for Clear Lake hitch, which are an important component of the Clear Lake ecosystem and are on the verge of collapse. The proposed project cost is: \$150,000. After the presentation, the following conversation was recorded:

- Mr. Magill expressed that he was pleased to see the coordination of different projects. Additionally, he noted that coordination between entities creates and strengthens the final goal.

- Ms. Kennedy mentioned that they are developing projects that need to be implemented and sharing the data that is collected.
- Mr. Shaver asked where the groundwater wells will be located. Mr. Falzone responded that they are limited due to uncooperative local landowners. But noted that the wells will be located between Argonaut Road and Soda Bay Road adjacent to the creek.
- Mr. Lund suggested that they start to develop expectations for uniformity of how the projects will fit together with each other and how they would coincide with the models of the lake and the data practices.
- Ms. Kennedy commented that training to utilize watershed scale models would be effective.
- Ms. Ryan created some technical memorandum on studies of Adobe Creek and will continue to share the information.
- Mr. Falzone mentioned that he would defer to United States Geological Survey (USGS) on the training for usage of their watershed scale models.

*Mr. Magill noted that the technical subcommittee has spent a lot of time discussing monitoring and modeling, and he suggested that there be a focused discussion on the watershed scale models.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 14 members
- Approve with modification: 0 members
- Do not approve: 0 members

This project was unanimously approved for seeking funding and implementation

Groundwater Dependent Ecosystems (GDE) and Wetland Restoration Analysis and Implementation

Anthony Falzone, FlowWest, provided a presentation for a proposal to restore groundwater-dependent ecosystems (GDE) in the Big Valley Subbasin. The proposed project cost is: \$500,000. After the presentation, the following conversation was recorded:

- Ms. Ryan mentioned that they expect nutrient loading to be reduced.
- Mr. Harter asked if the locations being used were private property locations for the wetlands restoration and how does that work for the challenges that may arise. Ms. Ryan responded that it would be either private, county, or city property. They will be reaching out to the landowners of the areas that are the best locations for the wetlands restoration.
- Mr. Harter asked if the post project testing constructed is significantly upstream before the lake, will there be testing relatively close to the project, as well as down by the lake to gauge the positive impact it has on the water quality. Mr. Falzone responded that he does not anticipate measuring at the lake and only plans to monitor directly upstream and downstream of the project. Mr. Harper responded and liked that the project is going to demonstrate in a more quantifiable manner and what positive impact the project could have.

- Mr. Falzone mentioned that the projects are easily implementable.
- Mr. Crandell, Lake County Board of Supervisors, asked if this is similar to the GSA grant the groundwater sustainability implementation project for the GSA water research department. Ms. Ryan responded that it was not submitted to the GSA.
- Mr. Lyons suggested that there be an integration/collaboration between proposals 6-Pest Management methods, 7-Hypolimnetic Oxygenation Pilot Project, and 8-Adobe Creek. Mr. Kirschner agreed with Mr. Lyons and he stated that there needs to be a global rationale supporting why all these studies are being done and put them in a lake management plan.
- Ms. Ryan noted that there is a Clear Lake Integrated Watershed Management Plan.
- Mr. Crandell noted that the next meeting for the **Middle Creek Committee is June 6th at 6:30 pm via Zoom.**
- Mr. Falzone noted that the project will be utilizing Middle Creek as a source for guidance and a technical direction. He also mentioned that the hitches are important component of the watershed and the Big Valley tributaries are the key fish bearing streams.
- Ms. Ryan noted the proposal can be applied to other creeks as well. She also commented the assumption that the majority of sediment/nutrients enters the system through Middle Creek is based on outdated information; the UC Davis in lake modeling/monitoring work currently underway suggests a much larger percentage of nutrient loading happens in the Lake (not its tributaries).
- Mr. Lund requested to see more information on how the wetland will improve ecosystems.
- Mr. Harter suggested that there be more collaboration with the Groundwater Sustainability Agency (GSA) on site selection.
- Additional information on sediment deposition is needed- use Tule Lake as a proxy before moving to new areas around Clear Lake.
- Mr. Magill noted the Middle Creek Restoration Project is a collaborative effort between the US Army Corps of Engineers and a variety of state, local, and Tribal partners. More information, including the current status of property acquisition for the project, is available online at <http://www.lakecountycal.gov/Government/Directory/WaterResources/Programs/Projects/MiddleCreek.htm>.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 12 members
- Approve with modification: 2 members
- Do not approve: 0 members

This project was approved by the majority for seeking funding and implementation.

Big Valley Tributary Harmful Algal Bloom (HAB) and Bank Erosion Project

Ms. Ryan and Mr. Falzone provided a presentation for a project that will assess the four primary tributaries to the Clear Lake in the Big Valley Basin for bank erosion and develop bio-engineering designs

to reduce chronic sources of sediment and nutrients to Clear Lake. The proposed project cost is: \$600,000. After the presentation, the following conversation was recorded:

- Mr. Shaver suggested to conduct the project in phases to incorporate HAB monitoring 2-3 years after project implementation
- Dr. Lund asked how the project coincides with the other monitoring programs. Ms. Ryan responded that the project is adding to the watershed monitoring that is currently being conducted.
- Mr. Schneider thanked Ms. Ryan and Mr. Falzone and noted the cyanobacteria issues have been ongoing and critically important in the lake. He noted that this project addresses the main priorities.
- Mr. Harter would like to see the community water system intakes in the project and nearby recreation areas identified in the proposal.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 14 members
- Approve with modification: 0 members
- Do not approve: 0 members

This project was unanimously approved for seeking funding and implementation.

Web Based Clearinghouse for Data and Reports and Expansion of the Bay Area Council Citizen Science App and Dashboard

Ms. Ryan and Mr. Falzone provided a presentation for a proposal to create a web-based clearinghouse for reports and links to data sets for all entities collecting water quality and hitch data on Clear Lake and tributaries. The proposed project cost is: \$250,000. After the presentation, the following conversation was recorded:

- Dr. Lund asked if there will be subcommittees of the target audience to help guide the development of the project. Mr. Falzone responded that there are numerous meetings between the tribes, other major stakeholders in the basin, including U.S. Fish and Wildlife Service, the Oregon Department of Environmental Quality, Trout, and the Nature Conservancy, and other local nonprofits. Ms. Ryan noted that successful collaboration between organizations has started on the Clear Lake Water Quality Facebook group.
- Mr. Schneider requested for a list of the projects being conducted by BRC and the status of those projects. Mr. Magill responded and stated that he would post it to the [Committee website](#). **(Action Item #2)**
- Ms. Logsdon asked how the project can be maintained on a long-term basis. Ms. Ryan responded that they will be adding the project into the existing programs and the funding sources that are in place. They plan to explore other partnerships to make sure that the efforts and work continues.

- Dr. Kirschner would like the proposal to include a long-term funding/data storage in the budget.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 14 members
- Approve with modification: 0 members
- Do not approve: 0 members

This project was approved unanimously for seeking funding and implementation.

Clear Lake Restoration Through Invasive Common Carp and Goldfish Management-Phase 2

Ms. Kennedy and Tony Havranek, WSB Engineering, provided a presentation for a proposal to implement common carp and goldfish management through large scale removal. Project implementation is expected to reduce internal phosphorous loading and improve in lake habitat for native fish species, while collecting additional data sets to provide an adaptive and long-term framework for local management. The proposed project cost is: \$746,900. After the presentation, the following conversation was recorded:

- Ms. Ryan asked if this project has been submitted to other entities. Ms. Kennedy responded previous grant applications have not been successful to date.
- Ms. Ryan asked how the project coincides with the activities that California Department of Fish and Wildlife (CDFW) has on invasive species. Mr. Havranek responded that CDFW supplied the electrofishing boat used by Robinson Rancheria for the previous study phase of the project, and committed to additional data collection moving forward.
- Mr. Shaver suggested the proposal mention that it was previously funded by the U.S. Fish and Wildlife Service. (FWS) to highlight the high-level of consideration they have received and to provide more incentive to fund the project.
- Dr. Kirschner mentioned that they historically support a fisheries management program for usable species and further support eradication of these invasive species.

* Mr. Magill noted that there is a need for a technical subcommittee meeting focused on management coordination and invasive species management prioritization.

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 14 members
- Approve with modification: 0 members
- Do not approve: 0 members

This project was unanimously approved for seeking funding and implementation.

Hypolimnetic Oxygenation Pilot Project

Geoff Schladow, UC Davis Tahoe Environmental Research Center (TERC), provided a presentation for a proposal to 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. UC Davis expects oxygenation will result in a significant decrease of HABs in the Oaks Arm; if the pilot is successful, the model could be expanded throughout the Lake. The amount requested: An estimate of about \$2,200,00 over a 2-year period. After the presentation, the following conversation was recorded:

- Mr. Sklar noted Committee members and Lake County requested peer review of the proposal prior to implementation.
- Ms. Ryan asked how success of the project will be determined, and whether the pilot project will distribute hypolimnetic oxygen throughout the entire Lake. Dr. Schladow responded oxygen levels will be measured using existing gauging stations in real time. Additionally, an autonomous underwater vehicle will be deployed to take measurements throughout the area. Within three months of pilot project construction, UC Davis should be able to determine if it successfully mitigated HAB production.
- Ms. Kennedy noted the proposal should explicitly note that a temporary reduction in methylmercury production from the pilot project should not be adopted by the US Environmental Protection Agency (EPA) as proof Sulphur Bank Mercury Mine remediation is complete.
- Mr. Shaver suggested that UC Davis should emphasize the benefit in the short-term reduction of mercury exposure for humans.
- Mr. Sklar noted that although it is a pilot study, it could give the foundation for future research.
- Ms. Logsdon mentioned that there is no stipend to incentivize local people to participate in the program.
- Dr. Kirshner noted oxygenation may increase the release of other toxic metals besides mercury and was not able to support the proposal at this time. Metal composition in other lakes such as Lake Coeur d'Alene in Idaho is such that oxygenation could result in the release of zinc and copper. Moreover, he noted that if the pilot project does release toxic metals, it may result in a violation of the Clean Water Act. Charlie Alpers, US Geological Survey (USGS) and Dr. Schladow noted the composition of Clear Lake sediment is fundamentally different than many other lakes, although arsenic and pyrite are present. Bench experiments could be conducted to determine whether oxygenation results in the dissolving and release of these constituents of concern.
- Temashio Anderson noted Clear Lake has naturally low oxygen levels, and suggested a project be designed to remedy the human-caused sources of HABs and methyl mercury production only. He also echoed concerns shared by others that because Lake County has extremely limited resources, the project may not be sustainable long-term. Finally, he noted the project should be developed with increased collaboration between all impacted stakeholders.
- Dr. Schladow noted that all data associated with the proposal is accessible online to the public at <https://clearlake.ucdavis.edu/>.

- Supervisor Crandell expressed that he is hesitant to invest in a project that is not sustainable in the long-term, particularly when the root causes of HABs may not be widely understood. Additionally, he asked what the cost/benefit of oxygenation is compared to ultrasonic algae mitigation. Mr. Sklar explained that there is a real commitment from both the state and federal level to fund long-term projects.
- Dr. Lund noted that the proposal builds significant knowledge of Clear Lake regardless of its success.
- Mr. Schneider mentioned that you must take risks to understand what works and what doesn't work.
- Ms. Kennedy expressed concern about a potential Clean Water Act violation, and suggested additional testing was warranted. A focused discussion with Committee members expressing concern should be scheduled as soon as possible to discuss the issue (**see Action Item #3**).

After questions, Mr. Magill opened a poll to solicit formal approval of the project proposal. The following results were recorded:

- Approve as presented: 8 members
- Approve with modification: 1 member
- Do not approve: 3 members
- Abstain/did not vote: 1 member

This project was approved with the caveat to include bench experiments on the effect of oxygenation on metals in sediment (primarily pyrite/arsenic).

Scotts Valley Ban of Pomo Indians-Letter of Support Request

Mr. Magill noted that the Scotts Valley Ban of Pomo Indians will be pursuing a USDA-NRCS grant and is requesting a letter of support from the BRC. He welcomed Ms. Logsdon to walk-through the letter of support.

Ms. Logsdon explained that the USDA-NRCS has funding for agricultural commodities such as biochar. She explained that with the pilot project they would like to verify and validate the production of 100% renewable energy and biochar from agricultural byproducts, and its subsequent use for nutrient capture and agricultural application as fertilizer. The proposed closed-circle pilot program will result in long-term, in-soil carbon sequestration combined with the use of biochar-captured nutrients to offset conventional agricultural fertilizer production. She noted that Scotts Valley will work with local partners but is requesting that all BRC members sign a letter of support for the grant proposal.

- Ms. Ryan asked if there will be a new biochar production facility. Ms. Logsdon responded that in the future they anticipate the building of a facility, but currently the biochar will be provided by the Clean Carbon Company in Lakeport.
Dr. Kirschner noted that biochar can be hazardous in certain aquatic applications. He asked if they have found a way to do selective extraction that will only extract phosphorous. Ms. Logsdon responded that they are currently working towards being able to make activated

charcoal or carbon at the facility; the grant will be used to study how biochar can be used as an agricultural product, but no plans exist to use it in Clear Lake itself at this time. After the presentation, Mr. Magill asked members for approval of the letter of support, and asked if Chair Eric Sklar could sign on their behalf. All members agreed.

Public Comment

Mr. Magill opened the meeting for public comment. The following comments were recorded:

- Ms. DePalma-Dow suggested that the committee develop a pre-ranking system based on the technical committee with a subsequent rearrangement of rankings. Mr. Sklar responded that he believes that the ranking method is unnecessary because the amounts being asked are well below the budget.
- Mr. Alpers commented that USGS is actively engaged in projects to monitor and model nutrient loading from all major Clear Lake tributaries. Other projects such as the proposed Adobe Creek Hydrology modeling effort could be incorporated into the USGS HSPF and SPARROW models.
- Betsy Cawn, member of the public, expressed support for all proposals regarding stream bank erosion. She also asked for an estimate of the funding request. Mr. Magill responded that some of the proposals may require refinement which could impact cost estimates. A rough estimate of the total for projects approved without significant refinement is approximately \$4 million.

Mr. Sklar thanked the committee members for their participation and helping gauge the proposals. Mr. Magill then adjourned the meeting.

ADJOURN

Committee Members Present			
First	Last	Organization	Title
Bob	Schneider	Central Valley Regional Water Quality Control Board	Committee Representative
Brock	Zoller	Lake County Farm Bureau	Committee Representative
Eddie	Crandell	Lake County Board of Supervisors	Supervisor
Eric	Sklar	Blue Ribbon Committee for the Rehabilitation of Clear Lake	Chair
Frederick	Kirshner	Elem Indian Colony	Committee Representative
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
Paul	Dodd	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

DRAFT