

Refined Recommendations Based on 8/15 Blue Ribbon Committee Member Comments

August 21, 2019

The document below represents an excerpt of discussions captured during the August 15, 2019 Clear Lake Blue Ribbon Committee (Committee) meeting. Specifically, it focuses on recommendations provided during the discussion, and further refines the list of recommendations developed during the July 9 Technical Subcommittee meeting.

Recommendations supported by general consensus are underlined below. Where specific comments were made on the recommendations, questions are indicated by a solid bullet; responses are provided with an open bullet. Additional comments received from Technical Subcommittee members since the July 9 meeting are included in *italics* under each recommendation.

Subcommittee Recommendations:

The Facilitator shared the draft list of recommendations from the Technical Subcommittee. All of them are focused on data gathering and further refinement of existing information, except for the final recommendation for an assessment of the public perception of water quality around Clear Lake, which was proposed by Angela DePalma-Dow, Lake County Water Resources Department (WRD) at the Committee's March quarterly meeting. The listed recommendations are:

- LiDAR flight of entire Clear Lake watershed
- Stream gauges and continuous input monitoring of upper watershed
- Upper watershed modeling
- Unified databased/data collection for Clear Lake
- Public assessment of Clear Lake water quality issues

One Committee member commented that this list is very heavy on monitoring but doesn't capture the focus on management and enforcement that the Subcommittee's conversations have demonstrated. The conversations have been much more expansive, and project monitoring is only a means to enhance existing regulations and gain a better sense of what's happening on the land and not just in the creeks.

LiDAR flight of entire Clear Lake watershed: LiDAR uses light rays to create a very detailed understanding of topography. A LiDAR scan was done of the Clear Lake basin in 2016 and comparing that to updated data would show where erosion occurs and where pollutants enter the Middle Creek watershed.

- *The LIDAR data should be ground truthed in key areas where there are known erosion processes that add sediment to the system. The paper subdivision parcels above Nice on Pyle road and the off road areas of BLM's Cow Mountain ORV park is recommended.*

Stream gauges and continuous input monitoring of upper watershed: This would determine areas of greatest concern as nutrient loading hotspots to Clear Lake and also monitor the efficacy of BMPs.
General comments:

- Stream gauges are based around the TMDL and responsible parties, but the responsible parties don't have monitoring plans. How do you show that loading has changed if you don't have numbers through monitoring?
 - The Nutrient TMDL does not require monitoring plans, it only requires a reduction in loading, demonstrated through monitoring or modeling. As CVRWQCB continues to gather information to figure out where we are with the loading reduction, that's something the Committee can take to the Board as a next step. The starting point is the BMPs, and information gathering, and from there we will talk about revisions to the TMDL. CVRWQCB has received some information from responsible parties, but the request for information is still being disseminated.
- *The sediment "island" at the mouth of Middle Creek could be cored for analysis of organic contribution to the lake.*

Upper watershed modeling: The bulk of the UC Davis modeling is taking place under the lake, and not in the upper watershed. Technical models of the upper water shed would seek to understand what impacts different precipitation amounts have on erosion and the flow of nutrients into the Lake. This would help to identify where small changes could have a large impact. This would be a large undertaking and the most expensive of all of the listed recommendations today.

- TERC is creating a 3D hydrodynamic model of the lake, as well as a watershed model. However, it is limited in how detailed the watershed model will be and therefore in its ability to serve all of the needs of the Committee and community. If a new LiDAR survey is funded that identifies areas of high erosion, finding resources for a more comprehensive watershed model than what TERC is developing now might be warranted.
- UC Davis receives data from the Geostationary Operational Environmental Satellite (GOES)-17 Satellite that was launched in November and is collecting data along the entire western seaboard. The data for the Clear Lake Region is available but would need funding and resources to be processed. Susan Houston runs a center at UC Davis that focuses specifically on remote telemetry and satellite data, she is willing to speak to the Committee or subcommittee about the latest in satellite technology and what might or might not be possible. It could complement or augment the LiDAR data and in situ monitoring.
 - *A full satellite study similar to the past effort for Clear Lake could outline the key stream contributors of sediment to the lake. A design model for this effort is needed.*
- *To date the understanding is that most winter sediment contributing to summer CB blooms enters from Middle Creek, with lesser amounts from Kelsey, Adobe creeks. The major bloom events however take place in the south and east end of the lake. The transport of nutrients from the West end to the East to fuel these blooms should be modeled.*
- *It was previously suggested that a modeling of P residence time would be useful in determining the degree of upper watershed sediment controls necessary. A methodology for this determination should be constructed.*

Unified databased/data collection for Clear Lake: There is a wealth of information about Clear Lake, but it is not in one place, most of it has not been analyzed, and there are not currently resources to compile or analyze the data. There is a suggestion to create a full time position to collect all of that data in a unified data base.

Public assessment of Clear Lake water quality issues: This is a nexus with the socioeconomic concerns. The assessment would seek to find out what are the public perceptions of water quality and attitudes and behaviors with negative or positive impacts. This will help the Committee and subcommittees know how to have the most positive impact to garner future support. It has never been done before and could include a second post-assessment survey five years later.

- Could this survey address public perception of current events around the Lake? For example, the city of Lucerne has high water rates because they had to take a loan to fix water equipment for the water company. However, residents seem to think that they are bearing the financial hardship to forgive a loan of the water company. Could something like this be a subject of the survey?
 - Yes, the specific survey has not been developed yet, but the projected budget provided in March includes funding for a focus group that could address specific questions.
- The survey is a great idea. Most people in the Clear Lake basin are ignorant about how they are contributing to the poor water quality in the lake, and place blame in different places. Unless the public is educated, any work the Committee does will be fighting against the wind.
- Is the budget submitted for the Assessment robust enough? If we make a request for funding for a survey, it must be a strong request and striking the right balance. Ms. DePalma-Dow should follow up with Ms. Godkin about the budget.
 - The estimated budget for the Assessment is realistic but was drafted from the perspective of County projects with shoestring budgets, and was compared against similar projects, but from the early 2000s. The budget estimate is only for one survey and does not include a 5-year post-assessment.

Additional Recommendations:

- Collecting Bathymetric data, the shape of the lake under the water, is a critical data gap for modeling of the lake and is not part of the UC Davis contract. The US Geological Survey (USGS) is commencing a study on volcanic eruption potential in the region, so there is a shared need for that data. Knowledge of what sediments are in what locations at the bottom of the lake would have big impacts. Like the LiDAR survey, new bathymetric data could be compared to old data to show change over time. Perhaps this can be brought up at the next Technical Subcommittee meeting.
 - Collecting bathymetric is very high priority.
- A review of local, state, tribal, and county ordinances and of how and why they are or are not being implemented or enforced would be a recommendation.
 - CVRWQCB is trying to gather that information, and it would be great if the Committee could assist in any way. For next year, the first step might be gathering information and determining next steps, but not committing to do a full evaluation of it, because that may not be enough time.
 - Frequent staff turnover at different agencies is often a cause of monitoring requirements or implementation of BMPs falling off the radar. It would be great for someone to have oversight of all these required activities.
 - Many agencies admit they are not able to keep up with monitoring requirements. There are a lot of assumptions that BMPs and other projects are installed and utilized correctly, but there is no oversight. Big Valley submitted comments on this to US EPA Region 9 to look at all the land use ordinances of all the different jurisdictions. There

are many jurisdictions and it's often hard to close the loop on who is supposed to be doing what and how the different responsibilities should be coordinated.

- *There are methodologies for controlling mosquitoes in sediment catchment areas, these should be outlined to offset concerns about this recommendation.*
- In order to come up with specific technical recommendations, it would be good to know about the socioeconomic impacts of water quality and the condition of the lake on the communities most impacted such as the economically disadvantaged, retired, those who take their drinking water from the lake, or residents of certain areas on the lake.
 - That can be a target of the public survey. It can look at age, income bracket, and location, though not in time for this year's recommendations report.

General Comments

The Committee confirmed that the report structure and the subcommittee recommendations are moving in the right direction. One member commented that "the devil is in the details" and refinement and prioritization will require further discussion. Committee members posed the following general comments and questions:

- Why are these recommendations not included in the TERC Work Plan? Are any of these recommendations within their scope? Before we assess the recommendations thoroughly, we need to know what TERC is doing.
 - Response (Schladow): I'm happy to work with other members of the tech subcommittee on providing an impression of the essence of the challenge TERC is facing, with some data to back it up in a readable format.
 - Response (CRC[name]): We would be amenable to that, but I am only one representative of a greater team.
- Are we required by AB 707 to have socioeconomic recommendations?
 - Response: No, the legislation reads "The first annual report submitted ... shall identify barriers to improved water quality in Clear Lake, the contributing factors causing the poor water quality, and the threats to wildlife. The report shall include recommendations on solutions to these issues, estimates of cost, and a plan for involving the local, state, and federal governments in funding for and implementation of lake restoration activities."
- If we pose a request for funding to the legislature, would any approved funds be part of the 2021 budget?
 - Response: January is the start of the budget cycle, and any funding as a result of this report would be available in July 2020. The report is not the request for funding but will facilitate a request for funding later on. Once we develop recommendations, we can talk to the Department of Finance and Aguiar-Curry's office.
- How long will the Committee be active? There is a lot to be done and not a lot of time to waste. This needs to be a collaborative, synergistic effort.
 - Response: There is no sunset for funding for the committee. The CCP facilitation team contract is three years. In similar projects, like the Salton Sea and Lake Tahoe, similar Committees started the needed work and the work continued after the Committee disbanded.
- These are good suggestions to start. It's unfortunate that legislators tend to find data collection unexciting, but eventually this will lead to large sweeping suggestions like land use changes. Big

data collection suggests the import of large actions. The information gathered will inform our next steps and where to focus funding for implementation.

- Response: Like the Salton Sea and Lake Tahoe, once the preliminary information is gathered that leads to a clear and viable vision and plan, more substantial funding can be requested.
- I'm concerned we are spending small amounts of money on small monitoring projects that will have little overall impact. The size of storms has the most impact on erosion. We need to make a significant investment on a real solution.
 - Response: The Middle Creek Restoration Project is one example of a large-scale project. There are elements of it that can be moved forward on a short term basis.